

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL100925\
 Data File : VL043092.D
 Acq On : 09 Oct 2025 17:17
 Operator : SY/MD
 Sample : Q3320-12 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV6DL

Quant Time: Oct 09 22:18:24 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL100225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Oct 03 08:23:34 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.774	49	192317	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.936	114	513474	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.862	117	466022	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.357	95	390643	11.636	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	116.400%

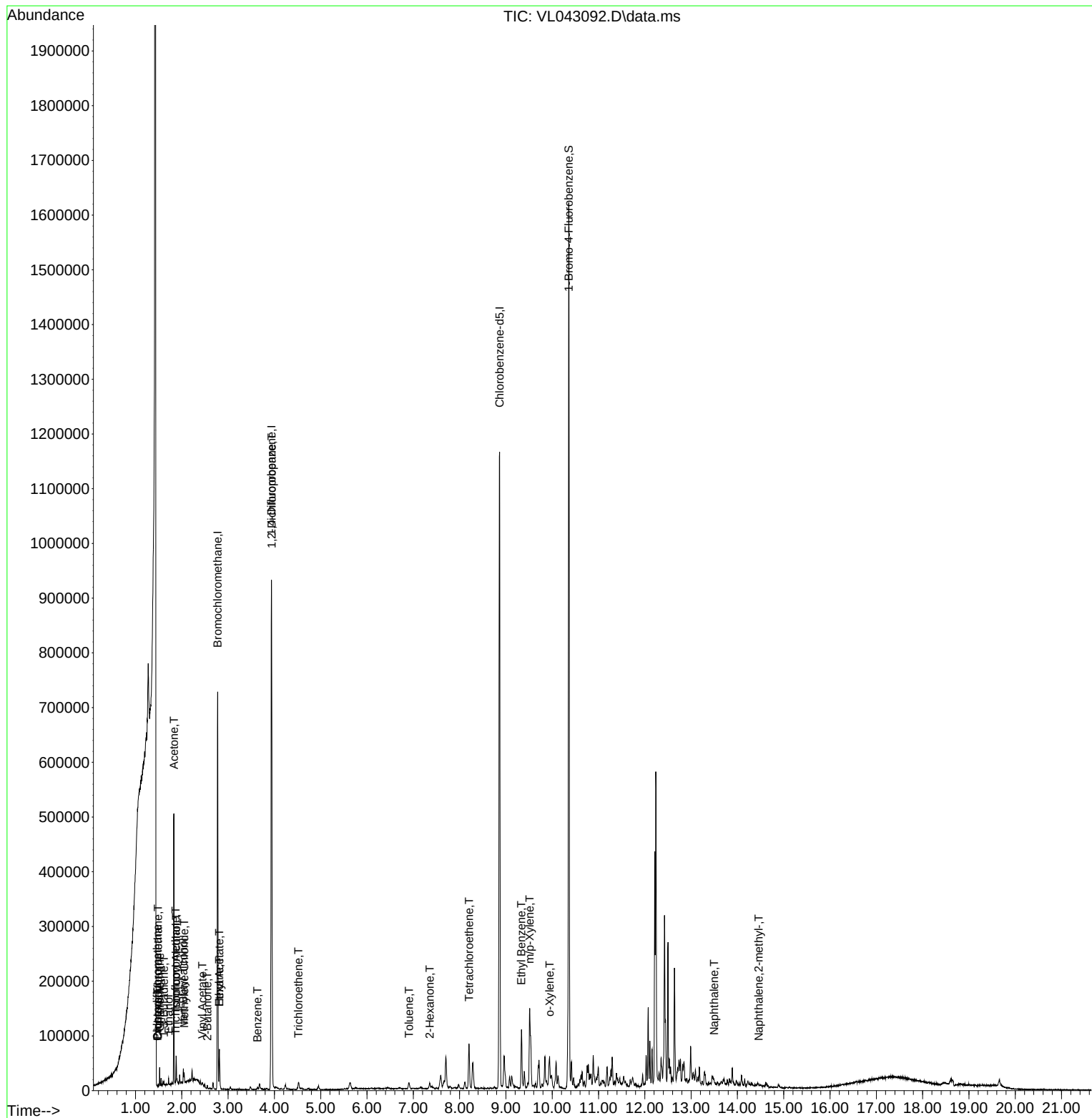
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.489	85	1569	0.048	ppbv	93
3) Chlorodifluoromethane	1.470	51	984	0.031	ppbv #	85
4) Chloromethane	1.525	50	482	0.041	ppbv	98
9) Propene	1.476	41	706	0.056	ppbv #	17
11) Trichlorofluoromethane	1.868	101	1202	0.036	ppbv	97
13) Ethanol	1.716	45	4105	7.690	ppbv #	31
15) Acetone	1.829	43	212161	7.879	ppbv	99
16) 1,3-Butadiene	1.615	39	346	0.031	ppbv #	75
17) tert-Butyl alcohol	2.033	59	9089	0.319	ppbv #	91
19) Isopropyl Alcohol	1.877	45	19030	1.475	ppbv #	1
20) Methylene Chloride	2.052	84	2400	0.204	ppbv #	86
23) Vinyl Acetate	2.444	43	1246	0.218	ppbv #	42
25) Ethyl Acetate	2.810	43	9963	0.147	ppbv #	77
26) Hexane	2.810	57	12903	0.497	ppbv #	32
34) 2-Butanone	2.551	43	3151	0.090	ppbv	98
36) Benzene	3.635	78	2406	0.049	ppbv	99
38) Trichloroethene	4.519	130	1598	0.078	ppbv #	86
39) 1,2-Dichloropropane	3.939	63	128349	7.058	ppbv #	22
51) 2-Hexanone	7.354	43	989	0.033	ppbv #	38
52) Tetrachloroethene	8.205	164	14210	0.782	ppbv	97
53) Toluene	6.907	91	7891	0.159	ppbv	97
58) Ethyl Benzene	9.335	91	56595	0.784	ppbv	92
59) m/p-Xylene	9.513	91	94743	1.556	ppbv	98
60) o-Xylene	9.946	91	19175	0.316	ppbv	98
79) Naphthalene	13.497	128	303	0.239	ppbv #	1
80) Naphthalene,2-methyl-	14.461	142	516	0.679	ppbv #	85

