

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL033125\
 Data File : VL042205.D
 Acq On : 31 Mar 2025 11:52
 Operator : SY/MD
 Sample : Q1669-06DL 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SSSG-DUP-1-3262025DL

Quant Time: Apr 01 01:37:39 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Mar 28 02:00:52 2025
 Response via : Initial Calibration

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

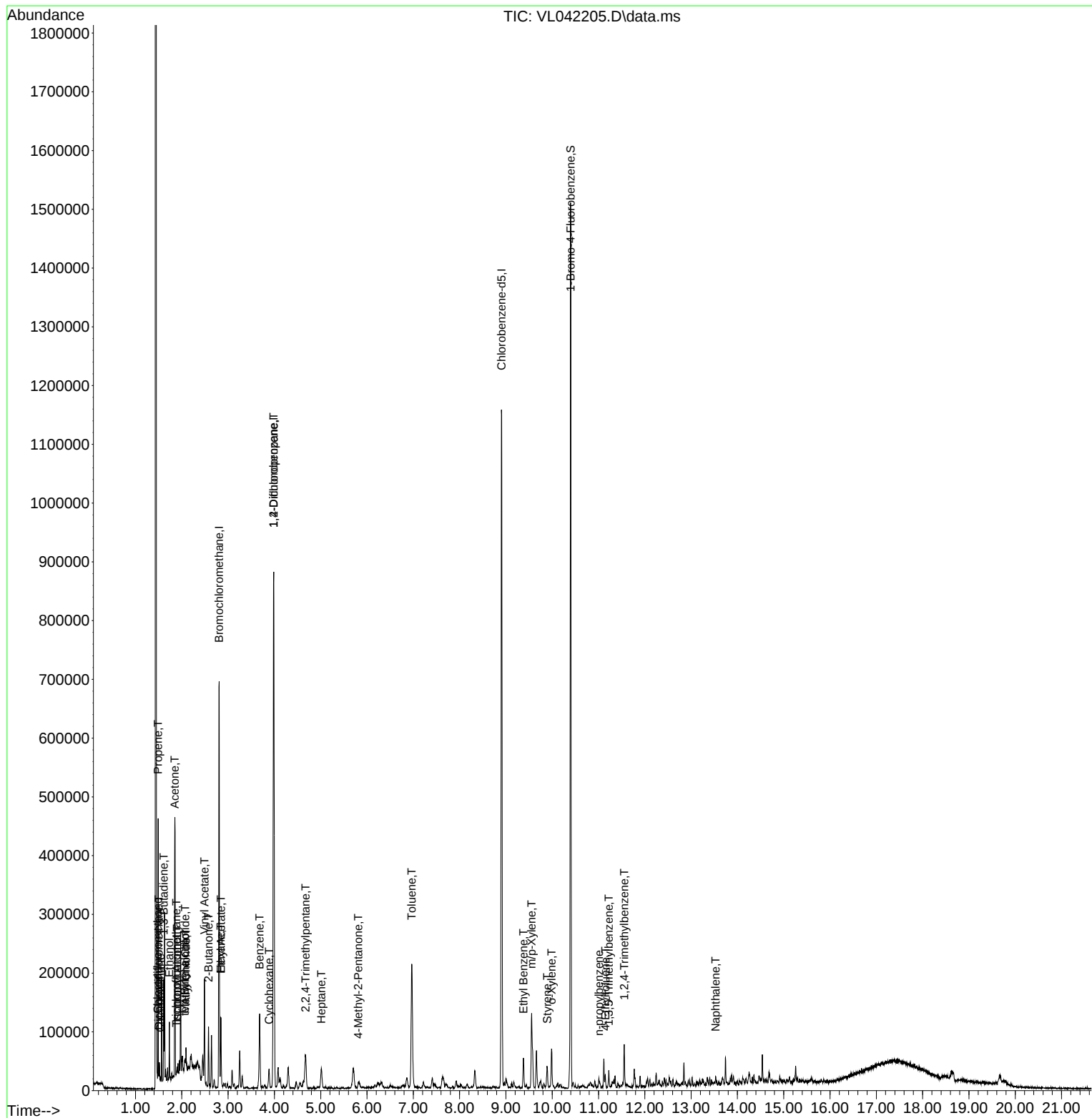
Internal Standards						
1) Bromochloromethane	2.803	49	188934	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	3.985	114	537109	10.000	ppbv	0.03
55) Chlorobenzene-d5	8.908	117	480959	10.000	ppbv	0.03
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.397	95	388692	9.841	ppbv	0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.400%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.502	85	3598	0.129	ppbv #	84
3) Chlorodifluoromethane	1.483	51	2993	0.105	ppbv #	84
4) Chloromethane	1.538	50	1536	0.135	ppbv #	82
9) Propene	1.489	41	58893	4.509	ppbv	95
10) Heptane	5.014	43	10399	0.299	ppbv #	28
11) Trichlorofluoromethane	1.884	101	1386	0.051	ppbv	86
13) Ethanol	1.732	45	32574	26.380	ppbv	84
15) Acetone	1.845	43	190475	7.209	ppbv #	85
16) 1,3-Butadiene	1.609	39	26963	2.089	ppbv #	50
17) tert-Butyl alcohol	2.062	59	1819	0.055	ppbv #	71
19) Isopropyl Alcohol	1.897	45	5660	0.380	ppbv #	1
20) Methylene Chloride	2.075	84	2549	0.259	ppbv #	93
21) Allyl Chloride	2.088	41	2790	0.150	ppbv #	1
23) Vinyl Acetate	2.489	43	50576	4.422	ppbv #	52
25) Ethyl Acetate	2.846	43	20526	0.299	ppbv #	79
26) Hexane	2.842	57	29019	1.095	ppbv #	33
30) Cyclohexane	3.884	84	8868	0.386	ppbv	96
34) 2-Butanone	2.577	43	62430	1.603	ppbv	99
36) Benzene	3.681	78	76263	1.432	ppbv	98
39) 1,2-Dichloropropane	3.985	63	136854	7.057	ppbv #	22
44) 2,2,4-Trimethylpentane	4.671	57	50242	0.558	ppbv #	79
50) 4-Methyl-2-Pentanone	5.810	43	2646	0.043	ppbv #	14
53) Toluene	6.966	91	150266	2.381	ppbv	98
58) Ethyl Benzene	9.377	91	27471	0.322	ppbv	95
59) m/p-Xylene	9.555	91	81487	1.195	ppbv	99
60) o-Xylene	9.986	91	28632	0.419	ppbv	92
61) Styrene	9.895	104	9837	0.291	ppbv	92
64) n-propylbenzene	11.012	120	1291	0.049	ppbv	96
72) 4-Ethyltoluene	11.148	105	7817	0.092	ppbv #	55
73) 1,3,5-Trimethylbenzene	11.222	105	7557	0.102	ppbv	89
74) 1,2,4-Trimethylbenzene	11.555	105	24393	0.285	ppbv #	70
79) Naphthalene	13.530	128	6586	0.070	ppbv	97

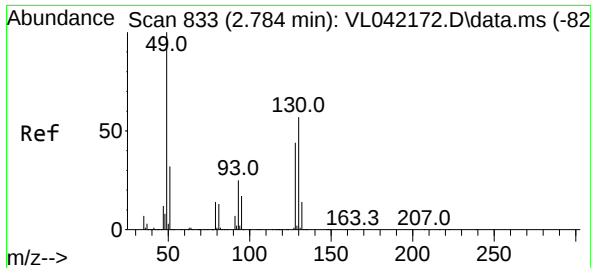
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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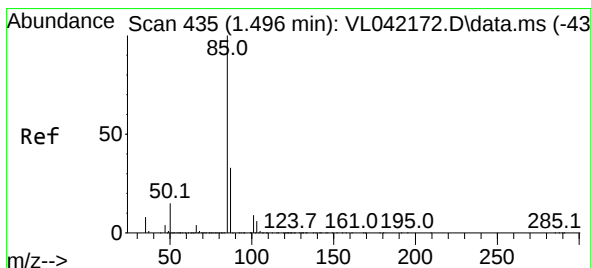
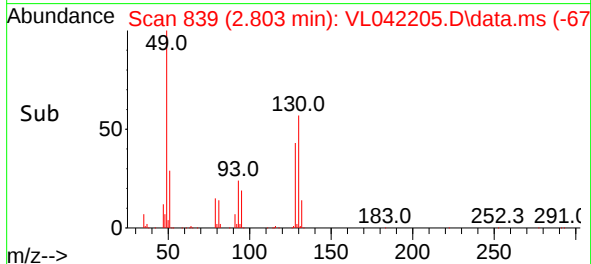
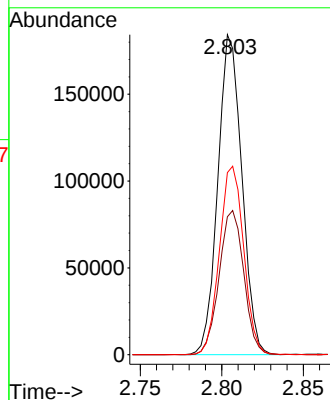
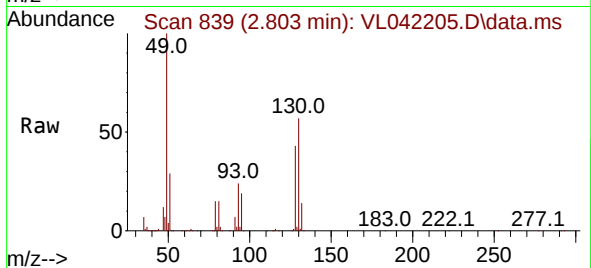




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.803 min Scan# 81
Delta R.T. 0.019 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

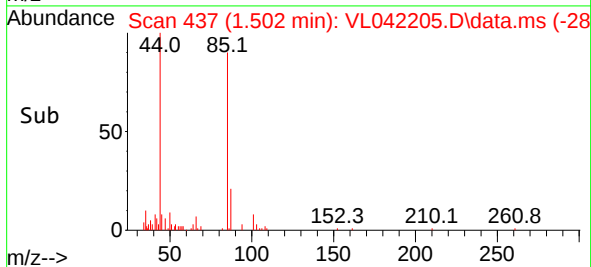
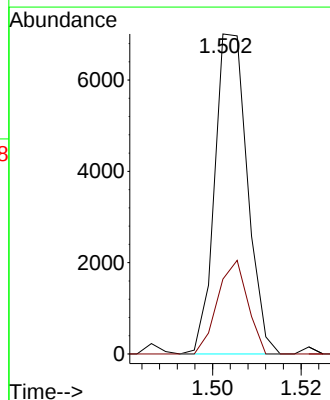
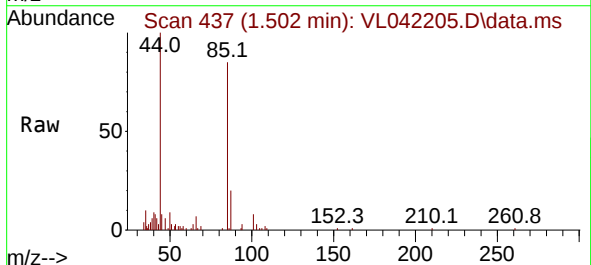
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

Tgt Ion: 49 Resp: 188934
Ion Ratio Lower Upper
49 100
128 46.3 22.9 68.5
130 59.5 28.8 86.4



