

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL120825\
 Data File : VL043327.D
 Acq On : 08 Dec 2025 23:34
 Operator : SY/MD
 Sample : Q3797-03 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

Quant Time: Dec 09 01:26:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-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)

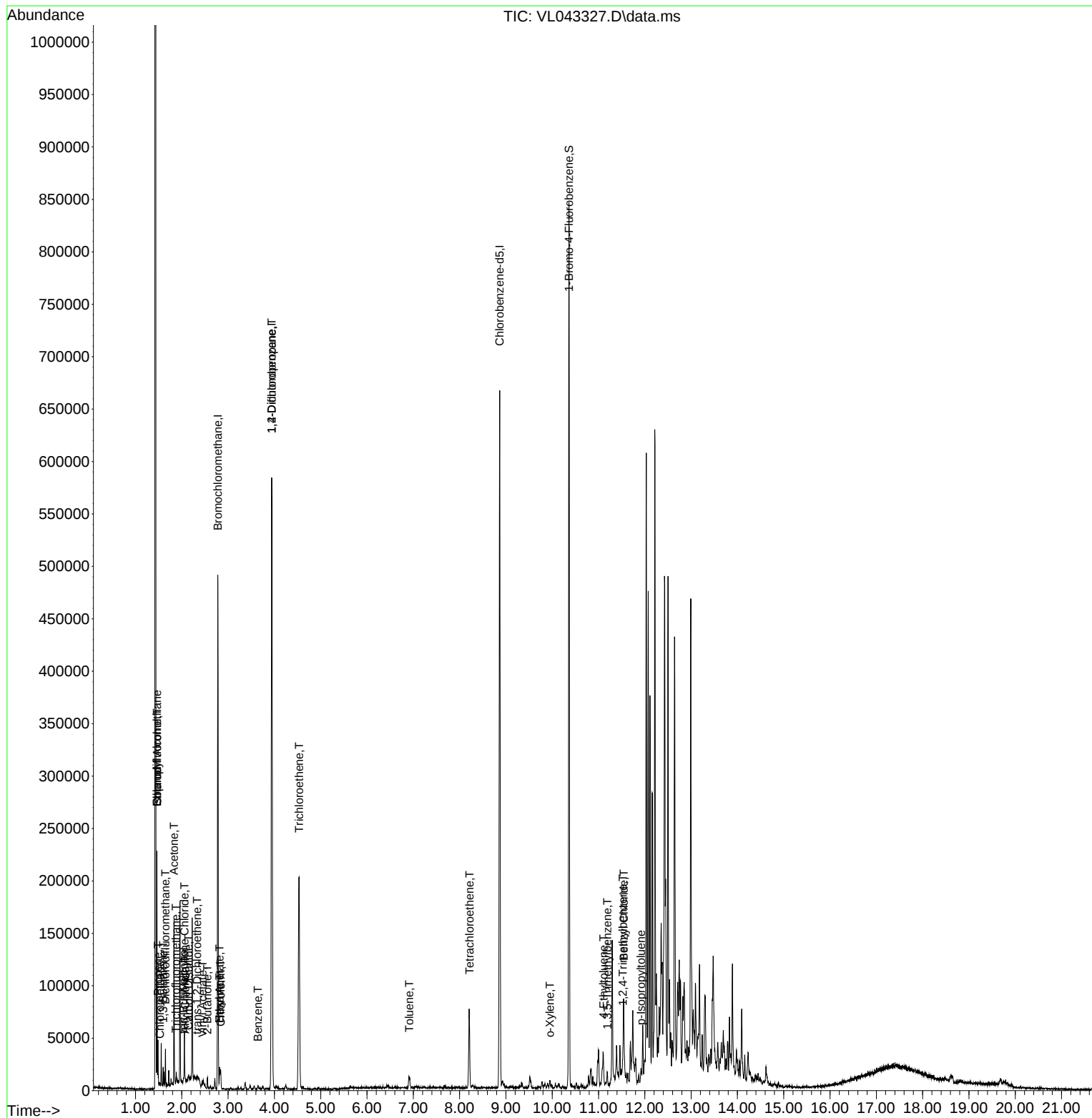
Internal Standards						
1) Bromochloromethane	2.777	49	132111	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.942	114	327839	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.865	117	260554	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.361	95	199245	10.432	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.300%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.648	85	791	0.042	ppbv	94
3) Chlorodifluoromethane	1.463	51	51680	2.820	ppbv #	61
4) Chloromethane	1.528	50	239	0.034	ppbv	89
9) Propene	1.486	41	3828	0.492	ppbv #	1
11) Trichlorofluoromethane	1.874	101	1004	0.056	ppbv	94
13) Ethanol	1.463	45	9479	3.464	ppbv #	38
15) Acetone	1.832	43	66430	3.619	ppbv	100
16) 1,3-Butadiene	1.599	39	2511	0.307	ppbv #	21
17) tert-Butyl alcohol	2.036	59	1360	0.056	ppbv #	78
19) Isopropyl Alcohol	1.463	45	9479	0.914	ppbv #	36
20) Methylene Chloride	2.059	84	7086	0.570	ppbv	83
21) Allyl Chloride	2.075	41	474	0.038	ppbv #	1
22) trans-1,2-Dichloroethene	2.331	96	256	0.034	ppbv #	37
23) Vinyl Acetate	2.447	43	1989	0.090	ppbv #	58
25) Ethyl Acetate	2.816	43	3164	0.080	ppbv #	82
26) Hexane	2.816	57	3424	0.197	ppbv #	41
27) Carbon Disulfide	2.146	76	2184	0.123	ppbv #	1
29) Chloroform	2.842	83	6635	0.269	ppbv	91
34) 2-Butanone	2.551	43	6373	0.275	ppbv	92
36) Benzene	3.645	78	953	0.030	ppbv #	73
38) Trichloroethene	4.531	130	57976	4.720	ppbv	96
39) 1,2-Dichloropropane	3.942	63	83352	7.254	ppbv #	25
52) Tetrachloroethene	8.212	164	12298	1.053	ppbv	87
53) Toluene	6.910	91	7564	0.203	ppbv	88
60) o-Xylene	9.950	91	2723	0.068	ppbv	96
66) Benzyl Chloride	11.545	91	393	0.060	ppbv #	68
69) p-Isopropyltoluene	11.914	119	2688	0.035	ppbv #	82
72) 4-Ethyltoluene	11.108	105	1732	0.035	ppbv #	17
73) 1,3,5-Trimethylbenzene	11.192	105	2553	0.062	ppbv	91
74) 1,2,4-Trimethylbenzene	11.526	105	7455	0.166	ppbv #	46

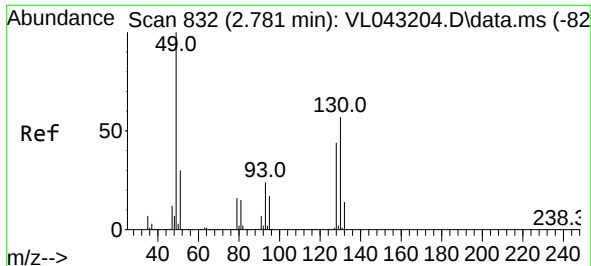
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ALS Vial : 1 Sample Multiplier: 1

Instrument :
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SV2

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Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL11825AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
QLast Update : Wed Nov 19 01:11:25 2025
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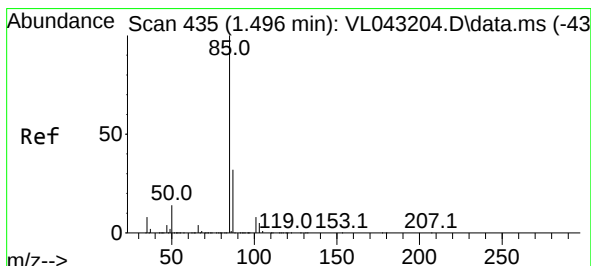
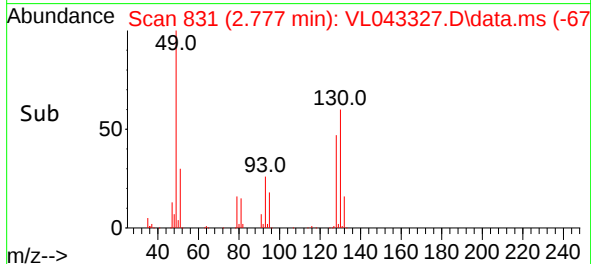
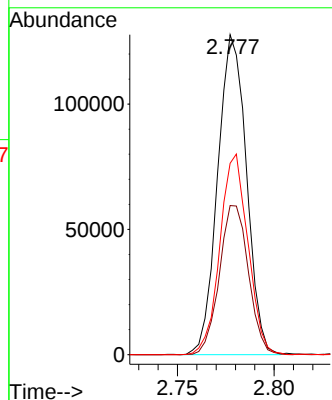
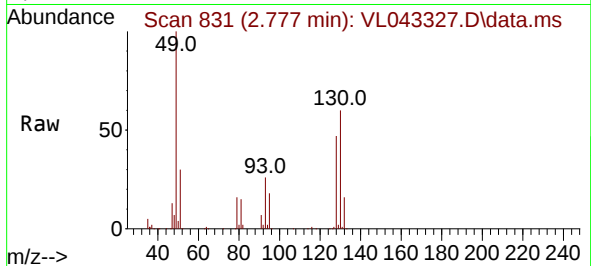




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.777 min Scan# 81
 Delta R.T. -0.004 min
 Lab File: VL043327.D
 Acq: 08 Dec 2025 23:34

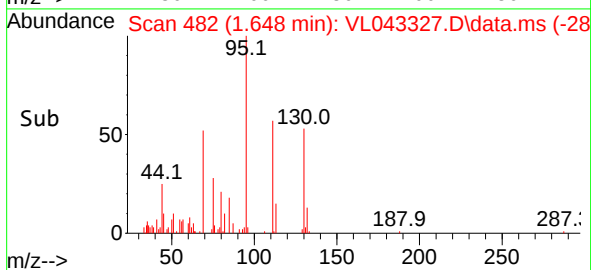
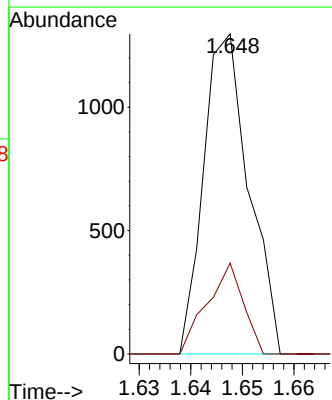
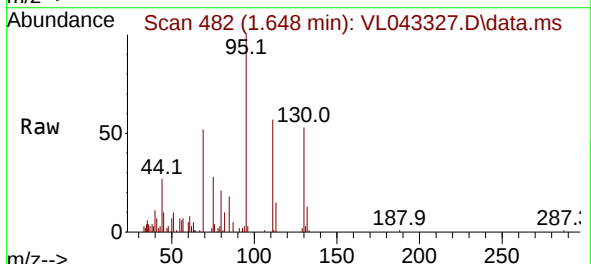
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