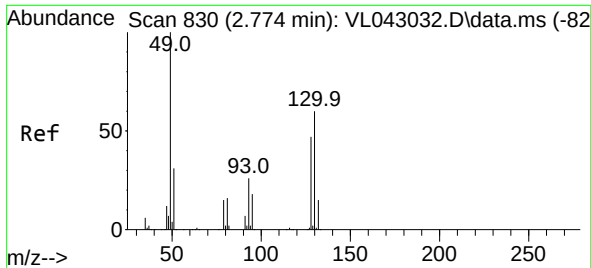
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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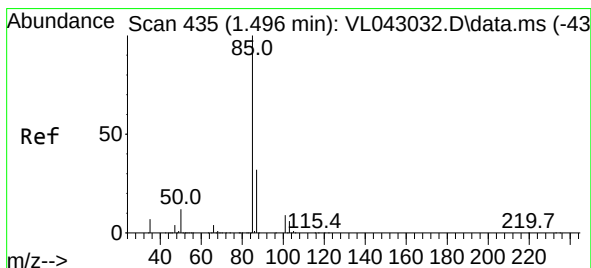
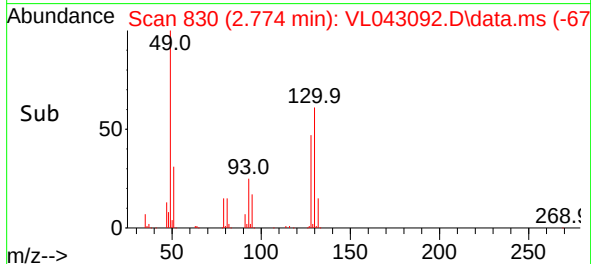
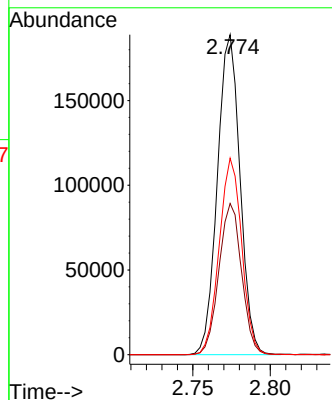
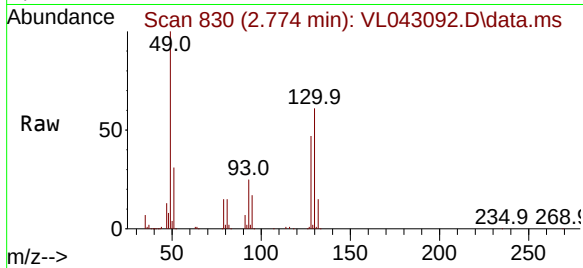