#2
Dichlorodifluoromethane
Concen: 0.129 ppbv
RT: 1.502 min Scan# 437
Delta R.T. 0.007 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 85 Resp: 3598
Ion Ratio Lower Upper
85 100
87 23.4 26.1 39.1#

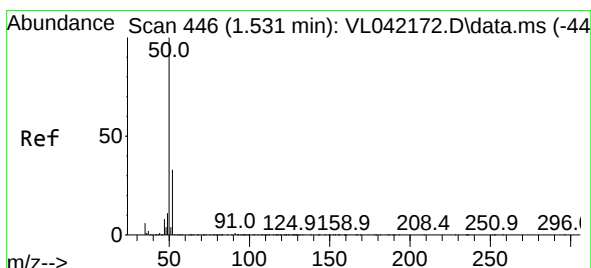
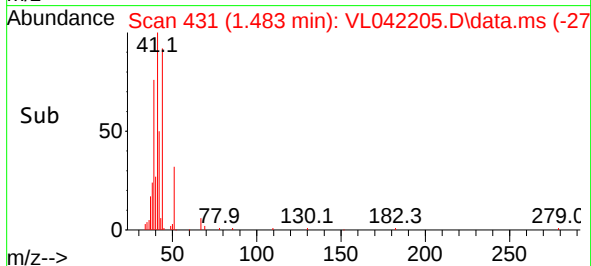
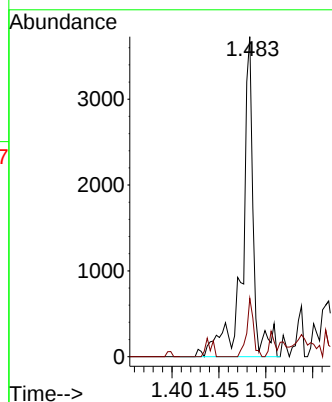
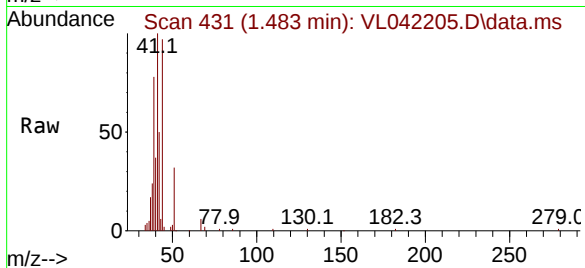




#3
Chlorodifluoromethane
Concen: 0.105 ppbv
RT: 1.483 min Scan# 41
Delta R.T. 0.010 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

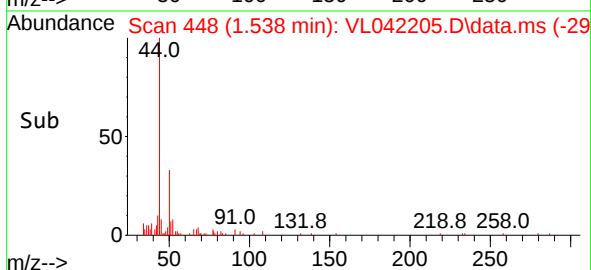
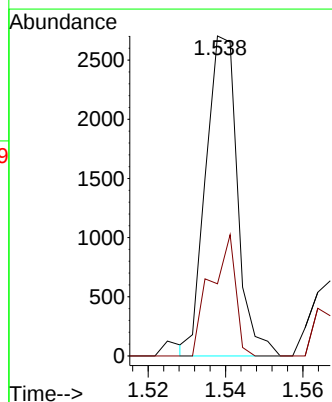
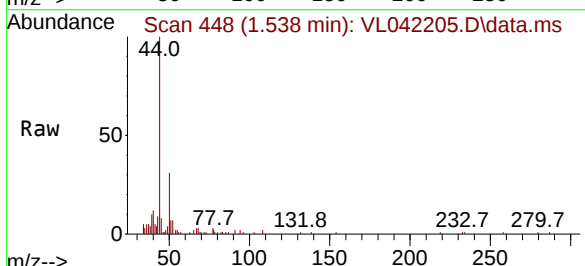
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

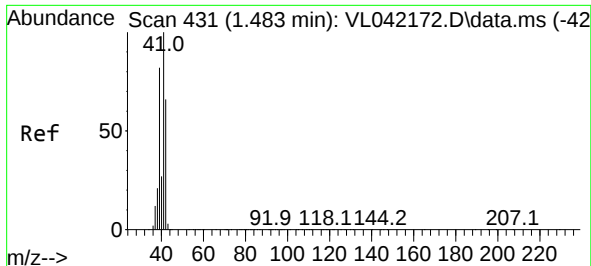
Tgt Ion: 51 Resp: 2993
Ion Ratio Lower Upper
51 100
67 11.4 15.0 22.6#



#4
Chloromethane
Concen: 0.135 ppbv
RT: 1.538 min Scan# 448
Delta R.T. 0.007 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 50 Resp: 1536
Ion Ratio Lower Upper
50 100
52 22.6 26.1 39.1#





#9

Propene

Concen: 4.509 ppbv

RT: 1.489 min Scan# 41

Delta R.T. 0.007 min

Lab File: VL042205.D

Acq: 31 Mar 2025 11:52

Instrument :

MSVOA_L

ClientSampleId :

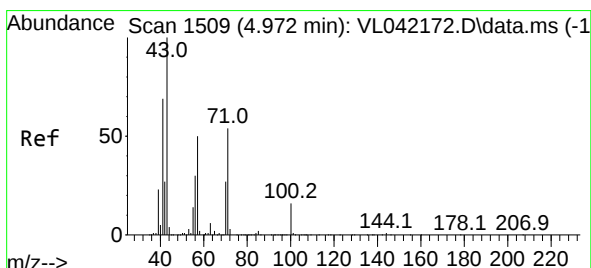
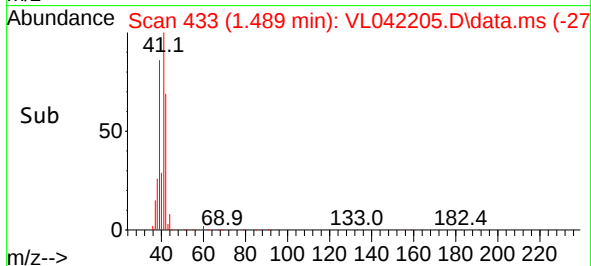
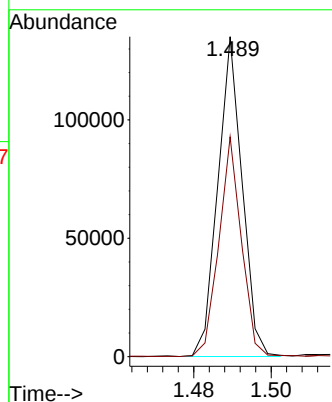
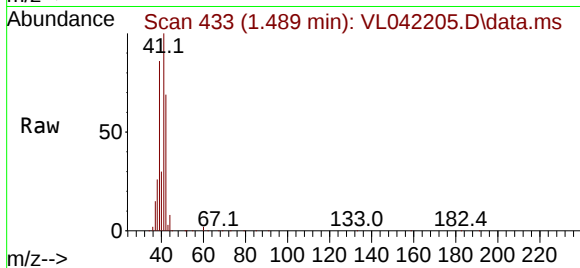
SSSG-DUP-1-3262025DL

Tgt Ion: 41 Resp: 58893

Ion Ratio Lower Upper

41 100

42 65.3 55.4 83.2



#10

Heptane

Concen: 0.299 ppbv

RT: 5.014 min Scan# 1522

Delta R.T. 0.042 min

Lab File: VL042205.D

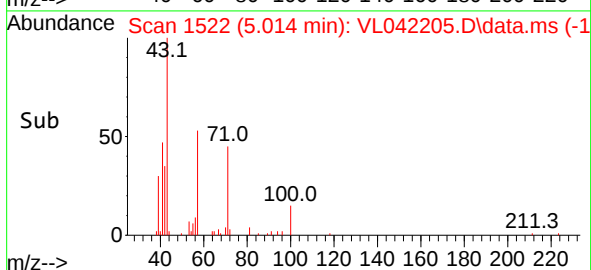
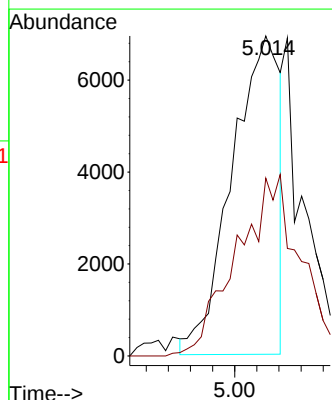
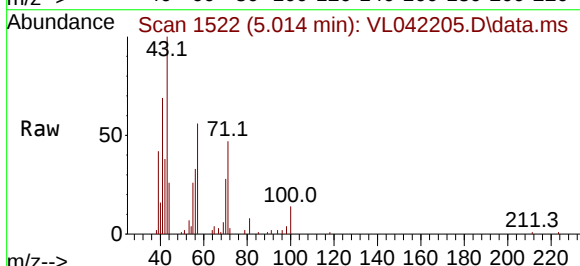
Acq: 31 Mar 2025 11:52

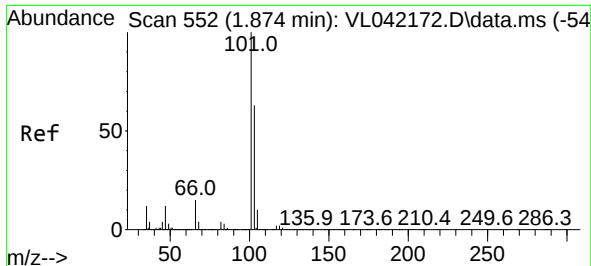
Tgt Ion: 43 Resp: 10399

Ion Ratio Lower Upper

43 100

57 0.0 39.4 59.2#

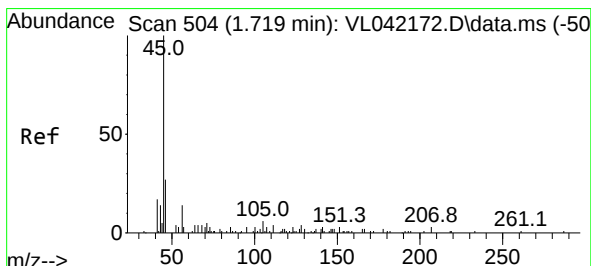
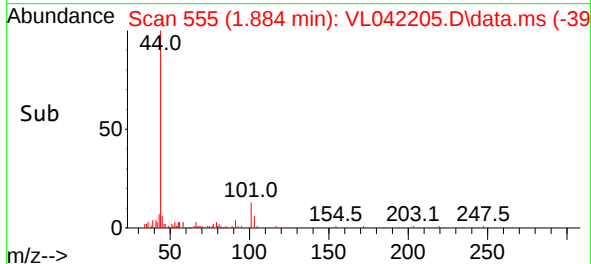
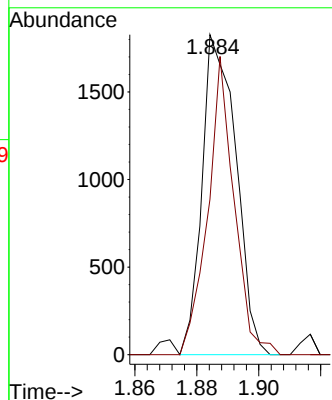
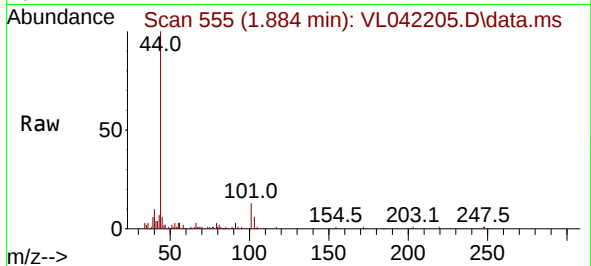