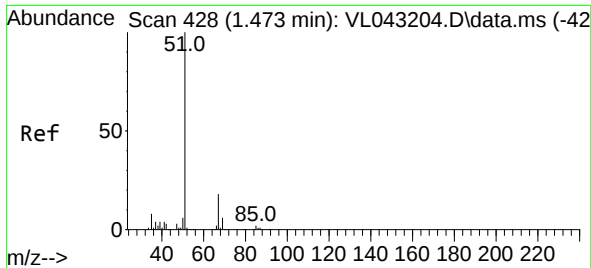
Tgt Ion: 49 Resp: 132111
 Ion Ratio Lower Upper
 49 100
 128 47.2 23.0 69.0
 130 61.2 29.9 89.7



#2
 Dichlorodifluoromethane
 Concen: 0.042 ppbv
 RT: 1.648 min Scan# 482
 Delta R.T. 0.152 min
 Lab File: VL043327.D
 Acq: 08 Dec 2025 23:34

Tgt Ion: 85 Resp: 791
 Ion Ratio Lower Upper
 85 100
 87 28.4 25.4 38.2

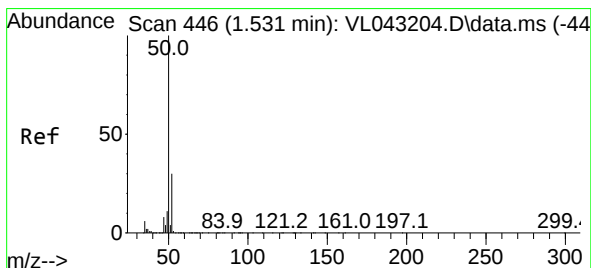
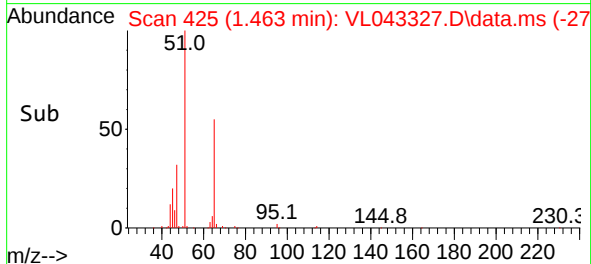
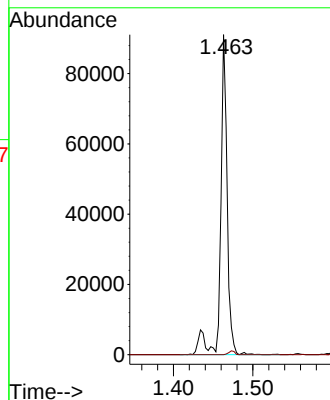
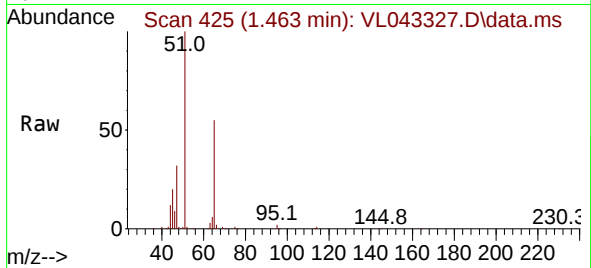




#3
Chlorodifluoromethane
Concen: 2.820 ppbv
RT: 1.463 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

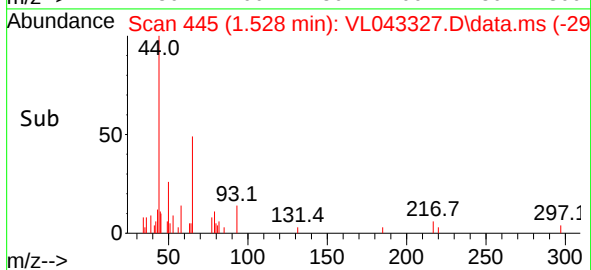
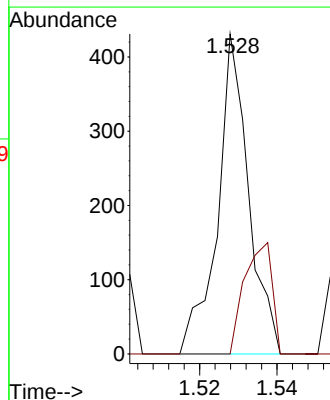
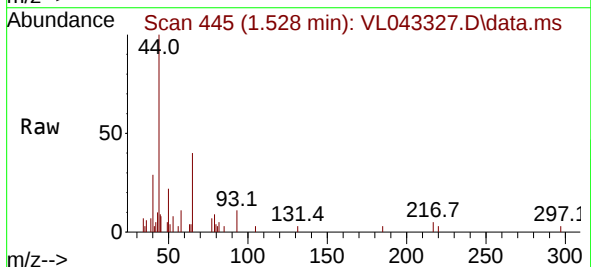
Instrument :
MSVOA_L
ClientSampleId :
SV2

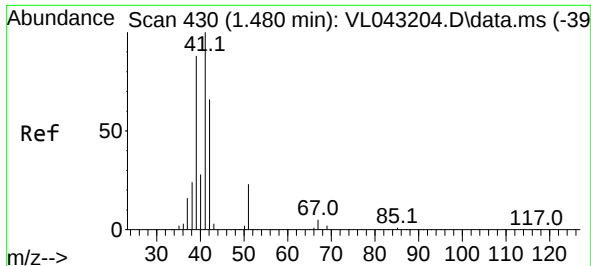
Tgt Ion: 51 Resp: 51680
Ion Ratio Lower Upper
51 100
67 1.1 14.9 22.3#



#4
Chloromethane
Concen: 0.034 ppbv
RT: 1.528 min Scan# 445
Delta R.T. -0.004 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 50 Resp: 239
Ion Ratio Lower Upper
50 100
52 36.0 24.1 36.1





#9

Propene

Concen: 0.492 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043327.D

Acq: 08 Dec 2025 23:34

Instrument :

MSVOA_L

ClientSampleId :

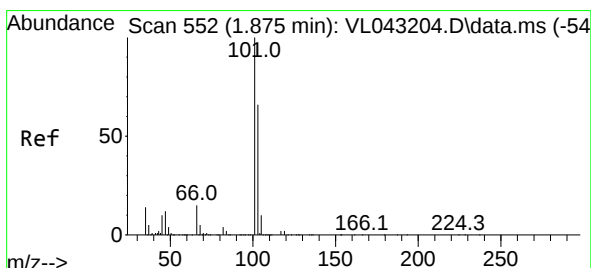
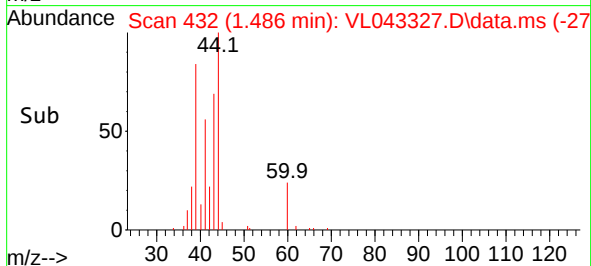
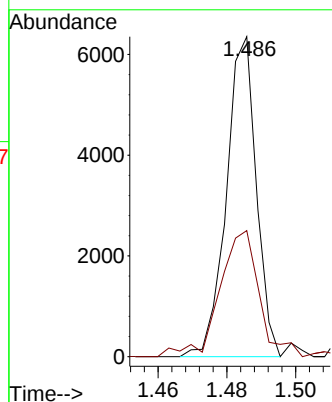
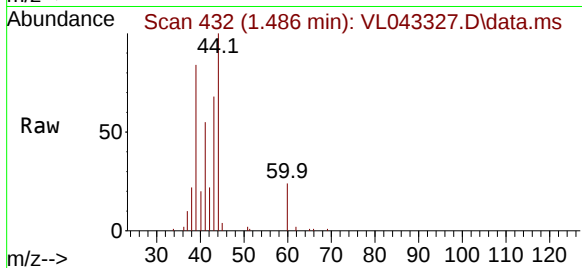
SV2

Tgt Ion: 41 Resp: 3828

Ion Ratio Lower Upper

41 100

42 54.1 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.056 ppbv

RT: 1.874 min Scan# 552

Delta R.T. -0.000 min

Lab File: VL043327.D

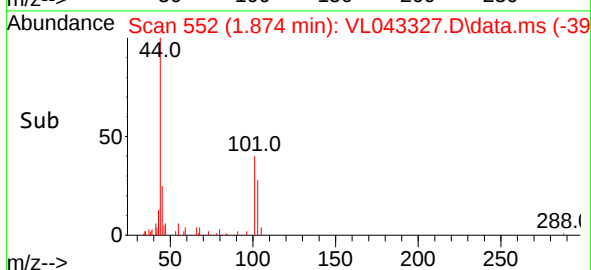
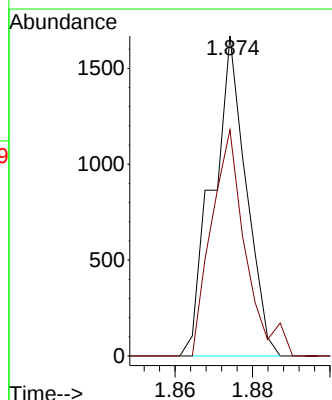
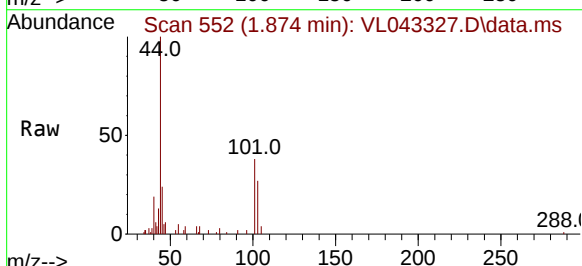
Acq: 08 Dec 2025 23:34