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.774 min Scan# 81
Delta R.T. -0.000 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

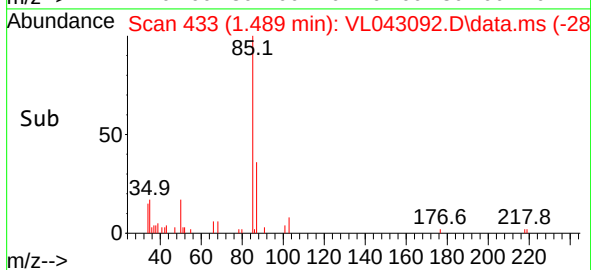
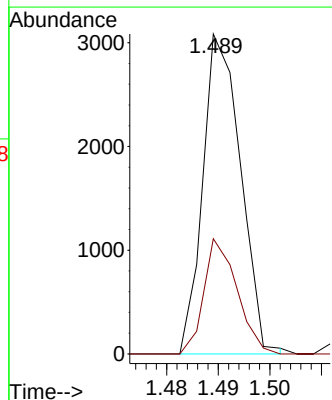
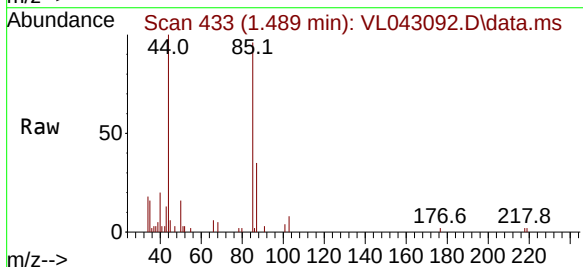
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

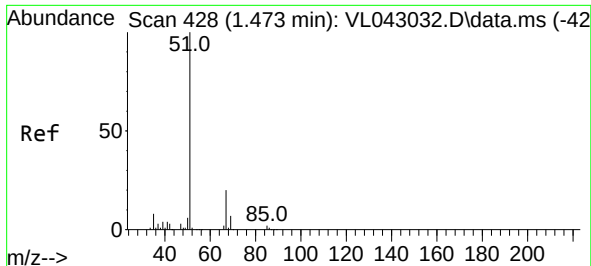
Tgt Ion: 49 Resp: 192317
Ion Ratio Lower Upper
49 100
128 47.3 24.1 72.2
130 60.9 31.4 94.3



#2
Dichlorodifluoromethane
Concen: 0.048 ppbv
RT: 1.489 min Scan# 433
Delta R.T. -0.007 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 85 Resp: 1569
Ion Ratio Lower Upper
85 100
87 36.0 25.8 38.6