#11
Trichlorofluoromethane
Concen: 0.051 ppbv
RT: 1.884 min Scan# 511
Delta R.T. 0.010 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

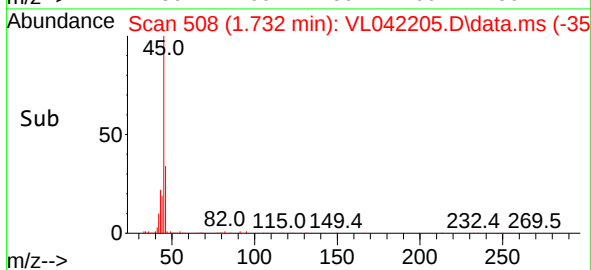
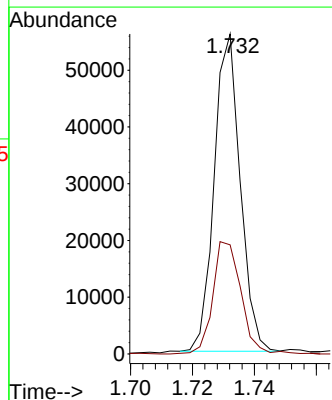
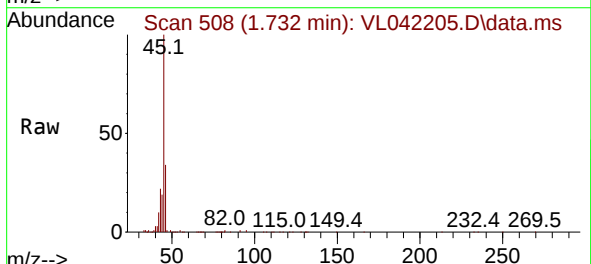
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

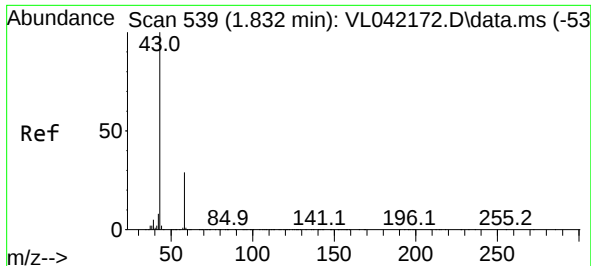
Tgt Ion:101 Resp: 1386
Ion Ratio Lower Upper
101 100
103 52.1 50.2 75.2



#13
Ethanol
Concen: 26.380 ppbv
RT: 1.732 min Scan# 508
Delta R.T. 0.013 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 45 Resp: 32574
Ion Ratio Lower Upper
45 100
46 39.1 20.2 80.8

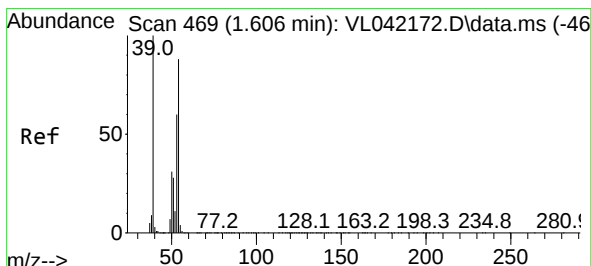
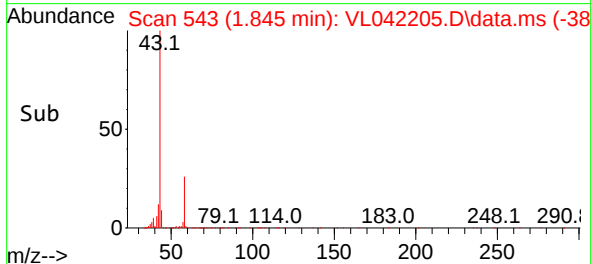
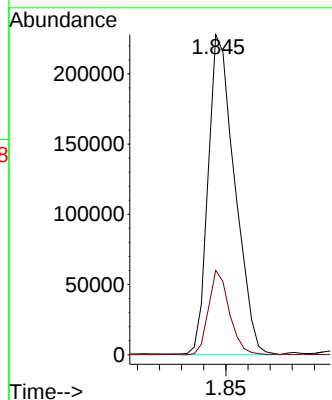
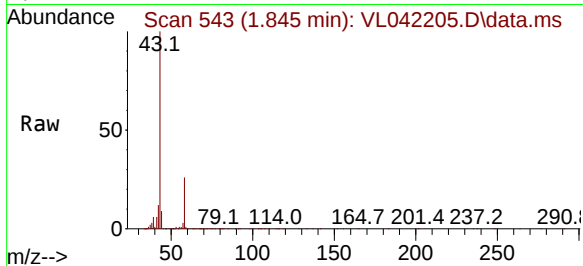




#15
Acetone
Concen: 7.209 ppbv
RT: 1.845 min Scan# 54
Delta R.T. 0.013 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

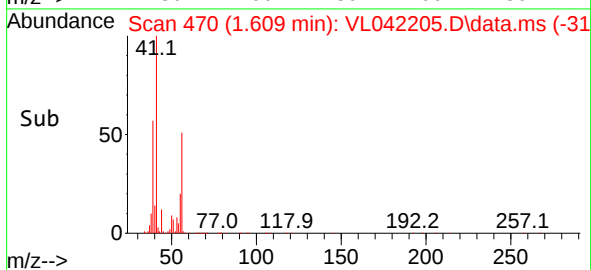
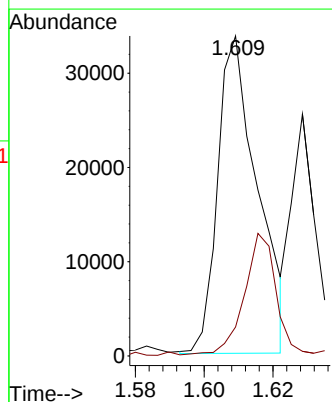
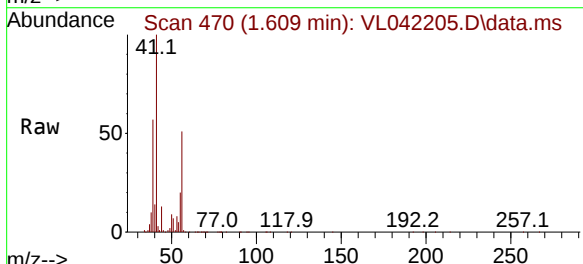
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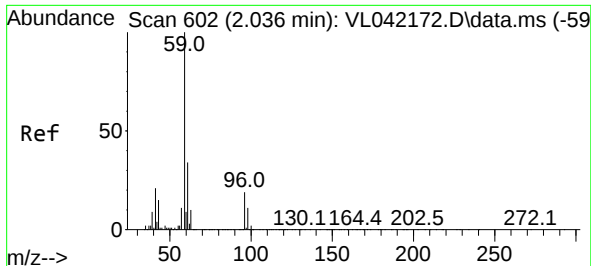
Tgt Ion: 43 Resp: 190475
Ion Ratio Lower Upper
43 100
58 20.7 23.2 34.8#



#16
1,3-Butadiene
Concen: 2.089 ppbv
RT: 1.609 min Scan# 470
Delta R.T. 0.003 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 39 Resp: 26963
Ion Ratio Lower Upper
39 100
54 33.3 60.7 91.1#





#17

tert-Butyl alcohol

Concen: 0.055 ppbv

RT: 2.062 min Scan# 610

Delta R.T. 0.026 min

Lab File: VL042205.D

Acq: 31 Mar 2025 11:52

Instrument :

MSVOA_L

ClientSampleId :

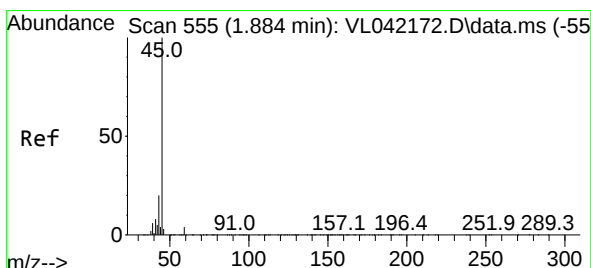
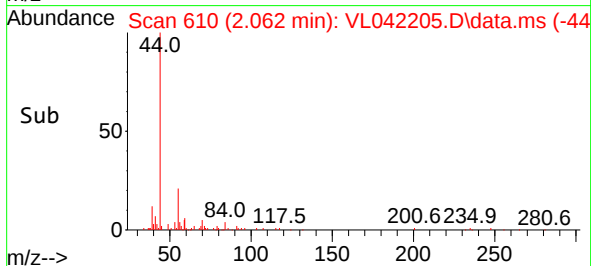
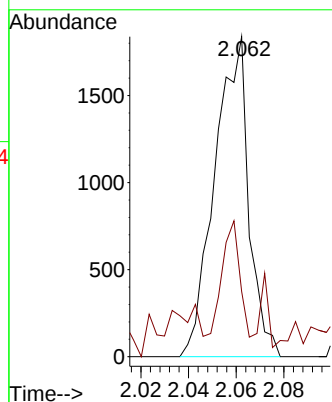
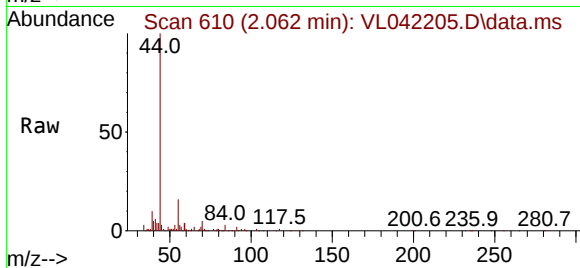
SSSG-DUP-1-3262025DL

Tgt Ion: 59 Resp: 1819

Ion Ratio Lower Upper

59 100

57 0.0 8.9 13.3#



#19

Isopropyl Alcohol

Concen: 0.380 ppbv

RT: 1.897 min Scan# 559

Delta R.T. 0.013 min

Lab File: VL042205.D

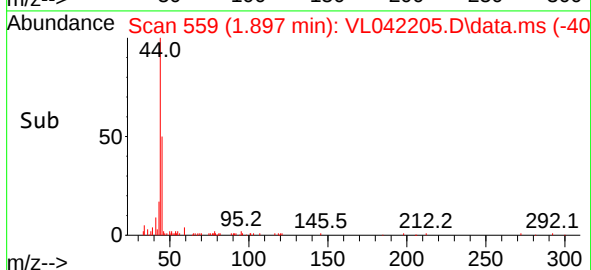
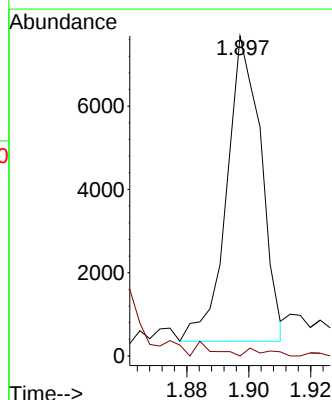
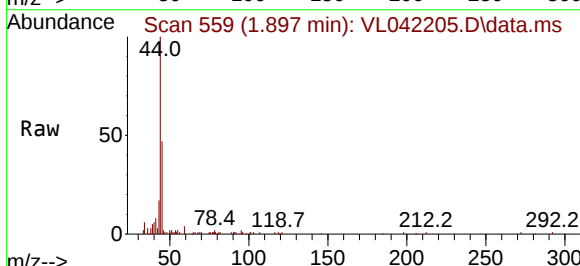
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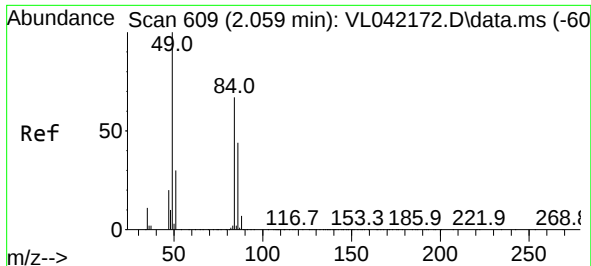
Tgt Ion: 45 Resp: 5660