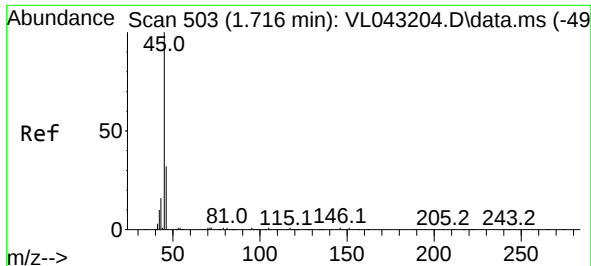
Tgt Ion:101 Resp: 1004

Ion Ratio Lower Upper

101 100

103 70.6 52.6 79.0

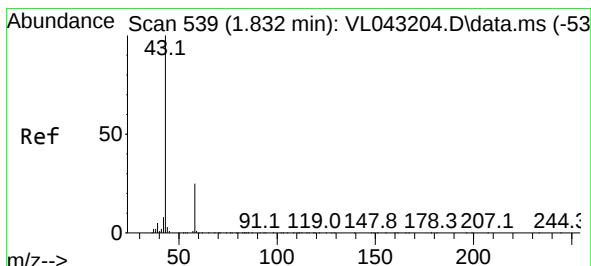
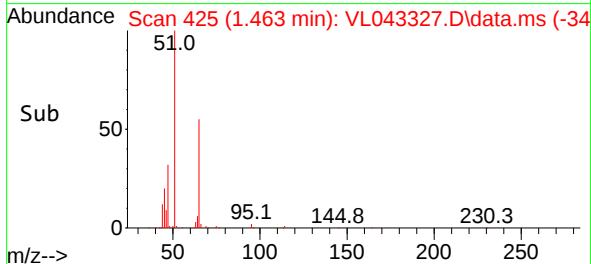
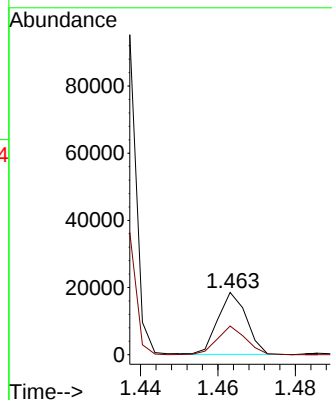
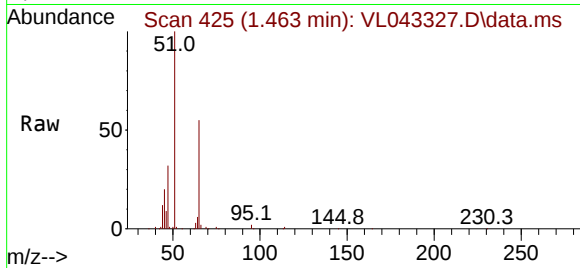




#13
Ethanol
Concen: 3.464 ppbv
RT: 1.463 min Scan# 41
Delta R.T. -0.253 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

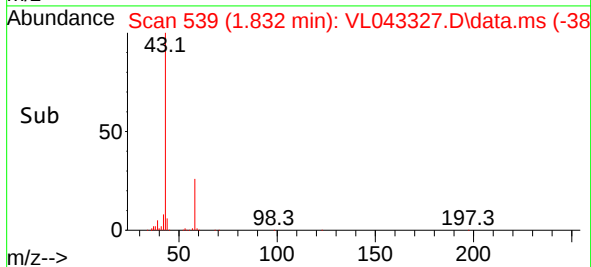
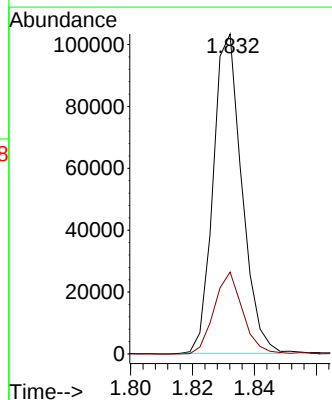
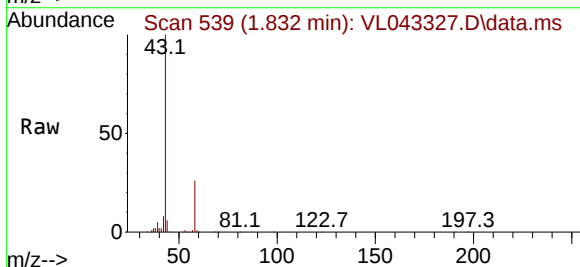
Instrument :
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ClientSampleId :
SV2

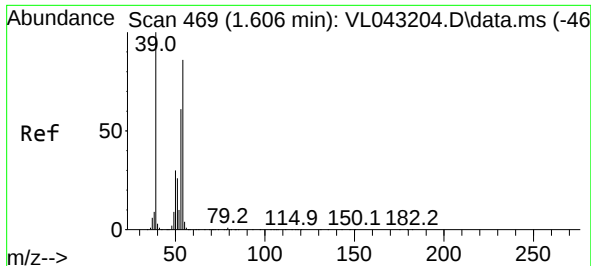
Tgt Ion: 45 Resp: 9479
Ion Ratio Lower Upper
45 100
46 0.0 15.0 59.8#



#15
Acetone
Concen: 3.619 ppbv
RT: 1.832 min Scan# 539
Delta R.T. -0.000 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 43 Resp: 66430
Ion Ratio Lower Upper
43 100
58 25.8 20.7 31.1

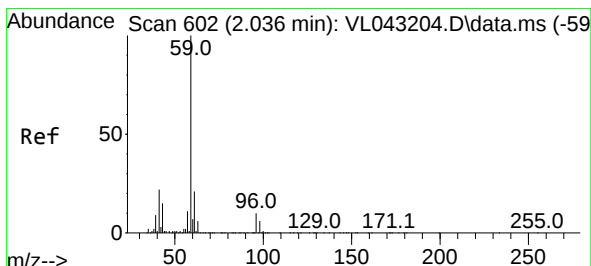
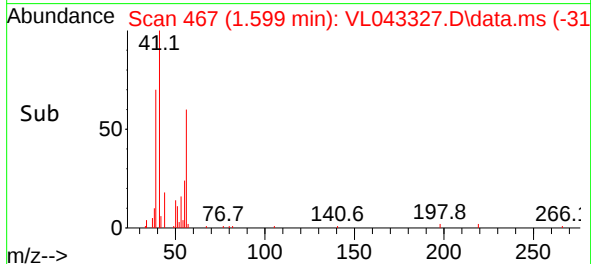
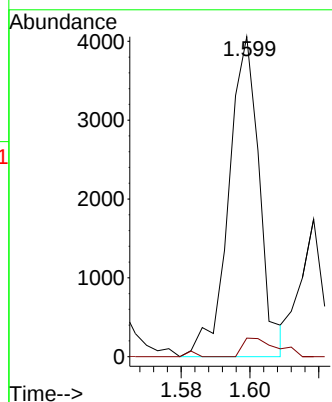
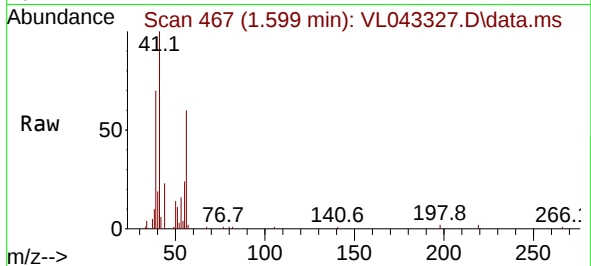




#16
1,3-Butadiene
Concen: 0.307 ppbv
RT: 1.599 min Scan# 467
Delta R.T. -0.007 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

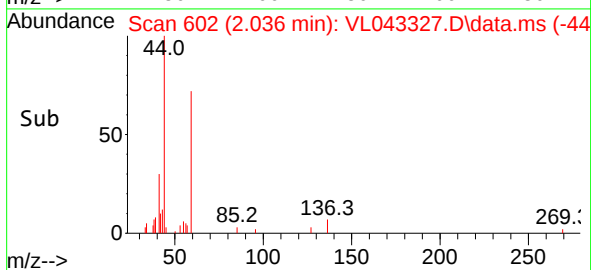
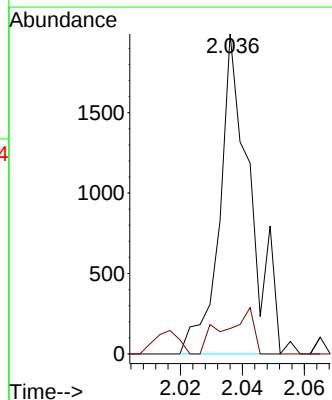
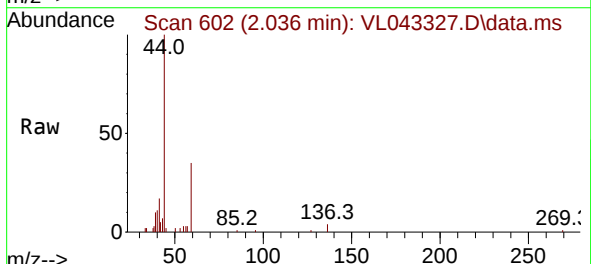
Instrument :
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ClientSampleId :
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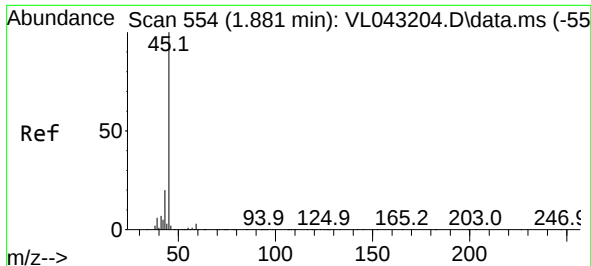
Tgt Ion: 39 Resp: 2511
Ion Ratio Lower Upper
39 100
54 7.0 59.4 89.2#



#17
tert-Butyl alcohol
Concen: 0.056 ppbv
RT: 2.036 min Scan# 602
Delta R.T. -0.000 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 59 Resp: 1360
Ion Ratio Lower Upper
59 100
57 19.5 9.0 13.4#

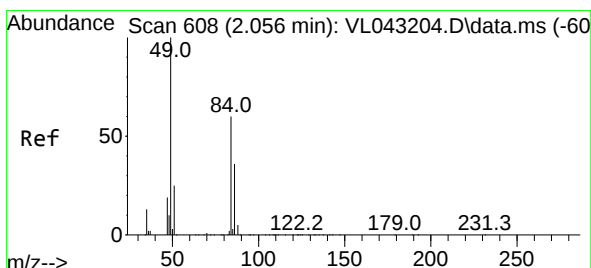
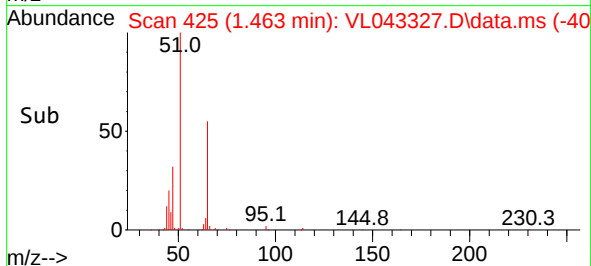
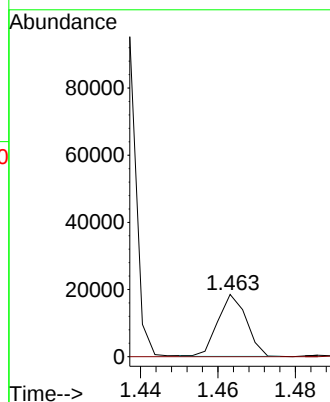
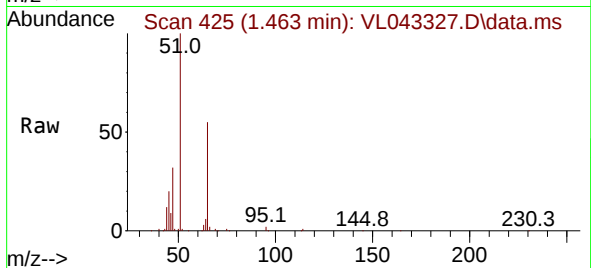