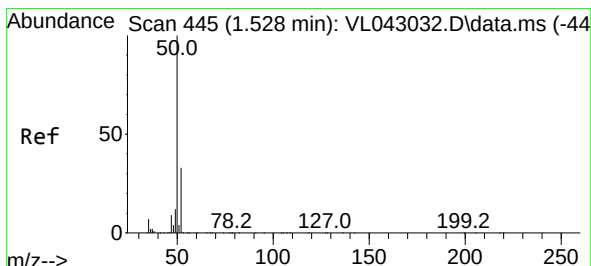
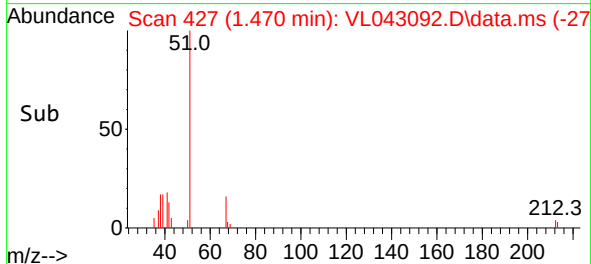
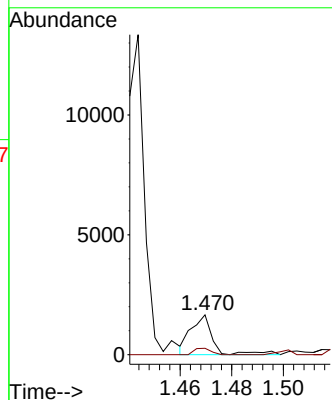
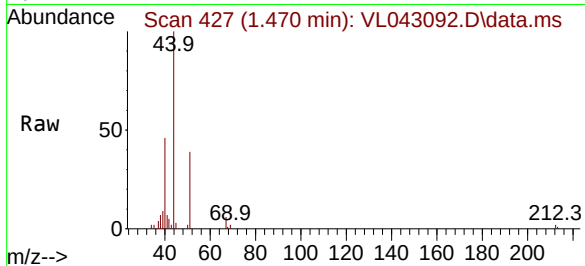




#3
Chlorodifluoromethane
Concen: 0.031 ppbv
RT: 1.470 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

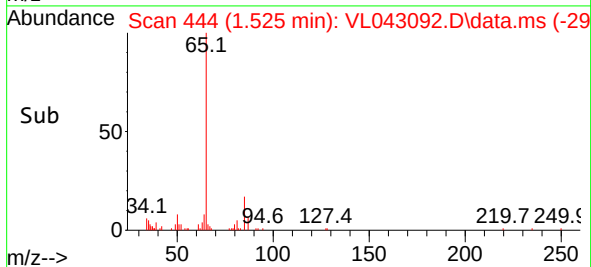
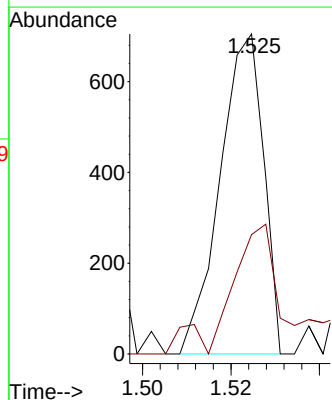
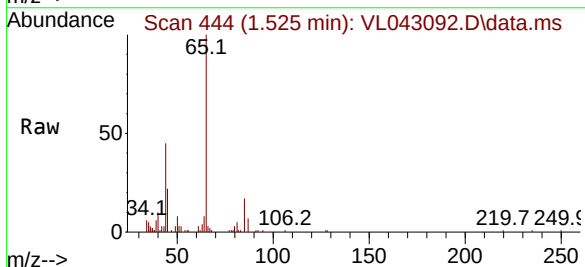
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