Ion Ratio Lower Upper

45 100

58 698.4 36.9 55.3#

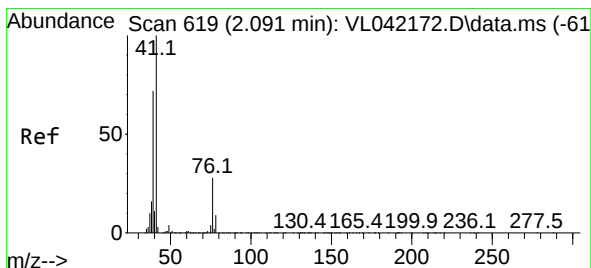
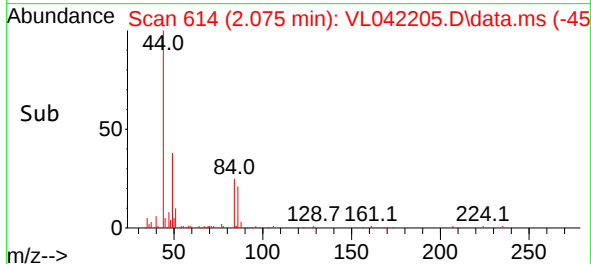
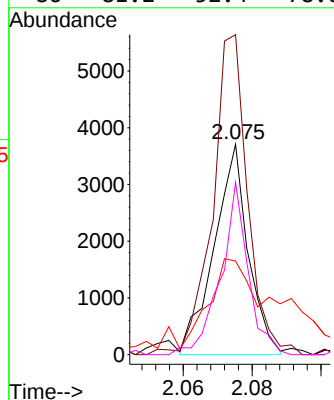
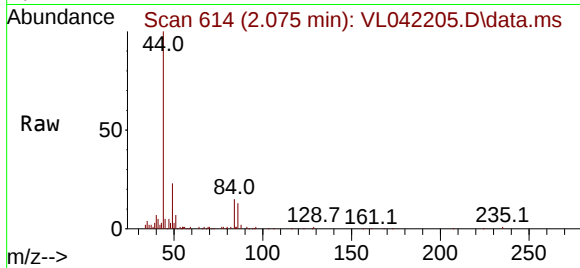




#20
Methylene Chloride
Concen: 0.259 ppbv
RT: 2.075 min Scan# 614
Delta R.T. 0.016 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

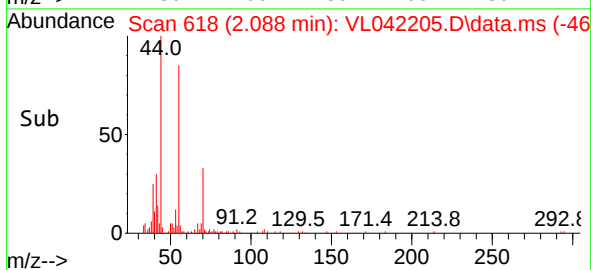
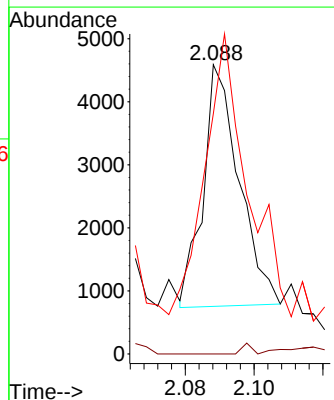
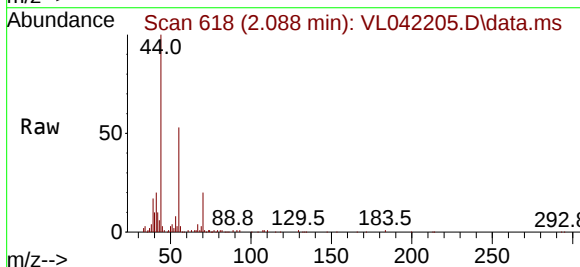
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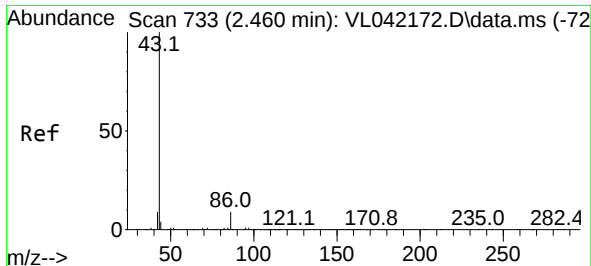
Tgt Ion:	84	Resp:	2549
Ion	Ratio	Lower	Upper
84	100		
49	152.5	120.2	180.4
51	43.9	37.4	56.0
86	81.2	52.4	78.6



#21
Allyl Chloride
Concen: 0.150 ppbv
RT: 2.088 min Scan# 618
Delta R.T. -0.003 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion:	41	Resp:	2790
Ion	Ratio	Lower	Upper
41	100		
76	9.9	24.1	36.1
39	204.9	61.1	91.7

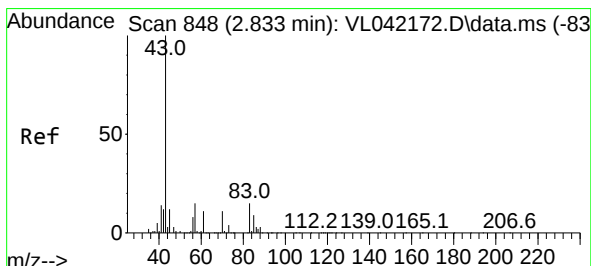
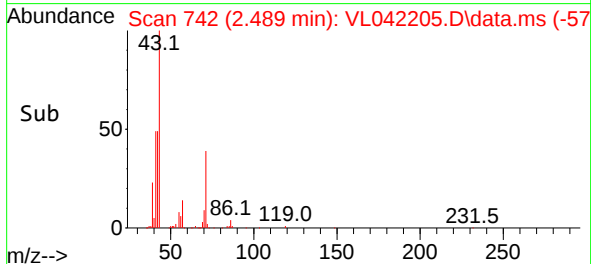
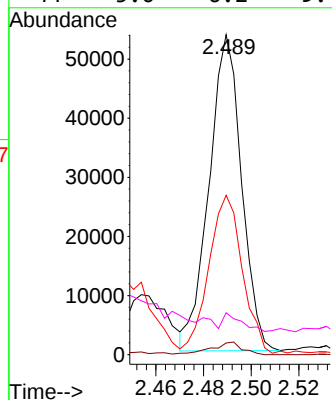
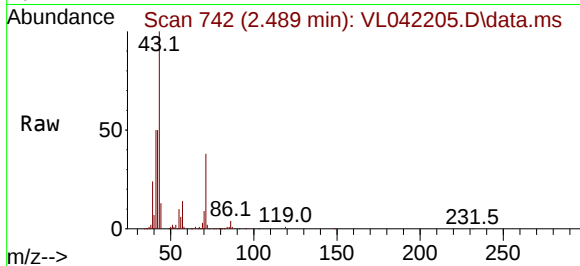




#23
 Vinyl Acetate
 Concen: 4.422 ppbv
 RT: 2.489 min Scan# 741
 Delta R.T. 0.029 min
 Lab File: VL042205.D
 Acq: 31 Mar 2025 11:52

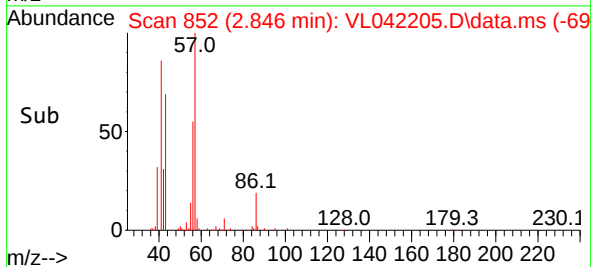
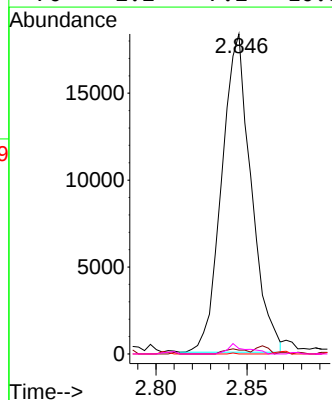
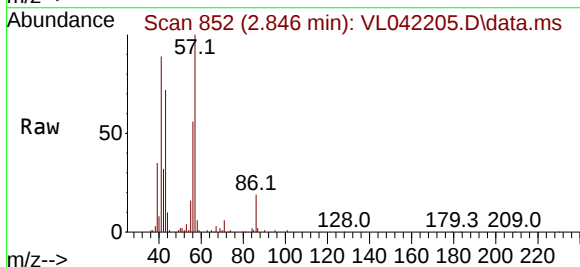
Instrument :
 MSVOA_1
 ClientSampleId :
 SSSG-DUP-1-3262025DL

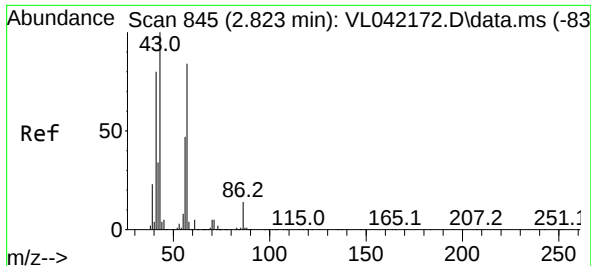
Tgt Ion:	43	Resp:	50576
Ion	Ratio	Lower	Upper
43	100		
86	3.7	5.5	8.3#
42	49.3	8.6	13.0#
44	5.0	6.2	9.4#



#25
 Ethyl Acetate
 Concen: 0.299 ppbv
 RT: 2.846 min Scan# 852
 Delta R.T. 0.013 min
 Lab File: VL042205.D
 Acq: 31 Mar 2025 11:52

Tgt Ion:	43	Resp:	20526
Ion	Ratio	Lower	Upper
43	100		
45	2.4	8.2	12.2#
61	0.3	7.3	10.9#
70	2.2	7.2	10.8#