#19
Isopropyl Alcohol
Concen: 0.914 ppbv
RT: 1.463 min Scan# 41
Delta R.T. -0.418 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

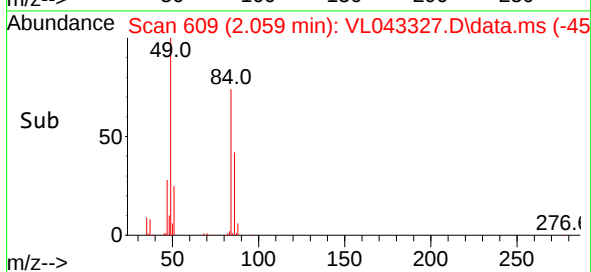
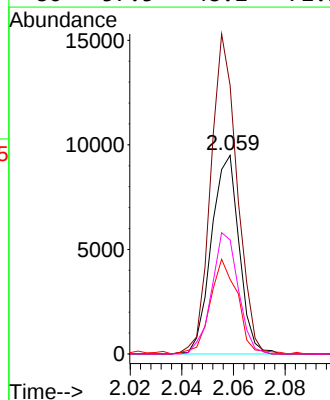
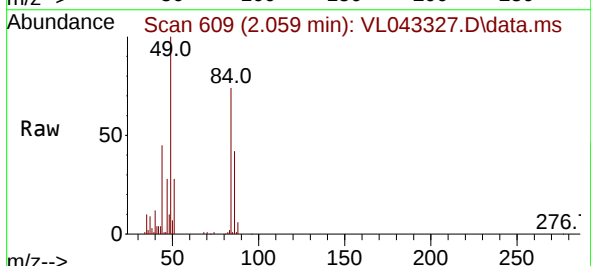
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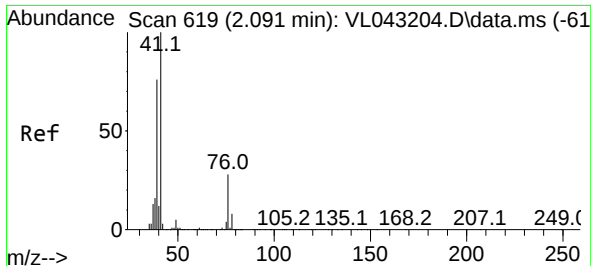
Tgt Ion: 45 Resp: 9479
Ion Ratio Lower Upper
45 100
58 0.0 31.3 46.9#



#20
Methylene Chloride
Concen: 0.570 ppbv
RT: 2.059 min Scan# 609
Delta R.T. 0.003 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 84 Resp: 7086
Ion Ratio Lower Upper
84 100
49 135.2 132.9 199.3
51 36.8 34.8 52.2
86 57.5 48.2 72.2

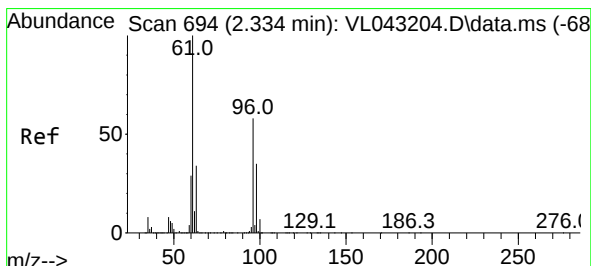
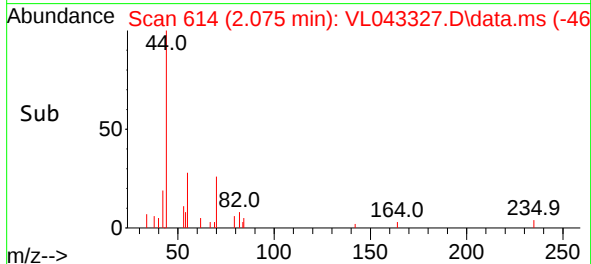
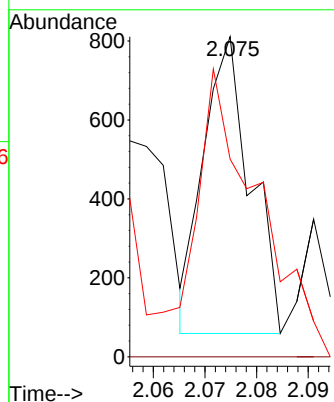
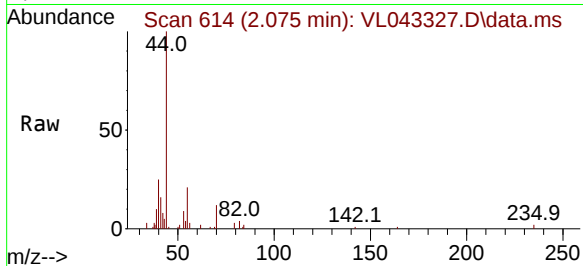




#21
 Allyl Chloride
 Concen: 0.038 ppbv
 RT: 2.075 min Scan# 614
 Delta R.T. -0.017 min
 Lab File: VL043327.D
 Acq: 08 Dec 2025 23:34

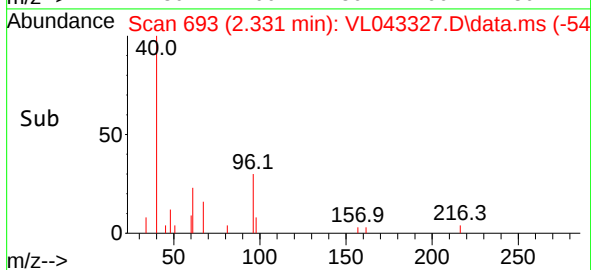
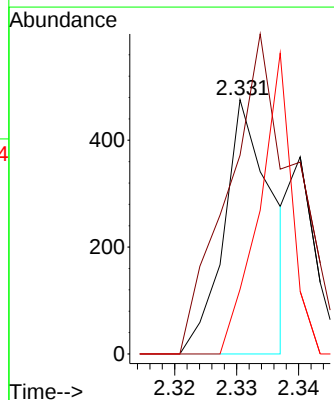
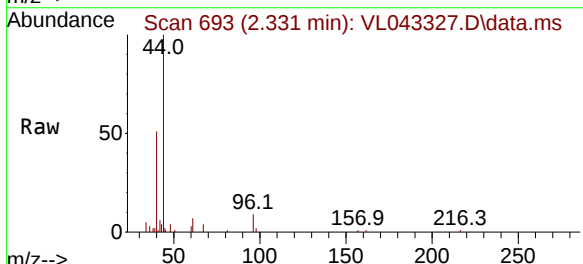
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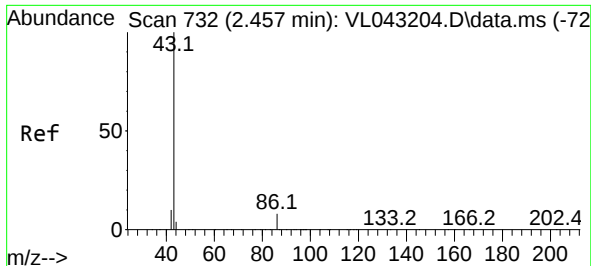
Tgt Ion: 41 Resp: 474
 Ion Ratio Lower Upper
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 76 460.8 22.1 33.1#
 39 120.9 61.0 91.4#



#22
 trans-1,2-Dichloroethene
 Concen: 0.034 ppbv
 RT: 2.331 min Scan# 693
 Delta R.T. -0.004 min
 Lab File: VL043327.D
 Acq: 08 Dec 2025 23:34

Tgt Ion: 96 Resp: 256
 Ion Ratio Lower Upper
 96 100
 61 78.2 139.0 208.6#
 98 25.4 49.4 74.2#

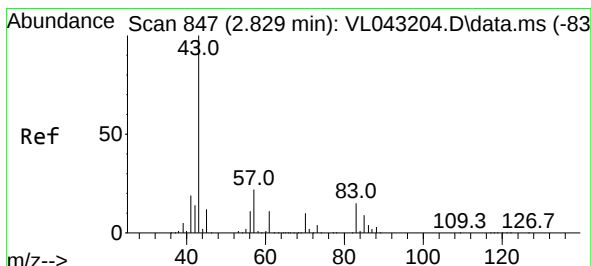
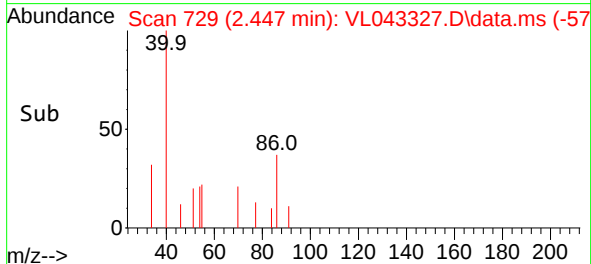
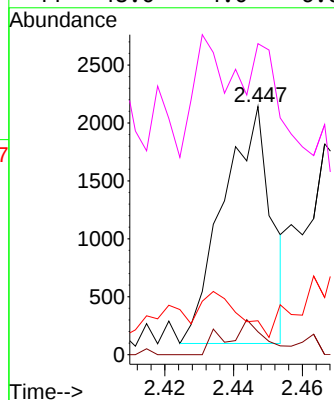
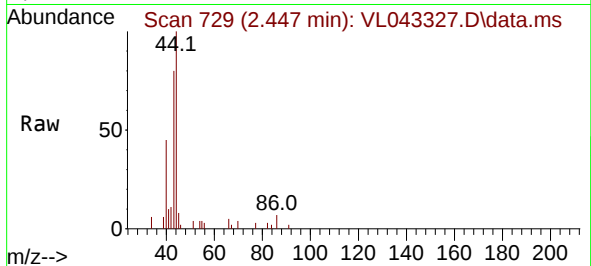




#23
 Vinyl Acetate
 Concen: 0.090 ppbv
 RT: 2.447 min Scan# 71
 Delta R.T. -0.010 min
 Lab File: VL043327.D
 Acq: 08 Dec 2025 23:34