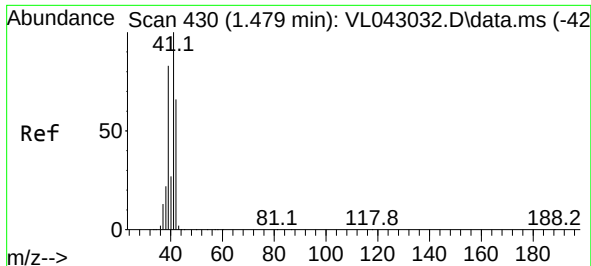
Tgt Ion: 51 Resp: 984
Ion Ratio Lower Upper
51 100
67 12.2 15.1 22.7#



#4
Chloromethane
Concen: 0.041 ppbv
RT: 1.525 min Scan# 444
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 50 Resp: 482
Ion Ratio Lower Upper
50 100
52 31.5 26.2 39.2





#9

Propene

Concen: 0.056 ppbv

RT: 1.476 min Scan# 41

Delta R.T. -0.003 min

Lab File: VL043092.D

Acq: 09 Oct 2025 17:17

Instrument :

MSVOA_L

ClientSampleId :

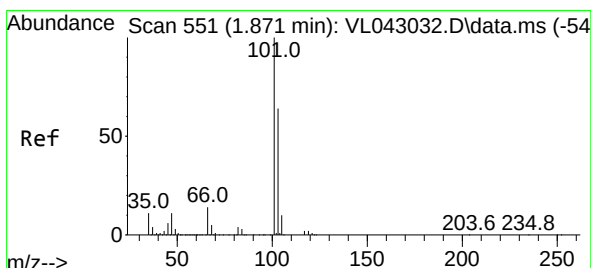
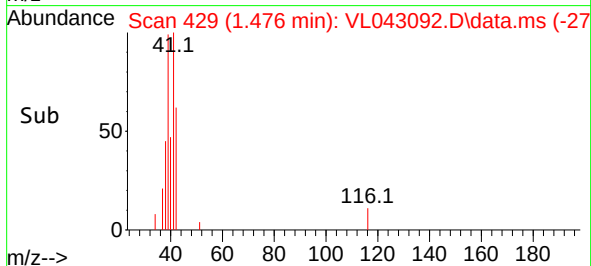
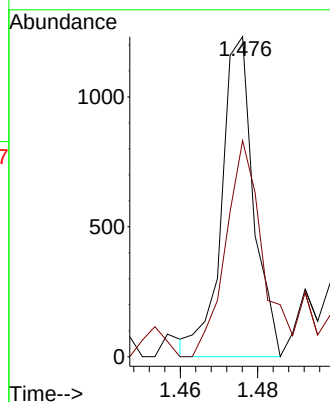
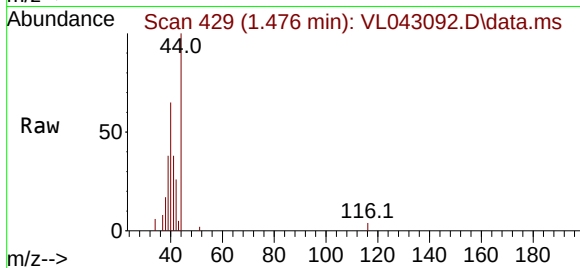
SV6DL