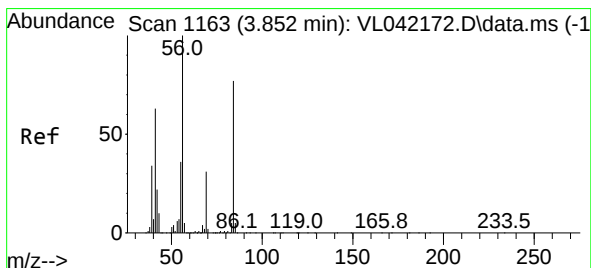
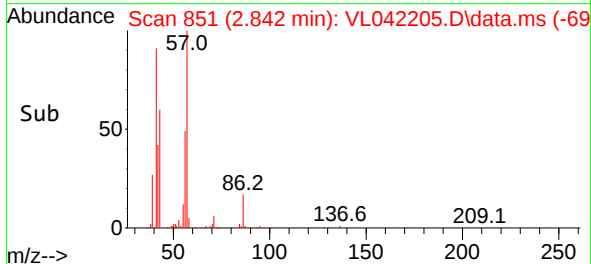
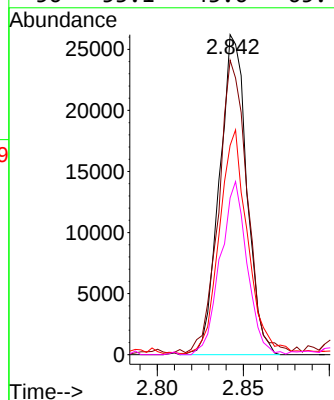
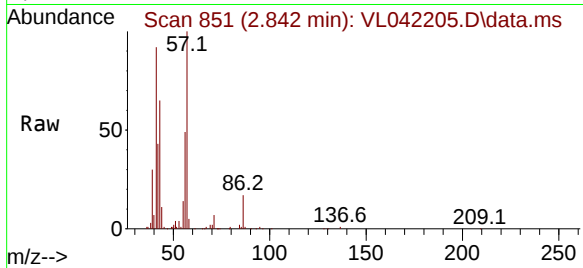




#26
Hexane
Concen: 1.095 ppbv
RT: 2.842 min Scan# 81
Delta R.T. 0.020 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

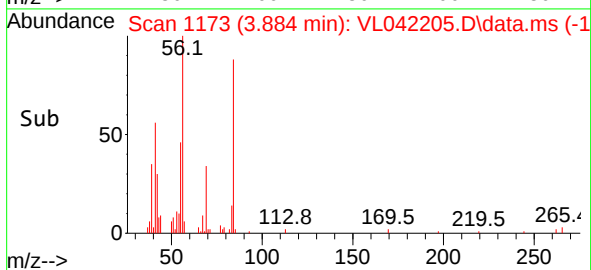
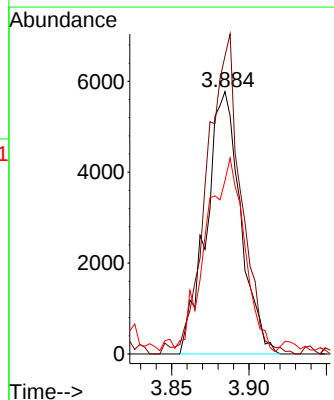
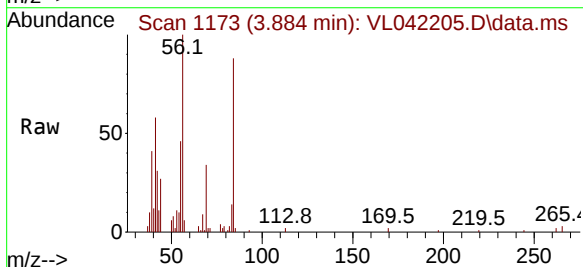
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

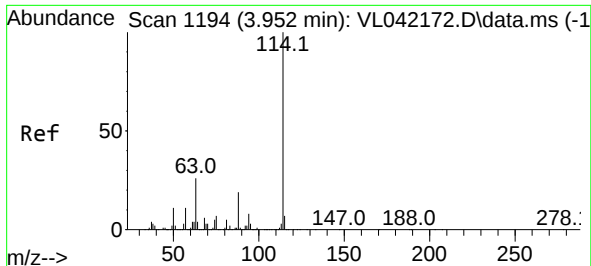
Tgt Ion:	57	Resp:	29019
Ion	Ratio	Lower	Upper
57	100		
41	96.6	76.6	114.8
43	72.3	207.8	311.8#
56	53.1	43.6	65.4



#30
Cyclohexane
Concen: 0.386 ppbv
RT: 3.884 min Scan# 1173
Delta R.T. 0.032 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion:	84	Resp:	8868
Ion	Ratio	Lower	Upper
84	100		
56	121.7	102.8	154.2
41	84.5	66.5	99.7

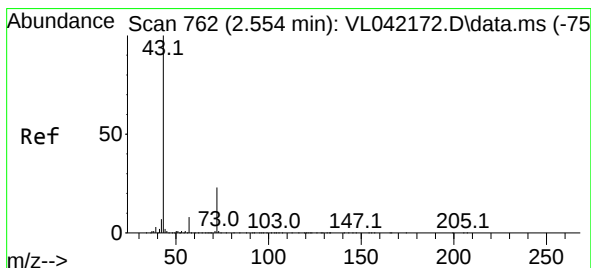
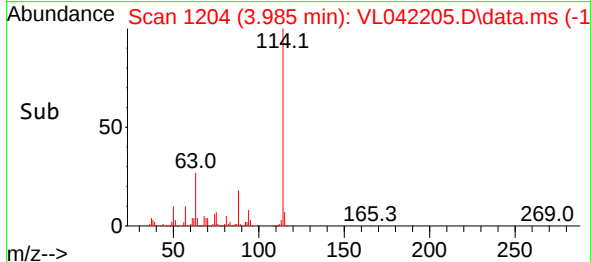
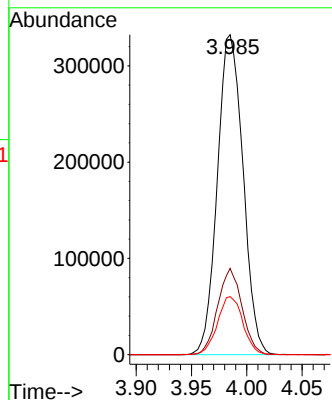
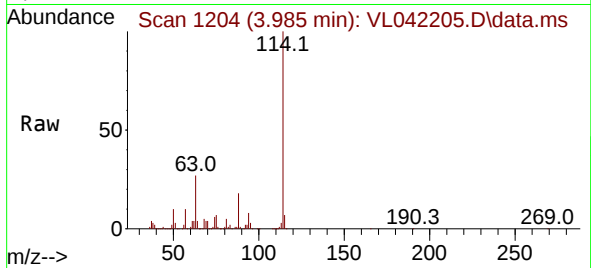




#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.985 min Scan# 1194
Delta R.T. 0.032 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

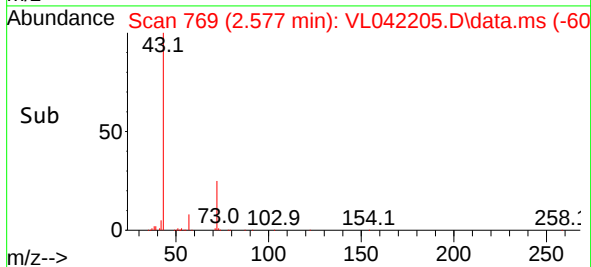
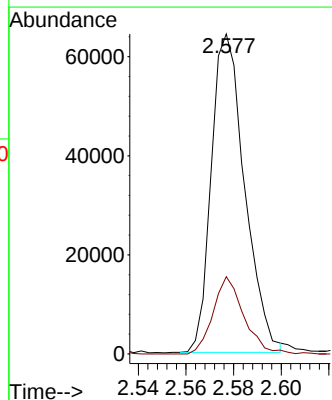
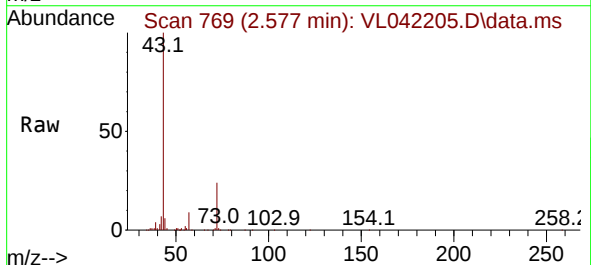
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

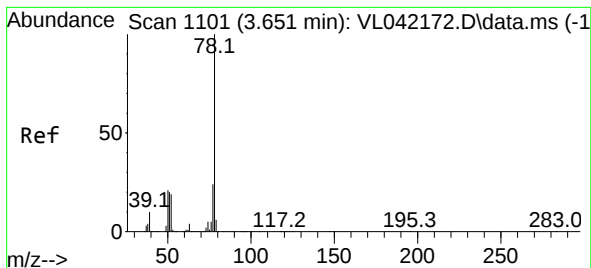
Tgt Ion:114 Resp: 537109
Ion Ratio Lower Upper
114 100
63 25.5 20.7 31.1
88 17.9 15.0 22.4



#34
2-Butanone
Concen: 1.603 ppbv
RT: 2.577 min Scan# 769
Delta R.T. 0.023 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 43 Resp: 62430
Ion Ratio Lower Upper
43 100
72 22.4 18.2 27.2





#36

Benzene

Concen: 1.432 ppbv

RT: 3.681 min Scan# 1110

Delta R.T. 0.029 min

Lab File: VL042205.D

Acq: 31 Mar 2025 11:52

Instrument :

MSVOA_L

ClientSampleId :

SSSG-DUP-1-3262025DL

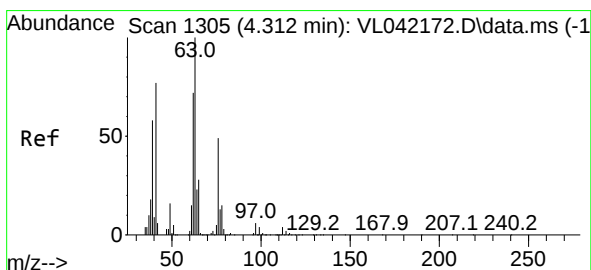
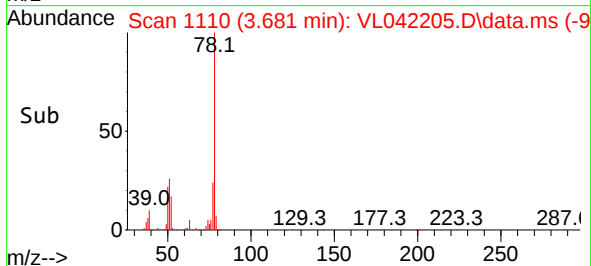
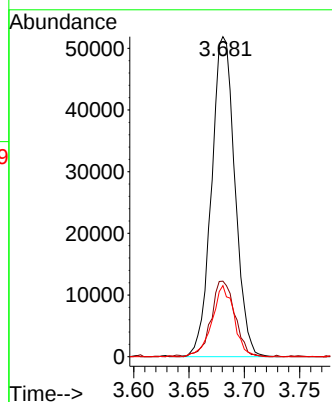
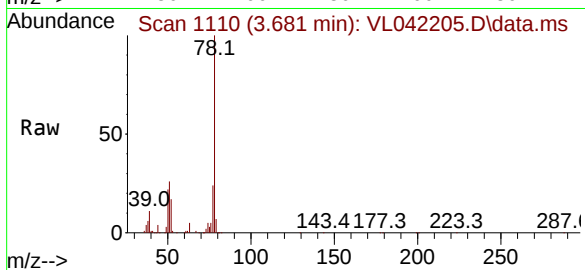
Tgt Ion: 78 Resp: 76263