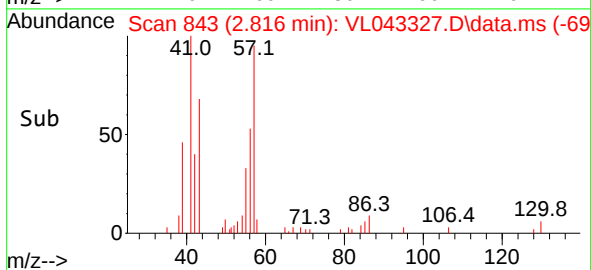
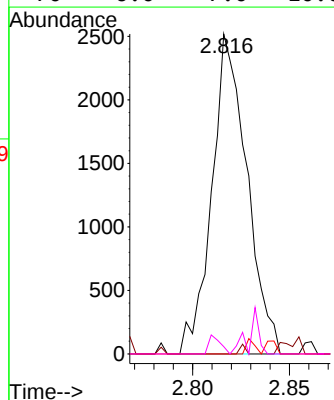
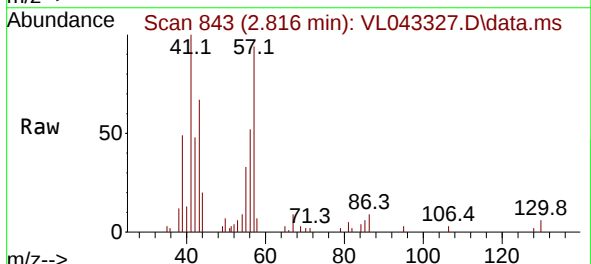
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

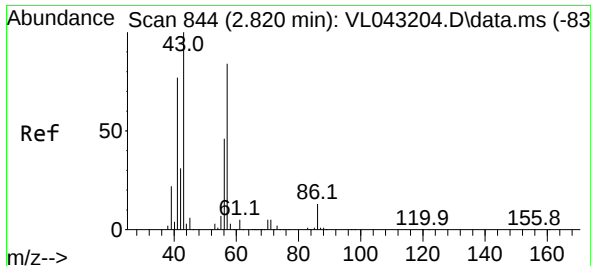
Tgt Ion: 43	Resp: 1989
Ion Ratio	Lower Upper
43 100	
86 9.6	6.2 9.2#
42 0.0	8.0 12.0#
44 48.0	4.0 6.0#



#25
 Ethyl Acetate
 Concen: 0.080 ppbv
 RT: 2.816 min Scan# 843
 Delta R.T. -0.013 min
 Lab File: VL043327.D
 Acq: 08 Dec 2025 23:34

Tgt	Ion: 43	Resp:	3164
Ion	Ratio	Lower	Upper
43	100		
45	2.2	8.1	12.1#
61	0.0	7.0	10.4#
70	6.0	7.0	10.6#

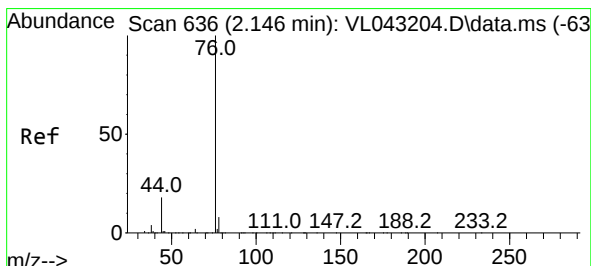
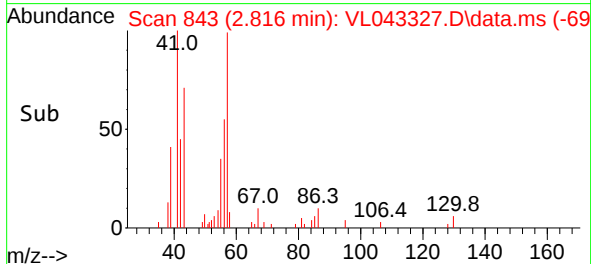
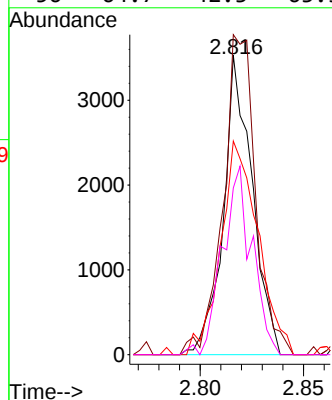
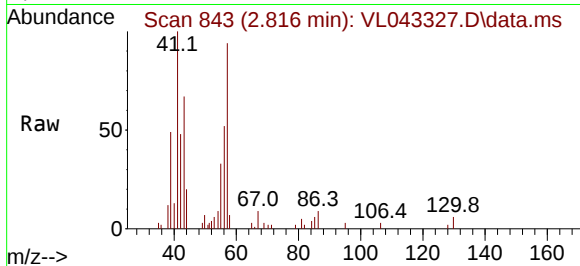




#26
Hexane
Concen: 0.197 ppbv
RT: 2.816 min Scan# 844
Delta R.T. -0.004 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

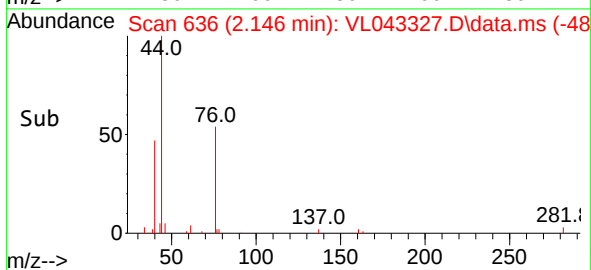
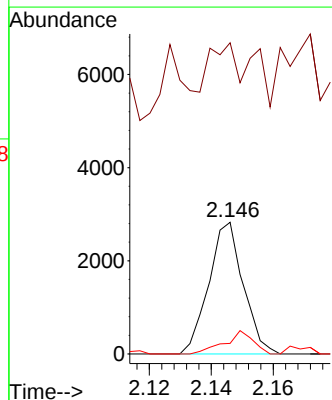
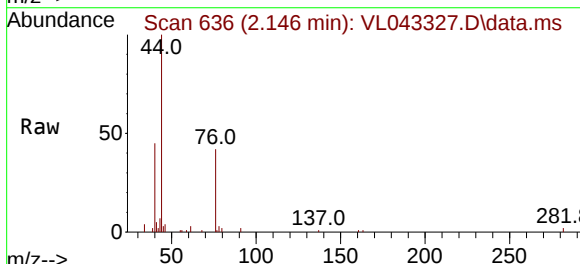
Instrument :
MSVOA_L
ClientSampleId :
SV2

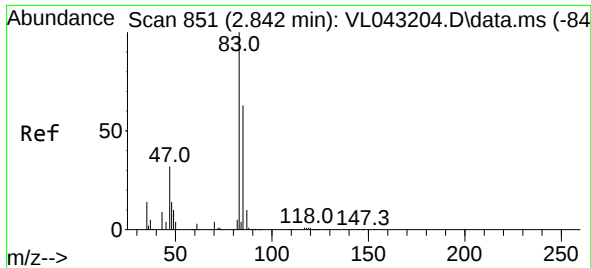
Tgt Ion: 57	Resp: 3424
Ion Ratio	Lower Upper
57 100	
41 128.3	74.6 111.8#
43 95.2	179.0 268.4#
56 64.7	42.3 63.5#



#27
Carbon Disulfide
Concen: 0.123 ppbv
RT: 2.146 min Scan# 636
Delta R.T. -0.000 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 76	Resp: 2184		
Ion Ratio	Lower	Upper	
76 100			
44 506.6	16.1	24.1#	
78 18.3	9.6	14.4#	

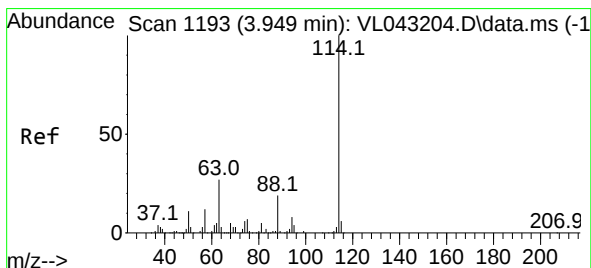
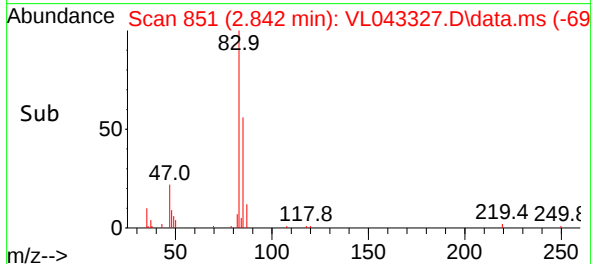
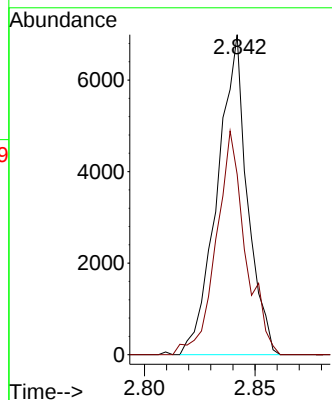
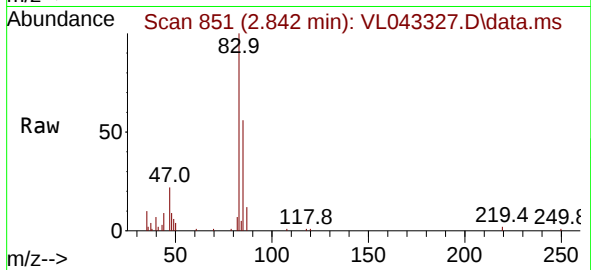




#29
Chloroform
Concen: 0.269 ppbv
RT: 2.842 min Scan# 851
Delta R.T. -0.000 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

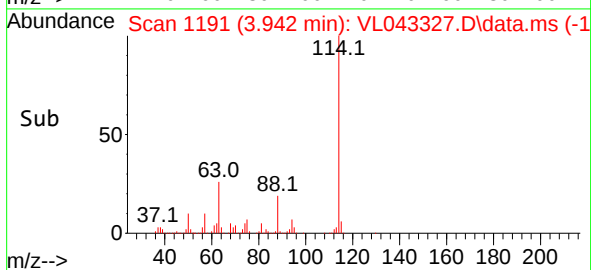
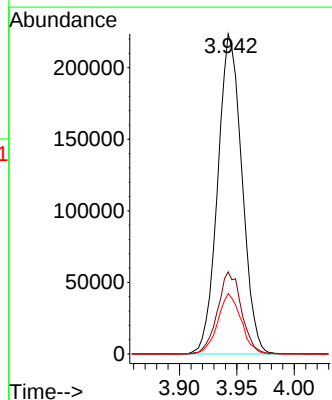
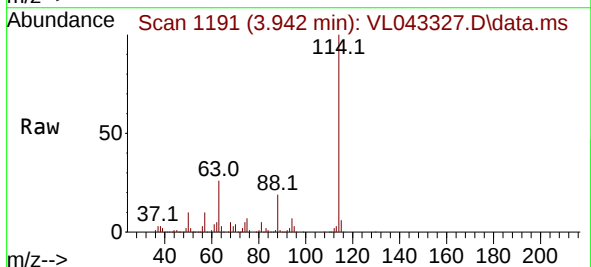
Instrument :
MSVOA_L
ClientSampleId :
SV2