Tgt Ion: 41 Resp: 706

Ion Ratio Lower Upper

41 100

42 0.0 53.3 79.9#



#11

Trichlorofluoromethane

Concen: 0.036 ppbv

RT: 1.868 min Scan# 550

Delta R.T. -0.003 min

Lab File: VL043092.D

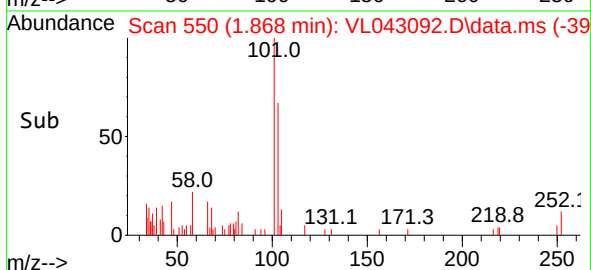
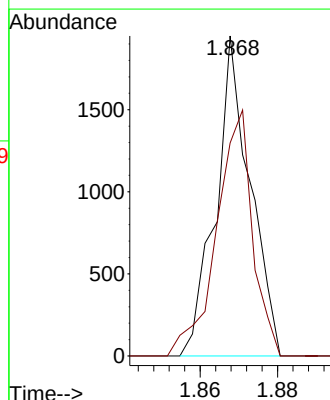
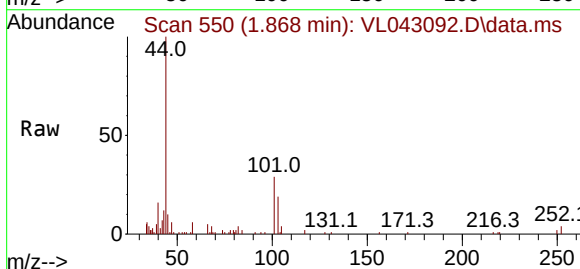
Acq: 09 Oct 2025 17:17

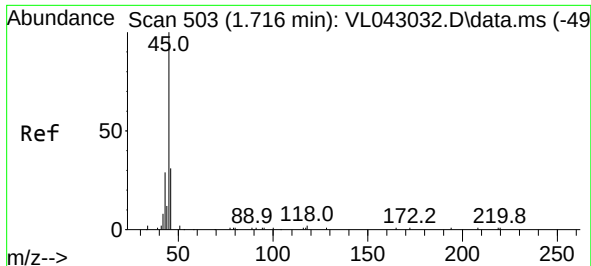
Tgt Ion: 101 Resp: 1202

Ion Ratio Lower Upper

101 100

103 66.5 51.1 76.7

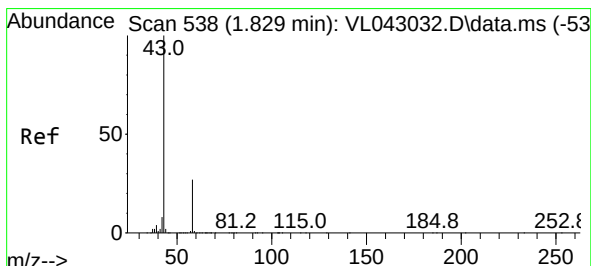
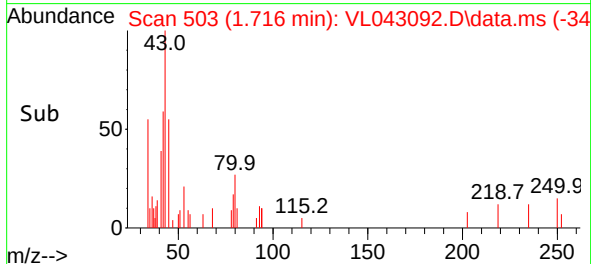
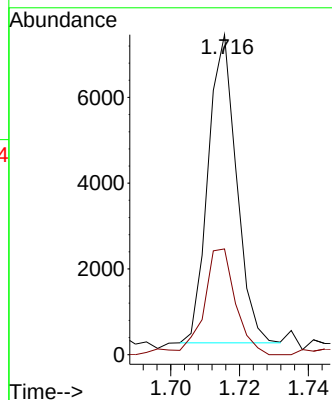
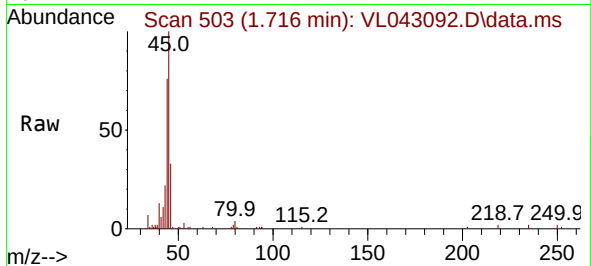