Ion Ratio Lower Upper

78 100

77 23.5 19.1 28.7

50 22.2 16.6 24.8



#39

1,2-Dichloropropane

Concen: 7.057 ppbv

RT: 3.985 min Scan# 1204

Delta R.T. -0.327 min

Lab File: VL042205.D

Acq: 31 Mar 2025 11:52

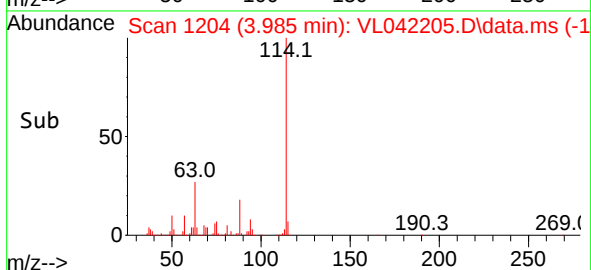
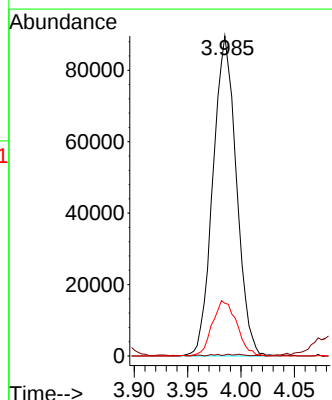
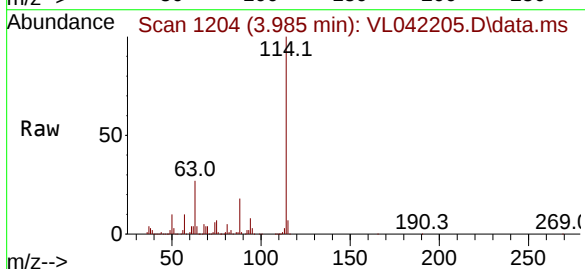
Tgt Ion: 63 Resp: 136854

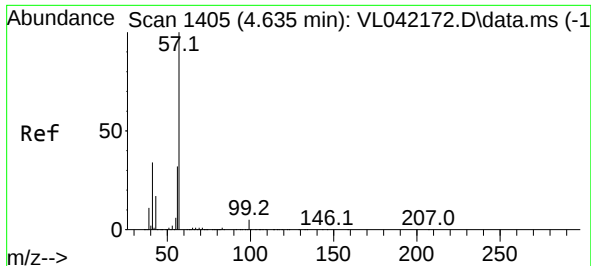
Ion Ratio Lower Upper

63 100

41 0.2 61.7 92.5#

62 16.4 57.6 86.4#

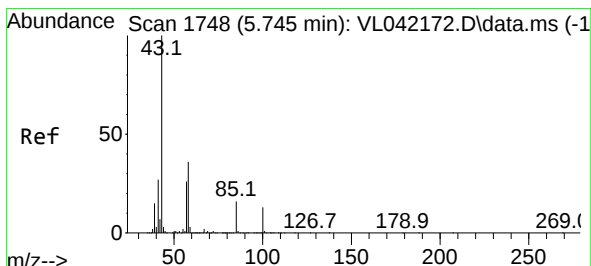
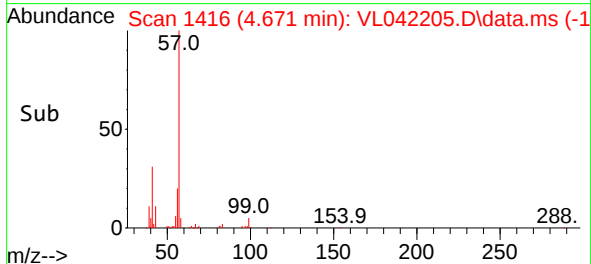
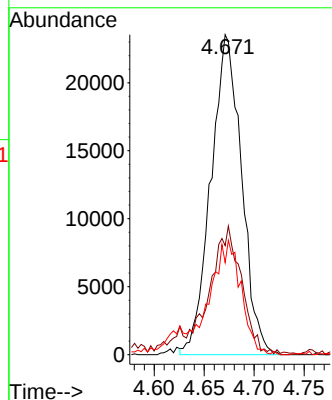
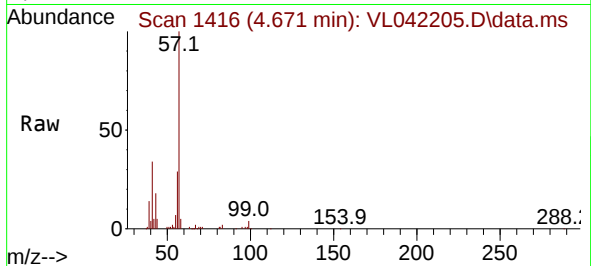




#44
 2,2,4-Trimethylpentane
 Concen: 0.558 ppbv
 RT: 4.671 min Scan# 1405
 Delta R.T. 0.036 min
 Lab File: VL042205.D
 Acq: 31 Mar 2025 11:52

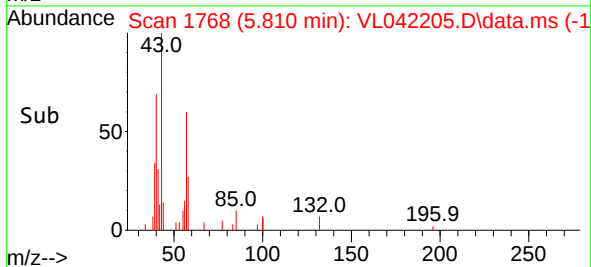
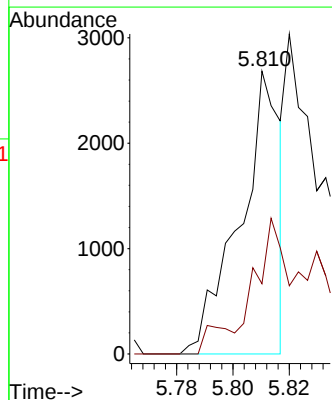
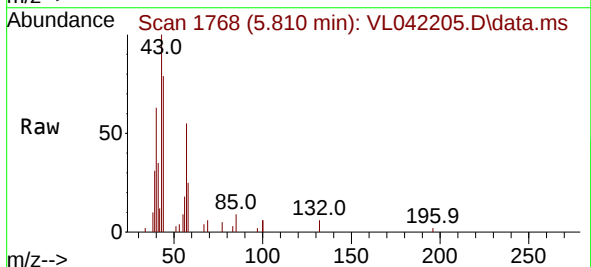
Instrument :
 MSVOA_L
 ClientSampleId :
 SSSG-DUP-1-3262025DL

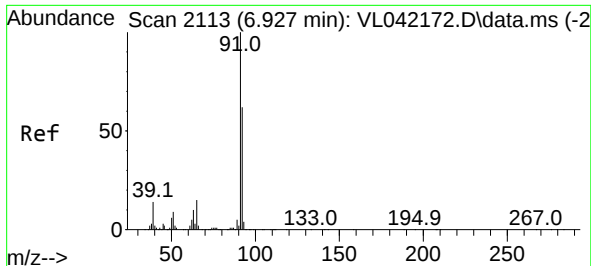
Tgt Ion: 57 Resp: 50242
 Ion Ratio Lower Upper
 57 100
 41 47.6 26.8 40.2#
 56 41.9 25.6 38.4#



#50
 4-Methyl-2-Pentanone
 Concen: 0.043 ppbv
 RT: 5.810 min Scan# 1768
 Delta R.T. 0.065 min
 Lab File: VL042205.D
 Acq: 31 Mar 2025 11:52

Tgt Ion: 43 Resp: 2646
 Ion Ratio Lower Upper
 43 100
 58 86.8 29.0 43.6#

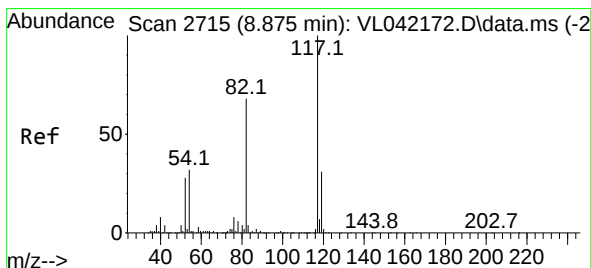
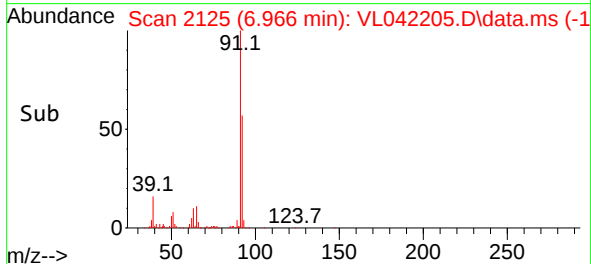
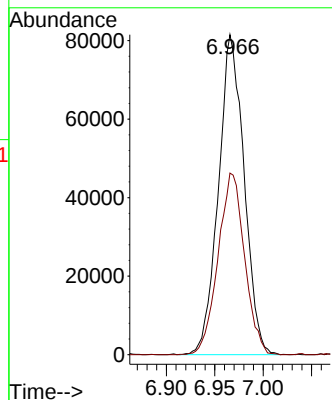
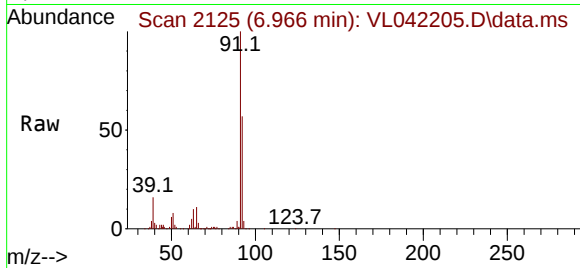




#53
Toluene
Concen: 2.381 ppbv
RT: 6.966 min Scan# 2113
Delta R.T. 0.039 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

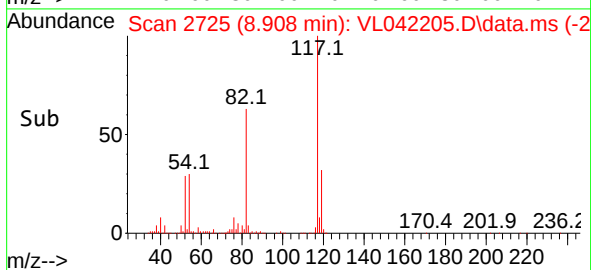
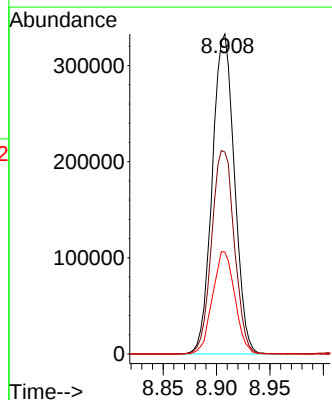
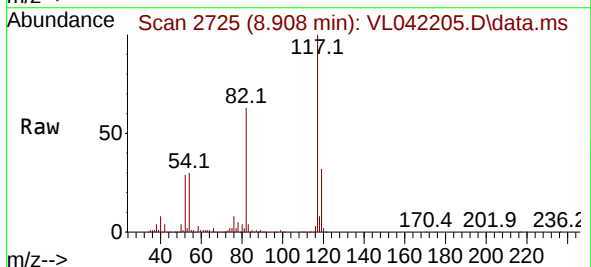
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