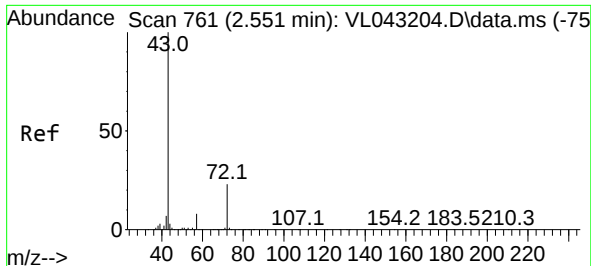
Tgt Ion: 83 Resp: 6635
Ion Ratio Lower Upper
83 100
85 56.3 50.5 75.7



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.942 min Scan# 1191
Delta R.T. -0.007 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 114 Resp: 327839
Ion Ratio Lower Upper
114 100
63 25.5 21.0 31.6
88 18.2 14.9 22.3

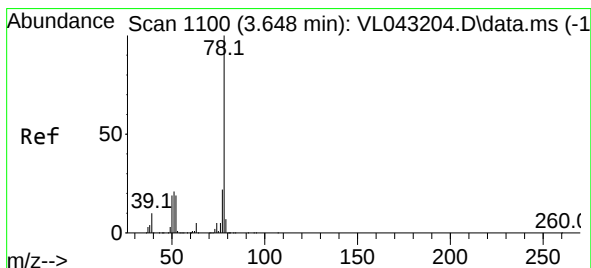
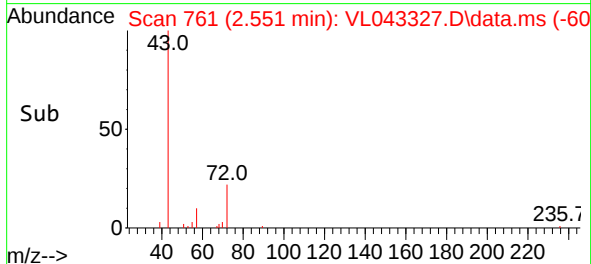
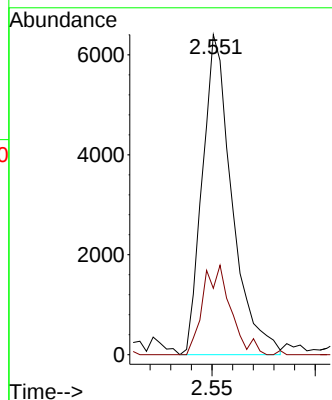
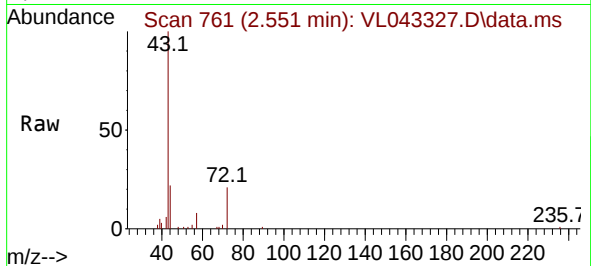




#34
2-Butanone
Concen: 0.275 ppbv
RT: 2.551 min Scan# 761
Delta R.T. -0.000 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

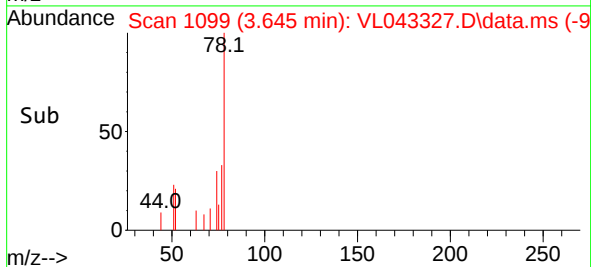
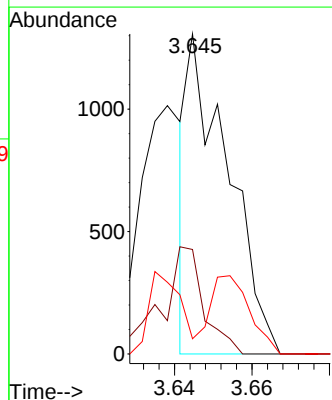
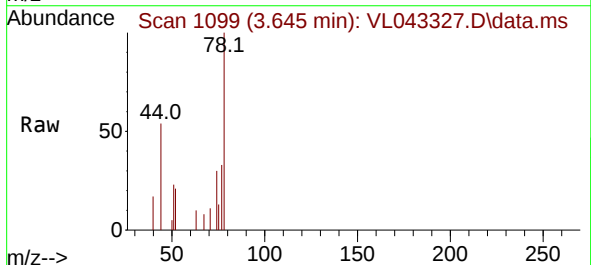
Instrument :
MSVOA_L
ClientSampleId :
SV2

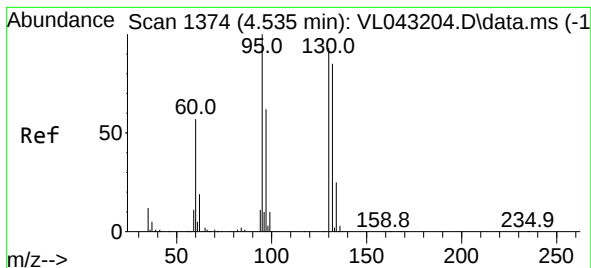
Tgt Ion: 43 Resp: 6373
Ion Ratio Lower Upper
43 100
72 26.6 18.1 27.1



#36
Benzene
Concen: 0.030 ppbv
RT: 3.645 min Scan# 1099
Delta R.T. -0.004 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 78 Resp: 953
Ion Ratio Lower Upper
78 100
77 32.7 17.5 26.3#
50 4.7 15.5 23.3#





#38

Trichloroethene

Concen: 4.720 ppbv

RT: 4.531 min Scan# 1191

Delta R.T. -0.004 min

Lab File: VL043327.D

Acq: 08 Dec 2025 23:34

Instrument :

MSVOA_L

ClientSampleId :

SV2

Tgt Ion:130 Resp: 57976

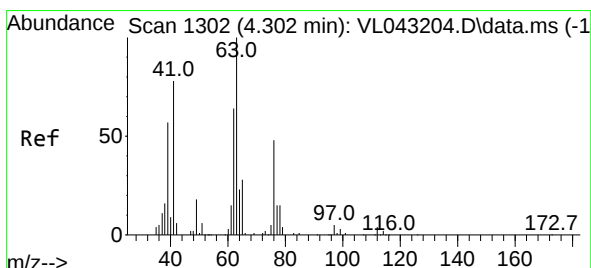
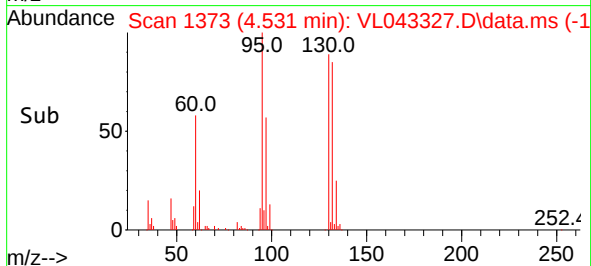
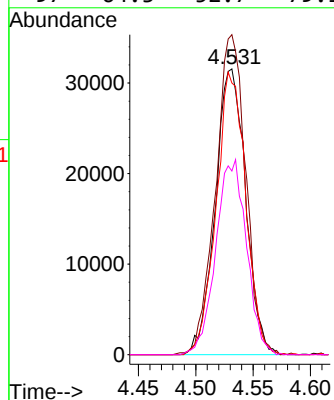
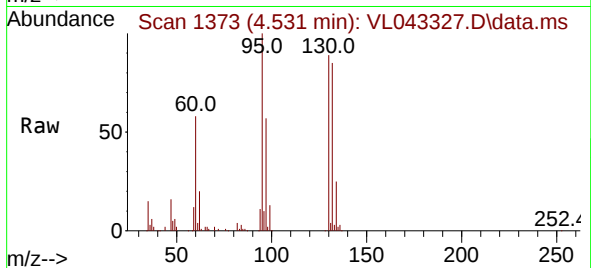
Ion Ratio Lower Upper

130 100

95 112.0 85.7 128.5

132 95.1 73.4 110.0

97 64.3 52.7 79.1



#39

1,2-Dichloropropane

Concen: 7.254 ppbv

RT: 3.942 min Scan# 1191

Delta R.T. -0.360 min

Lab File: VL043327.D

Acq: 08 Dec 2025 23:34

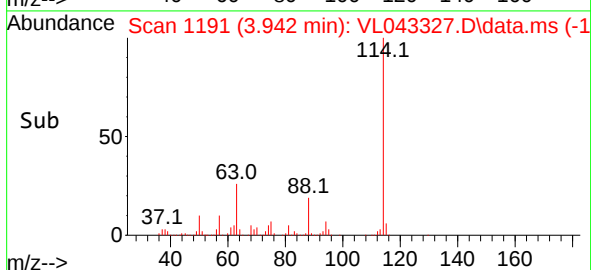
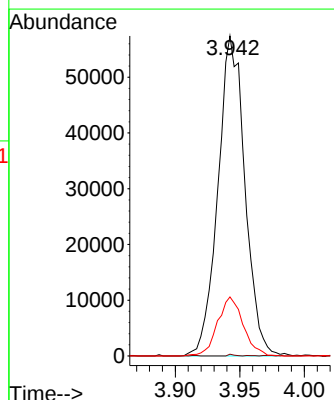
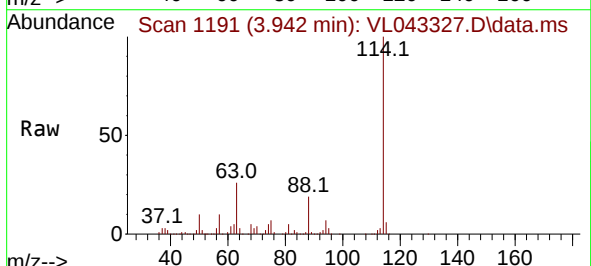
Tgt Ion: 63 Resp: 83352