#13
Ethanol
Concen: 7.690 ppbv
RT: 1.716 min Scan# 503
Delta R.T. -0.000 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

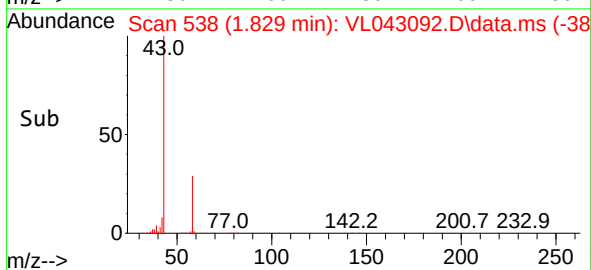
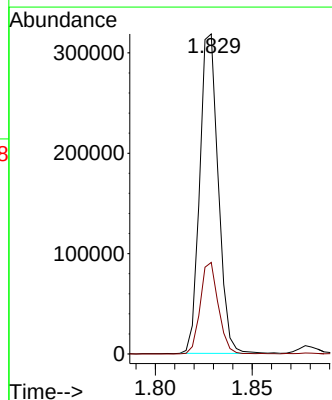
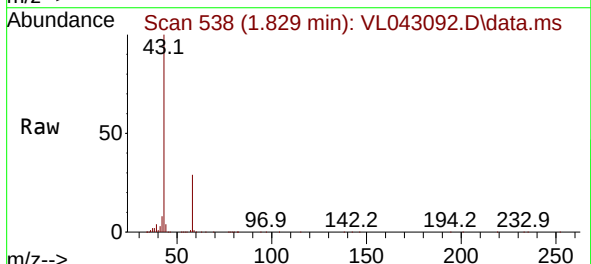
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

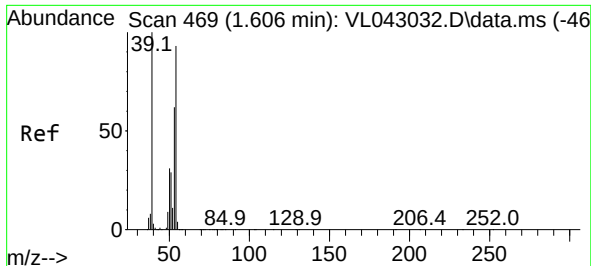
Tgt Ion: 45 Resp: 4105
Ion Ratio Lower Upper
45 100
46 0.0 17.8 71.4#



#15
Acetone
Concen: 7.879 ppbv
RT: 1.829 min Scan# 538
Delta R.T. -0.000 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 43 Resp: 212161
Ion Ratio Lower Upper
43 100
58 28.1 22.2 33.4





#16

1,3-Butadiene

Concen: 0.031 ppbv

RT: 1.615 min Scan# 41

Delta R.T. 0.010 min

Lab File: VL043092.D

Acq: 09 Oct 2025 17:17

Instrument :

MSVOA_L

ClientSampleId :