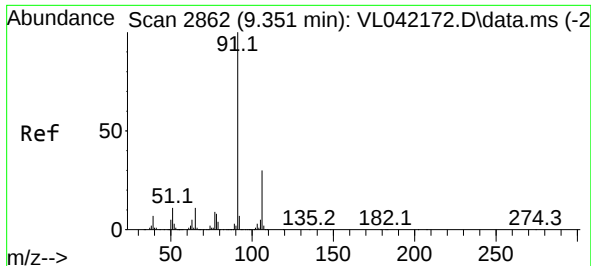
Tgt Ion: 91 Resp: 150266
Ion Ratio Lower Upper
91 100
92 58.7 48.4 72.6



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.908 min Scan# 2725
Delta R.T. 0.032 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 117 Resp: 480959
Ion Ratio Lower Upper
117 100
82 65.1 55.8 83.6
119 32.3 25.5 38.3

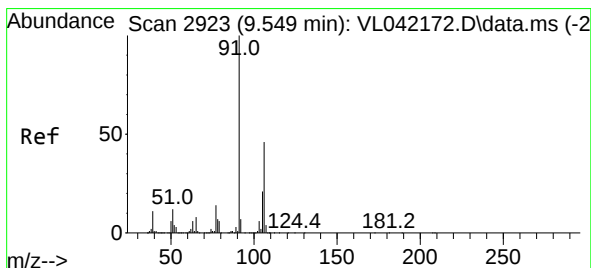
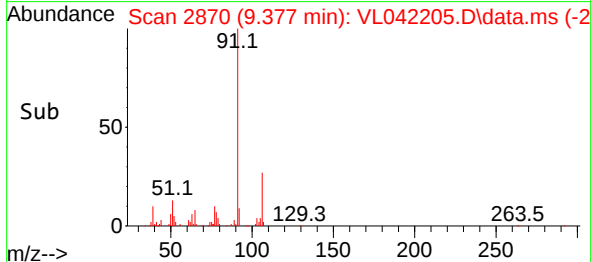
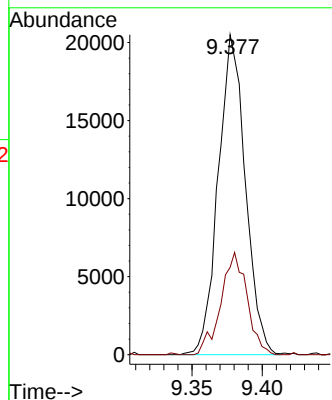
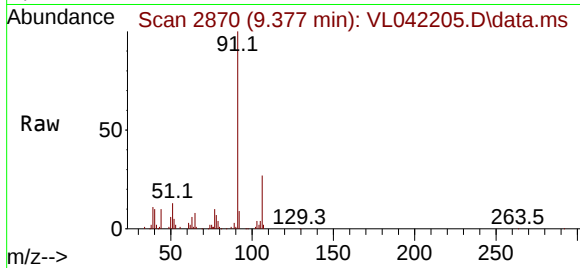




#58
Ethyl Benzene
Concen: 0.322 ppbv
RT: 9.377 min Scan# 21
Delta R.T. 0.026 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

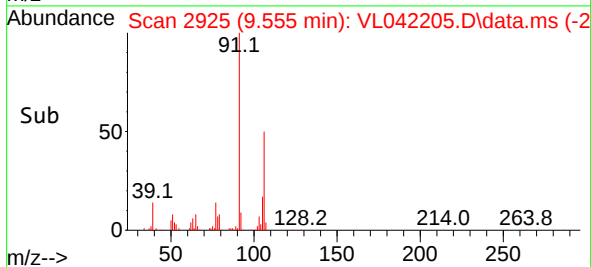
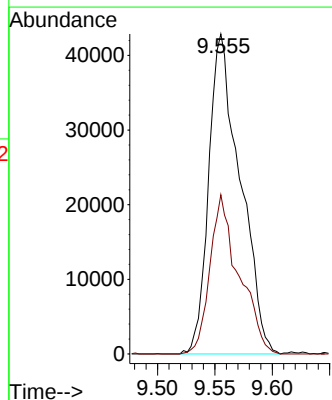
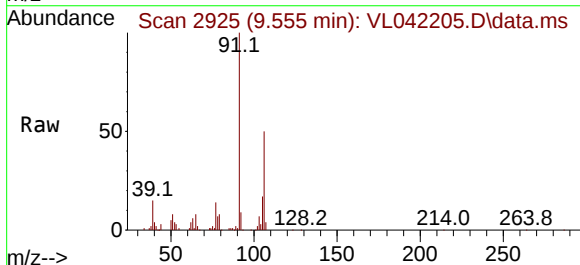
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

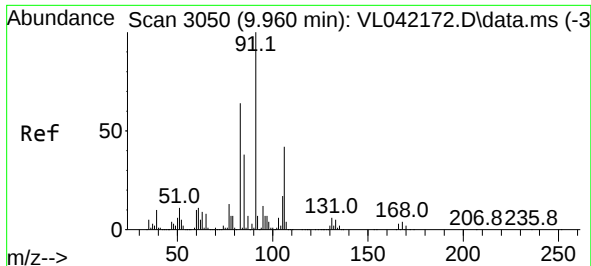
Tgt Ion: 91 Resp: 27471
Ion Ratio Lower Upper
91 100
106 27.3 24.2 36.2



#59
m/p-Xylene
Concen: 1.195 ppbv
RT: 9.555 min Scan# 2925
Delta R.T. 0.007 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 91 Resp: 81487
Ion Ratio Lower Upper
91 100
106 46.0 36.4 54.6

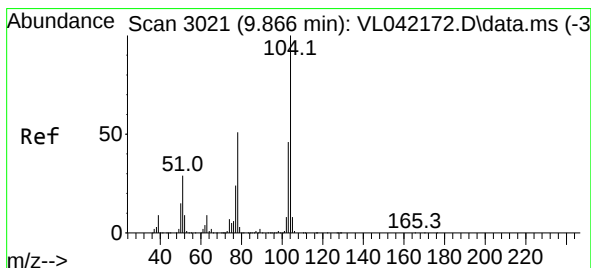
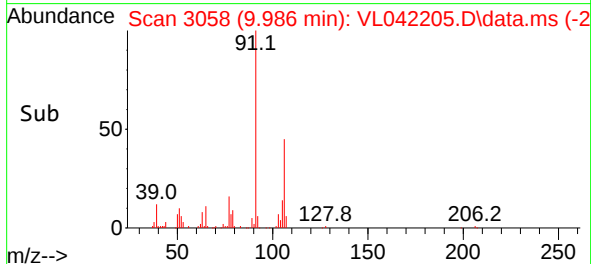
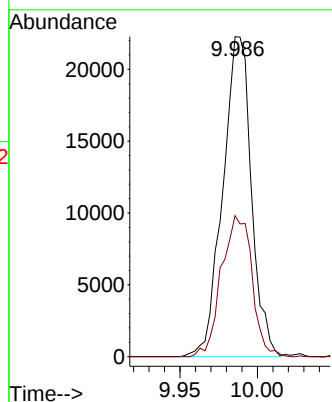
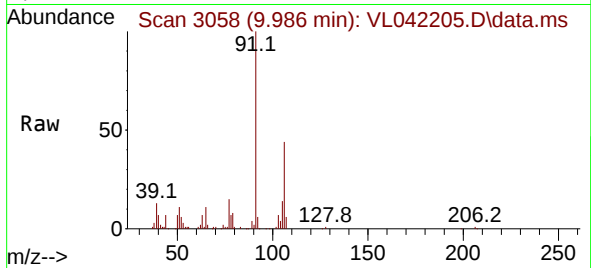




#60
o-Xylene
Concen: 0.419 ppbv
RT: 9.986 min Scan# 3030
Delta R.T. 0.026 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

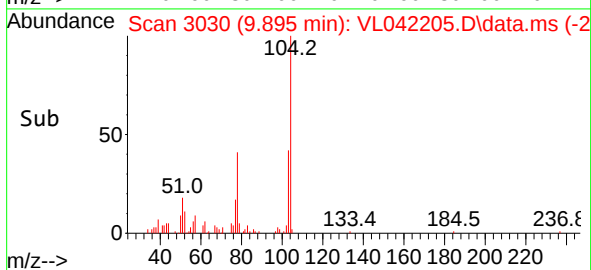
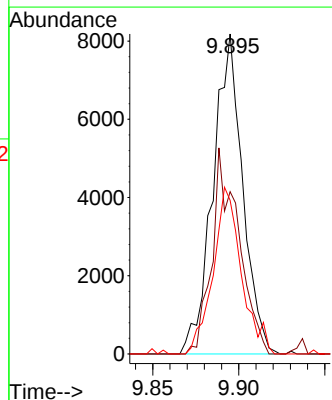
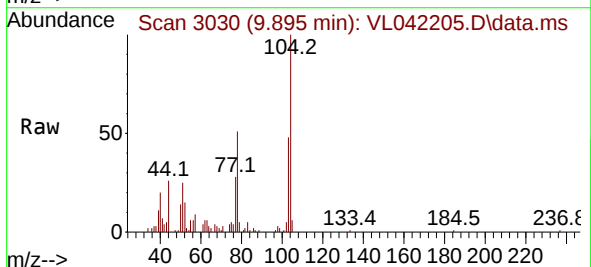
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

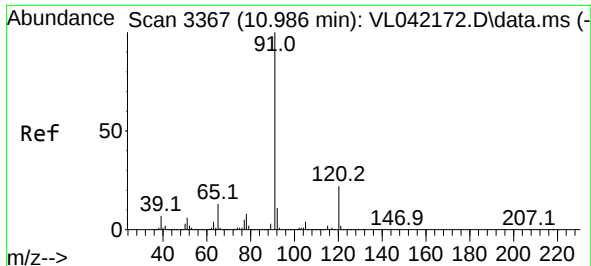
Tgt Ion: 91 Resp: 28632
Ion Ratio Lower Upper
91 100
106 47.0 20.8 62.5



#61
Styrene
Concen: 0.291 ppbv
RT: 9.895 min Scan# 3030
Delta R.T. 0.029 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 104 Resp: 9837
Ion Ratio Lower Upper
104 100
78 59.0 41.8 62.6
103 50.2 37.0 55.4

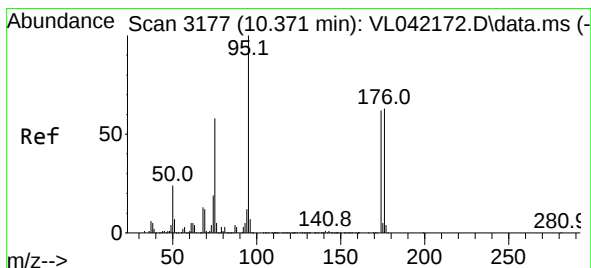
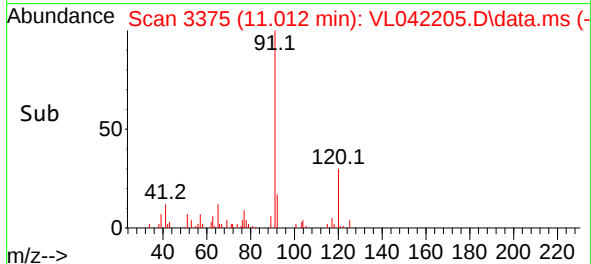
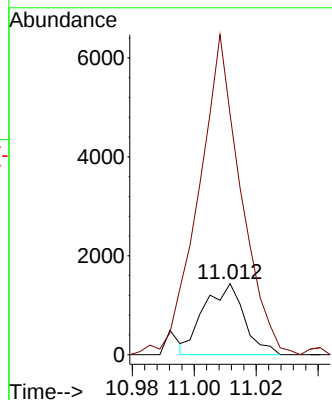
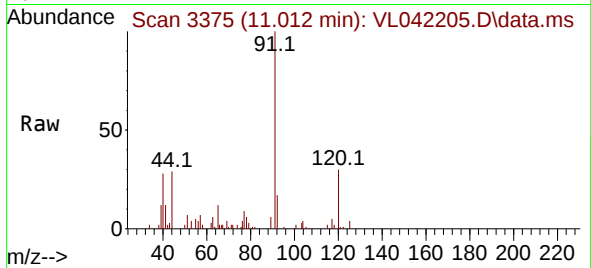