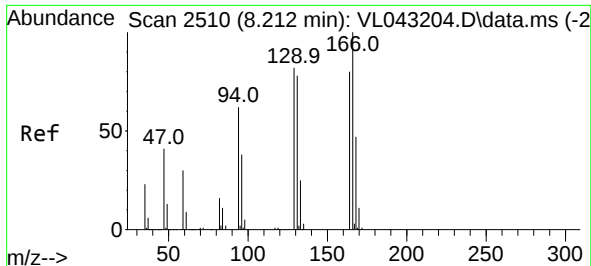
Ion Ratio Lower Upper

63 100

41 0.5 62.6 93.8#

62 18.5 51.0 76.6#

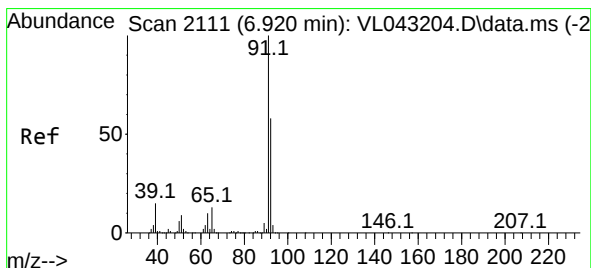
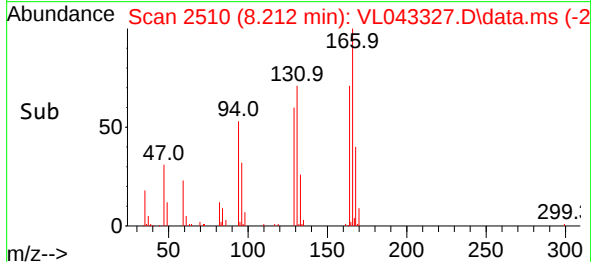
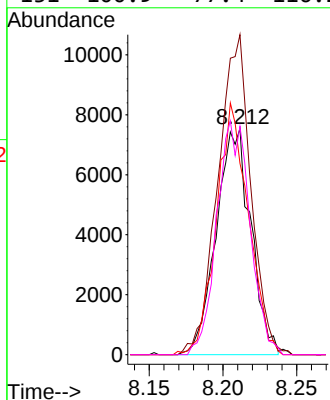
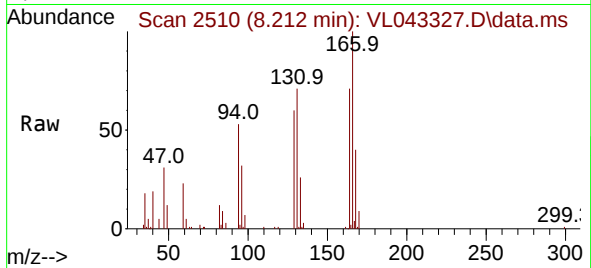




#52
Tetrachloroethene
Concen: 1.053 ppbv
RT: 8.212 min Scan# 2108
Delta R.T. -0.000 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

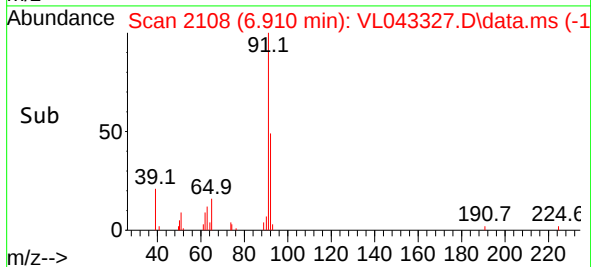
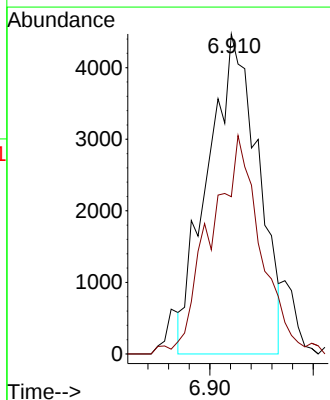
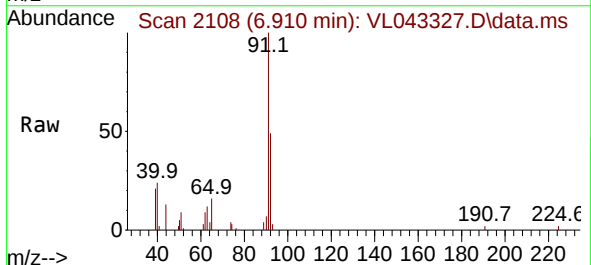
Instrument :
MSVOA_L
ClientSampleId :
SV2

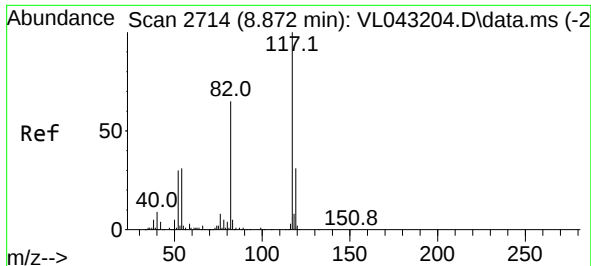
Tgt Ion:	164	Resp:	12298
Ion	Ratio	Lower	Upper
164	100		
166	141.5	99.4	149.2
129	83.1	81.8	122.8
131	100.9	77.4	116.2



#53
Toluene
Concen: 0.203 ppbv
RT: 6.910 min Scan# 2108
Delta R.T. -0.010 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion:	91	Resp:	7564
Ion	Ratio	Lower	Upper
91	100		
92	68.5	47.4	71.0

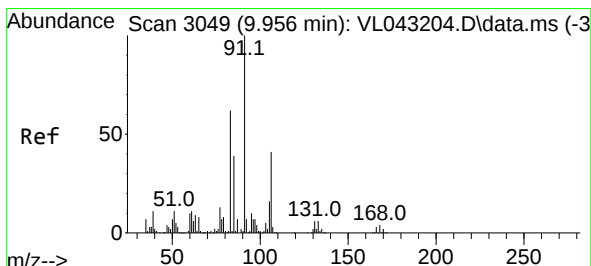
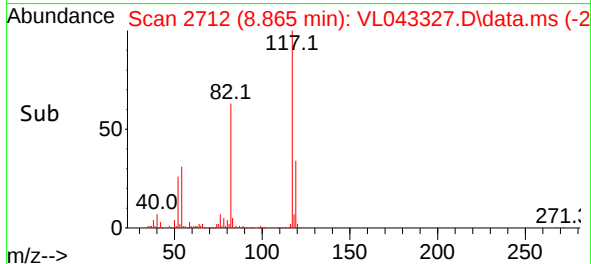
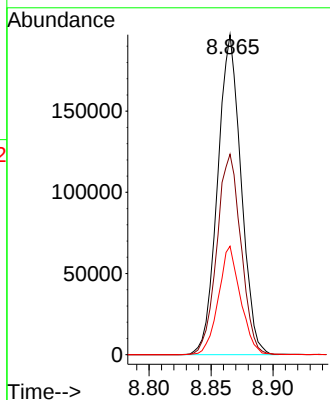
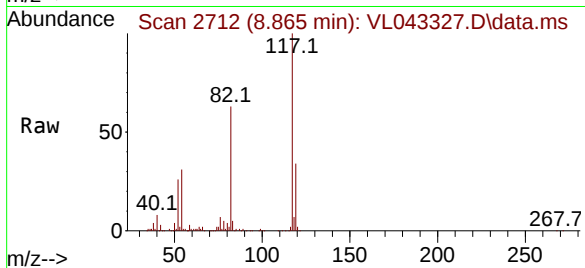




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.865 min Scan# 21
Delta R.T. -0.007 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

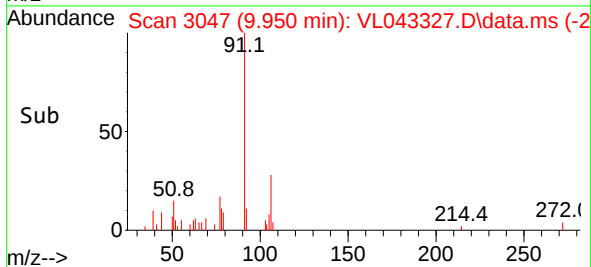
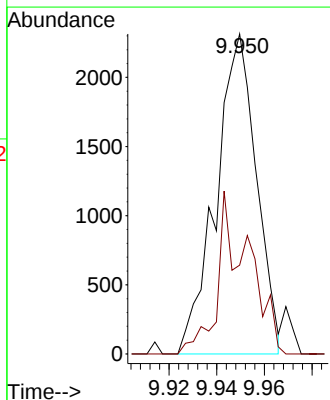
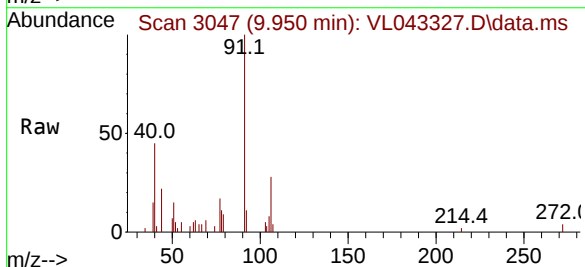
Instrument :
MSVOA_L
ClientSampleId :
SV2

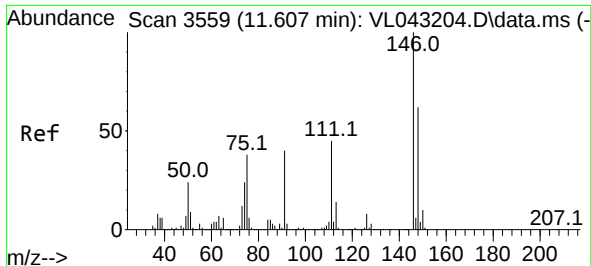
Tgt Ion:117 Resp: 260554
Ion Ratio Lower Upper
117 100
82 64.4 56.1 84.1
119 32.1 25.0 37.6



#60
o-Xylene
Concen: 0.068 ppbv
RT: 9.950 min Scan# 3047
Delta R.T. -0.007 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 91 Resp: 2723
Ion Ratio Lower Upper
91 100
106 39.1 20.9 62.8

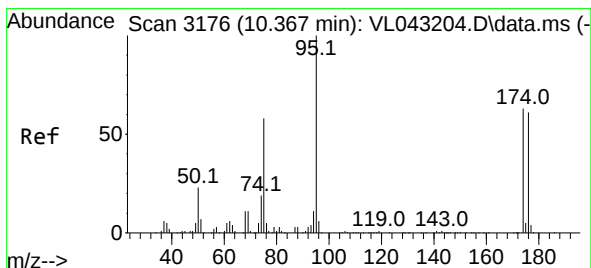
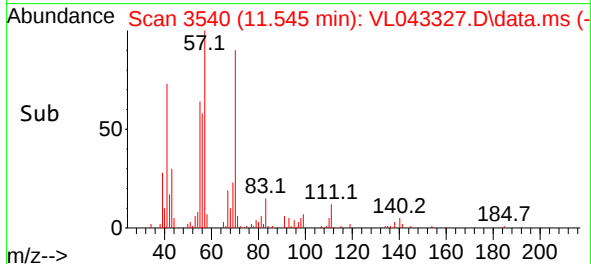
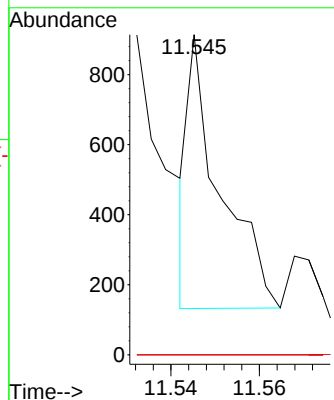
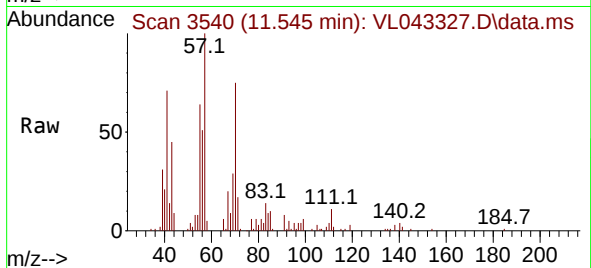