#64
n-propylbenzene
Concen: 0.049 ppbv
RT: 11.012 min Scan# 3185
Delta R.T. 0.026 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

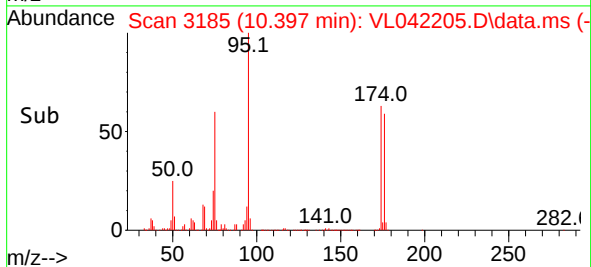
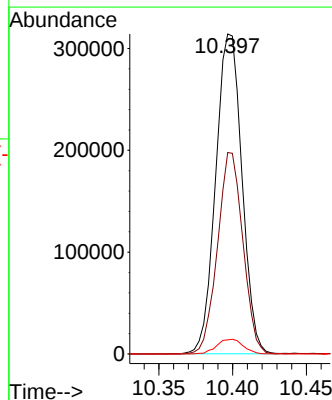
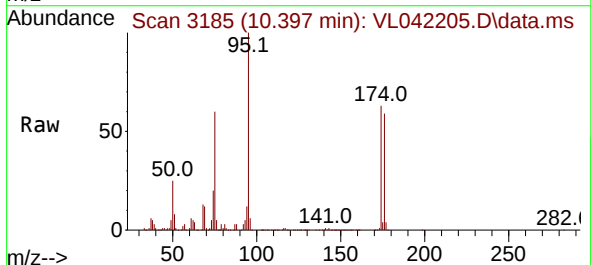
Instrument :
MSVOA_L
ClientSampleId :
SSSG-DUP-1-3262025DL

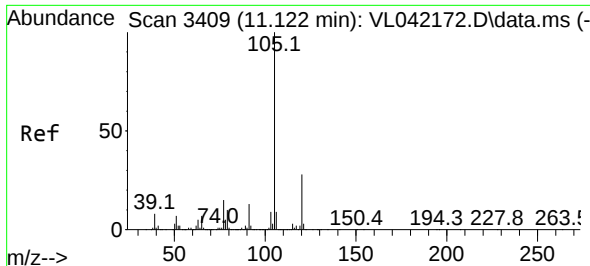
Tgt Ion:120 Resp: 1291
Ion Ratio Lower Upper
120 100
91 483.0 376.9 565.3



#68
1-Bromo-4-Fluorobenzene
Concen: 9.841 ppbv
RT: 10.397 min Scan# 3185
Delta R.T. 0.026 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion: 95 Resp: 388692
Ion Ratio Lower Upper
95 100
174 61.0 50.6 76.0
175 4.7 3.8 5.6

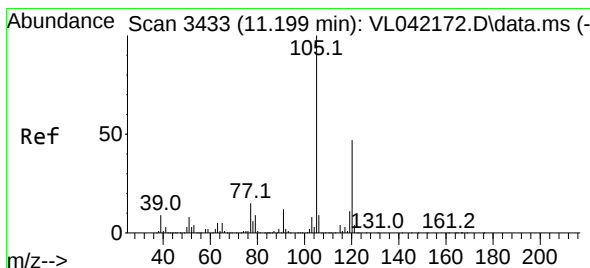
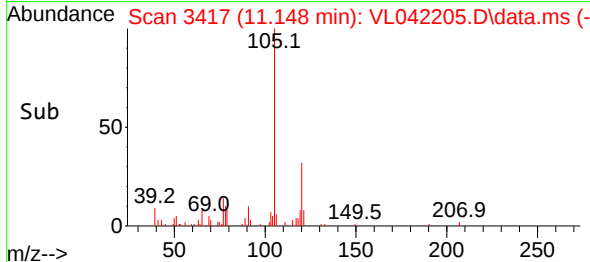
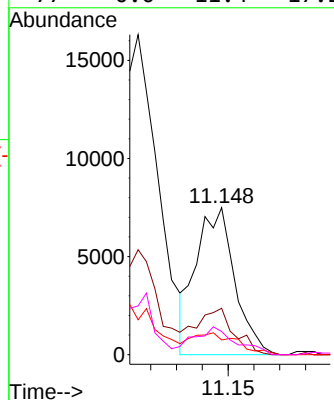
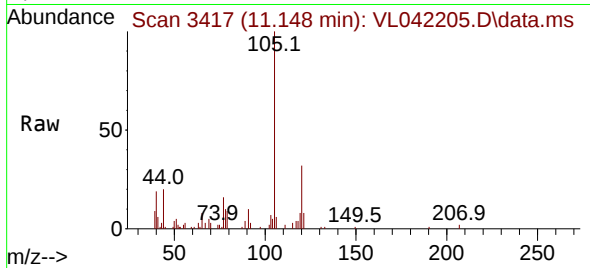




#72
4-Ethyltoluene
Concen: 0.092 ppbv
RT: 11.148 min Scan# 3409
Delta R.T. 0.026 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

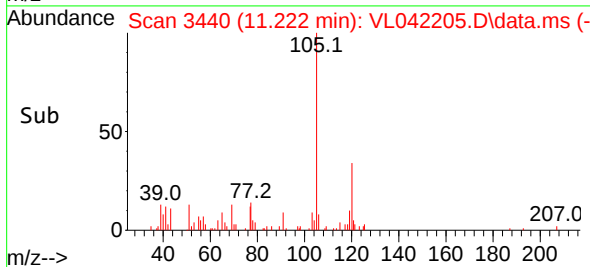
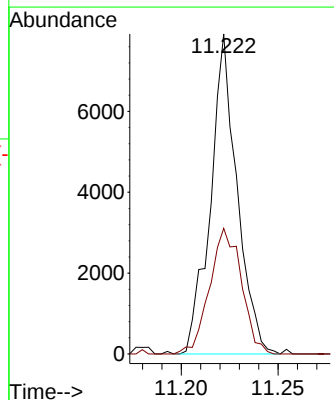
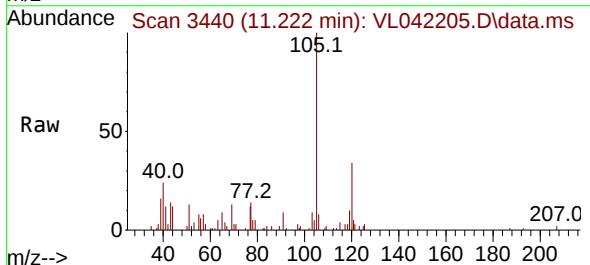
Instrument :
MSVOA_1
ClientSampleId :
SSSG-DUP-1-3262025DL

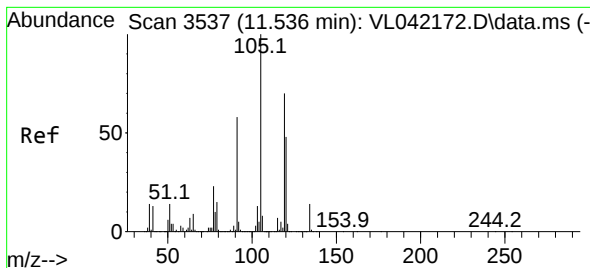
Tgt Ion	Ion:105	Resp:	7817
	Ratio	Lower	Upper
105	100		
120	0.0	23.4	35.0#
91	0.0	10.3	15.5#
77	0.0	11.4	17.2#



#73
1,3,5-Trimethylbenzene
Concen: 0.102 ppbv
RT: 11.222 min Scan# 3440
Delta R.T. 0.023 min
Lab File: VL042205.D
Acq: 31 Mar 2025 11:52

Tgt Ion:105	Resp:	7557	
Ion	Ratio	Lower	Upper
105	100		
120	39.3	37.4	56.0





#74

1,2,4-Trimethylbenzene

Concen: 0.285 ppbv

RT: 11.555 min Scan# 31

Delta R.T. 0.019 min

Lab File: VL042205.D

Acq: 31 Mar 2025 11:52

Instrument :

MSVOA_L

ClientSampleId :

SSSG-DUP-1-3262025DL

Tgt Ion:105 Resp: 24393

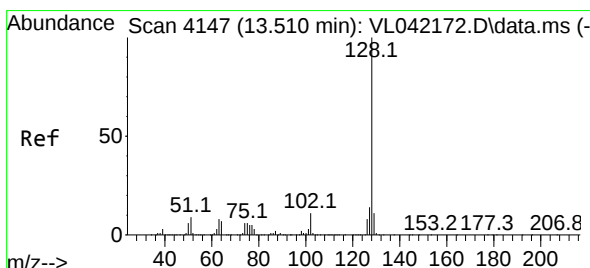
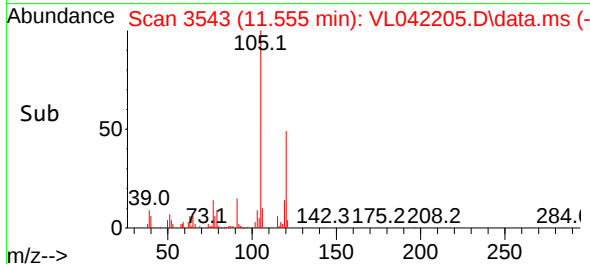
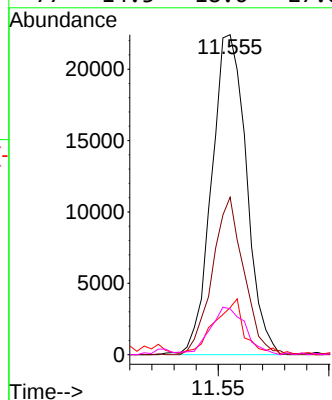
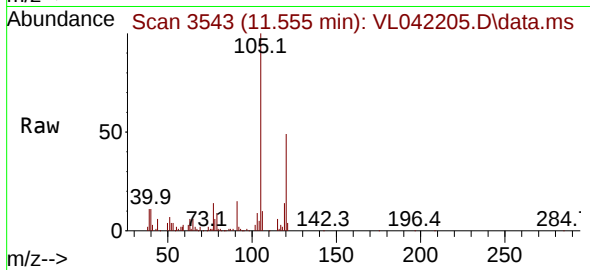
Ion Ratio Lower Upper

105 100

120 49.2 38.6 58.0

91 14.3 46.2 69.2#

77 14.3 18.6 27.8#



#79

Naphthalene

Concen: 0.070 ppbv

RT: 13.530 min Scan# 4153

Delta R.T. 0.020 min

Lab File: VL042205.D

Acq: 31 Mar 2025 11:52

Tgt Ion:128 Resp: 6586

Ion Ratio Lower Upper

128 100

127 12.7 10.8 16.2

129 9.4 9.0 13.4