#66
Benzyl Chloride
Concen: 0.060 ppbv
RT: 11.545 min Scan# 3154
Delta R.T. -0.062 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

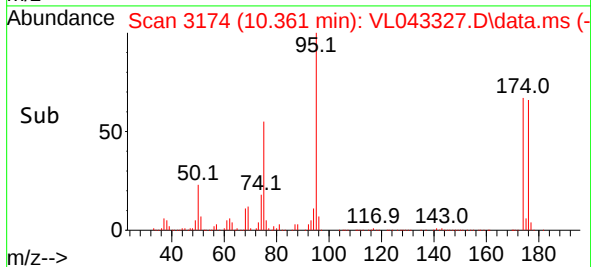
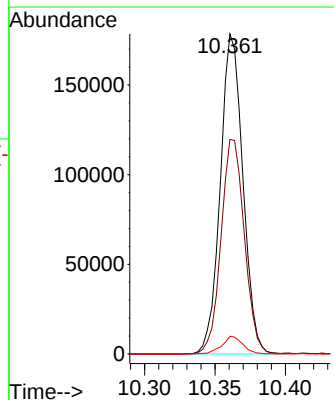
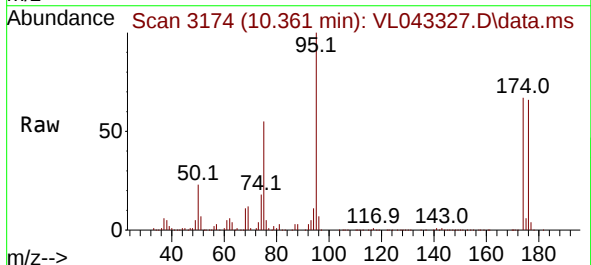
Instrument :
MSVOA_L
ClientSampleId :
SV2

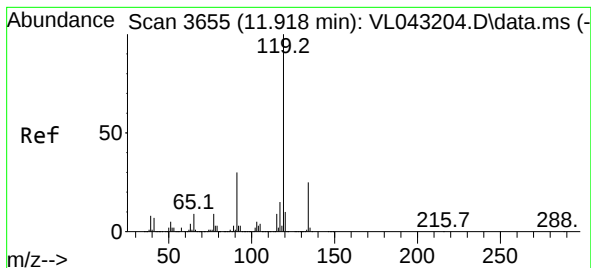
Tgt Ion: 91 Resp: 393
Ion Ratio Lower Upper
91 100
126 0.0 14.4 21.6#
128 4.6 4.6 6.8



#68
1-Bromo-4-Fluorobenzene
Concen: 10.432 ppbv
RT: 10.361 min Scan# 3174
Delta R.T. -0.007 min
Lab File: VL043327.D
Acq: 08 Dec 2025 23:34

Tgt Ion: 95 Resp: 199245
Ion Ratio Lower Upper
95 100
174 69.4 50.2 75.2
175 5.1 4.1 6.1





#69

p-Isopropyltoluene

Concen: 0.035 ppbv

RT: 11.914 min Scan# 3

Delta R.T. -0.004 min

Lab File: VL043327.D

Acq: 08 Dec 2025 23:34

Instrument :

MSVOA_L

ClientSampleId :

SV2

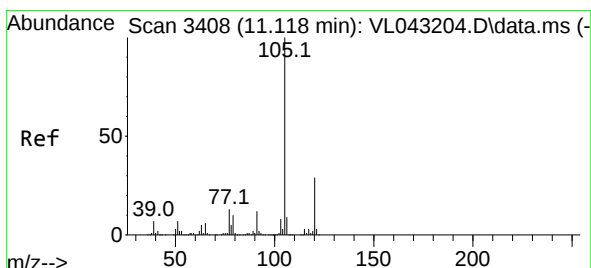
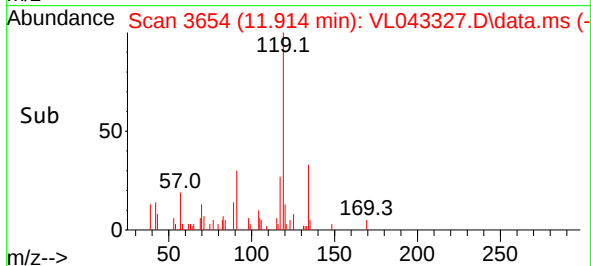
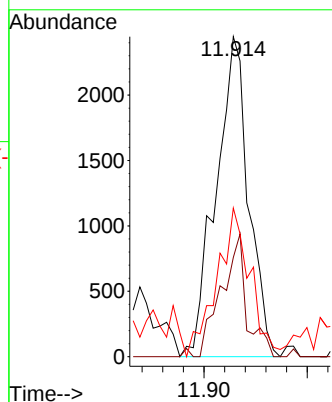
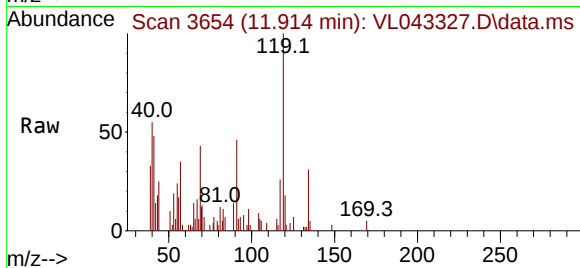
Tgt Ion:119 Resp: 2688

Ion Ratio Lower Upper

119 100

134 30.4 20.2 30.2#

91 43.1 23.8 35.8#



#72

4-Ethyltoluene

Concen: 0.035 ppbv

RT: 11.108 min Scan# 3405

Delta R.T. -0.010 min

Lab File: VL043327.D

Acq: 08 Dec 2025 23:34

Tgt Ion:105 Resp: 1732

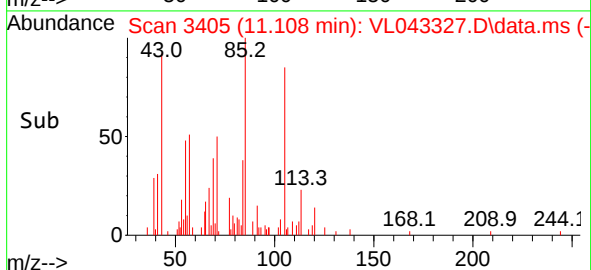
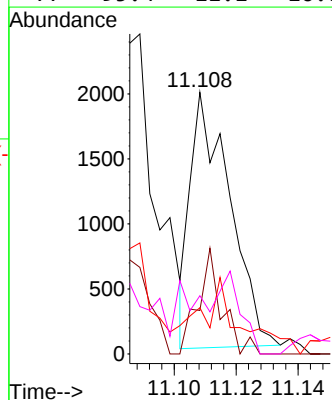
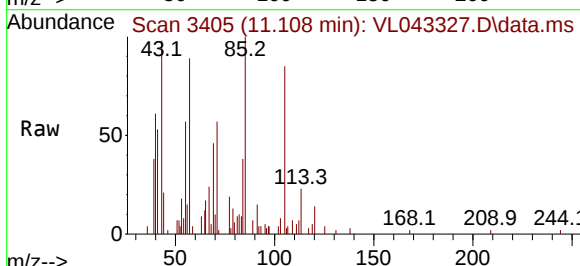
Ion Ratio Lower Upper

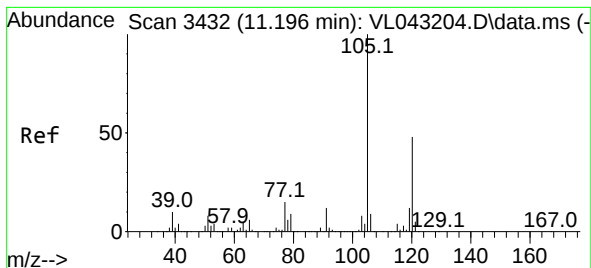
105 100

120 0.0 23.8 35.8#

91 21.1 10.3 15.5#

77 95.4 11.1 16.7#





#73

1,3,5-Trimethylbenzene

Concen: 0.062 ppbv

RT: 11.192 min Scan# 34

Delta R.T. -0.004 min

Lab File: VL043327.D

Acq: 08 Dec 2025 23:34

Instrument :

MSVOA_L

ClientSampleId :

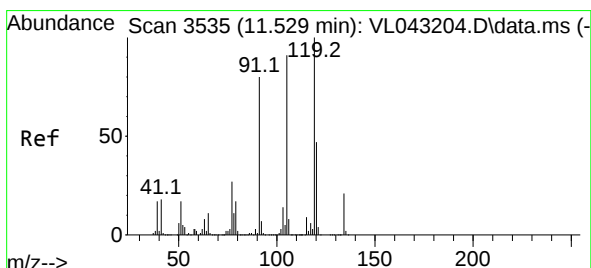
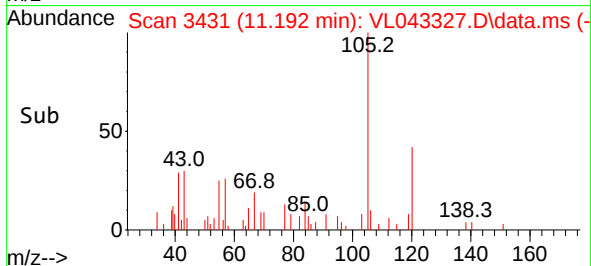
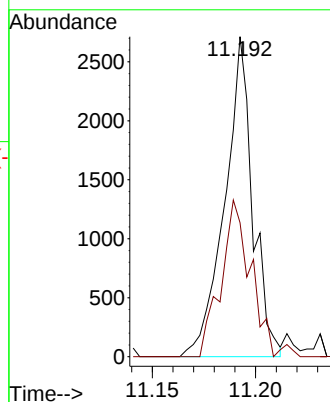
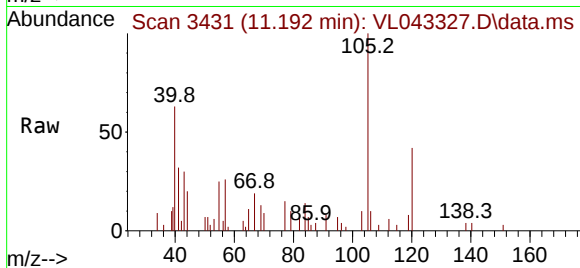
SV2

Tgt Ion:105 Resp: 2553

Ion Ratio Lower Upper

105 100

120 41.8 38.6 57.8



#74

1,2,4-Trimethylbenzene

Concen: 0.166 ppbv

RT: 11.526 min Scan# 3534

Delta R.T. -0.004 min

Lab File: VL043327.D

Acq: 08 Dec 2025 23:34

Tgt Ion:105 Resp: 7455

Ion Ratio Lower Upper

105 100

120 41.1 41.7 62.5#

91 9.2 70.0 105.0#

77 14.2 23.8 35.8#