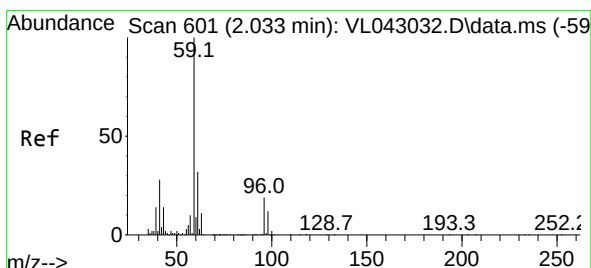
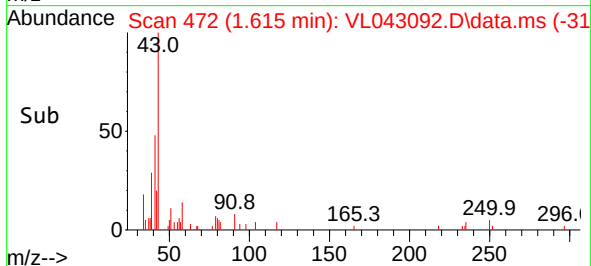
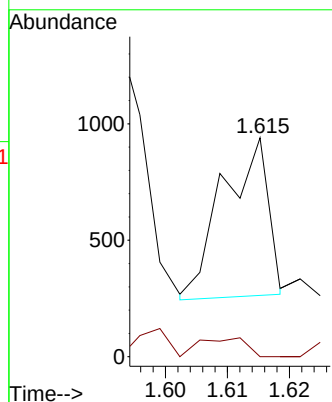
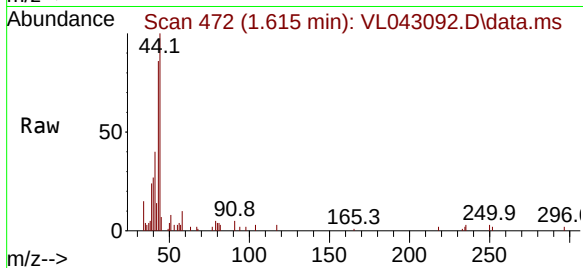
SV6DL

Tgt Ion: 39 Resp: 346

Ion Ratio Lower Upper

39 100

54 55.5 61.4 92.2#



#17

tert-Butyl alcohol

Concen: 0.319 ppbv

RT: 2.033 min Scan# 601

Delta R.T. -0.000 min

Lab File: VL043092.D

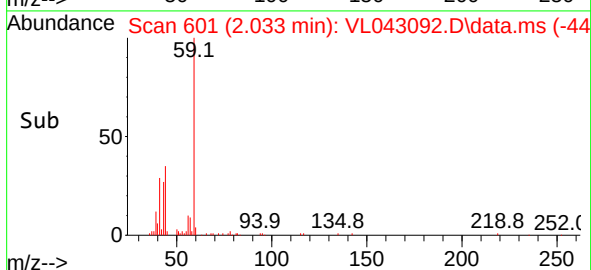
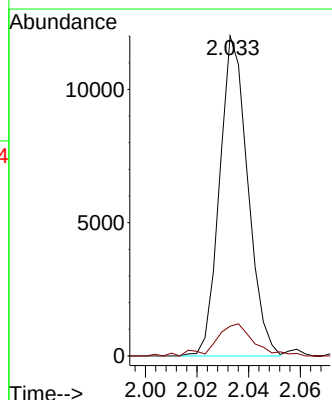
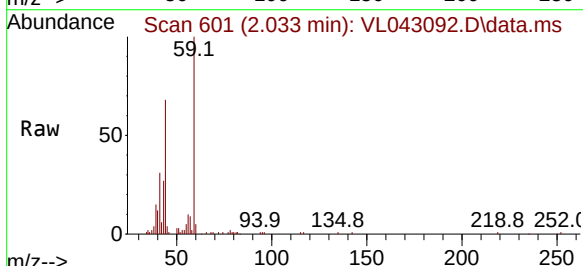
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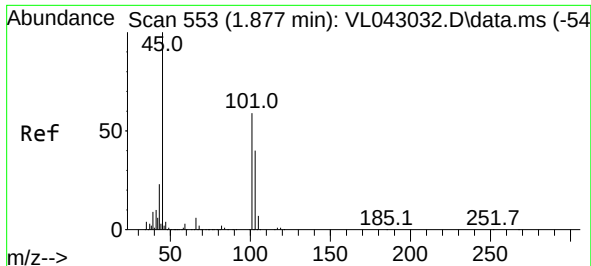
Tgt Ion: 59 Resp: 9089

Ion Ratio Lower Upper

59 100

57 13.8 8.5 12.7#

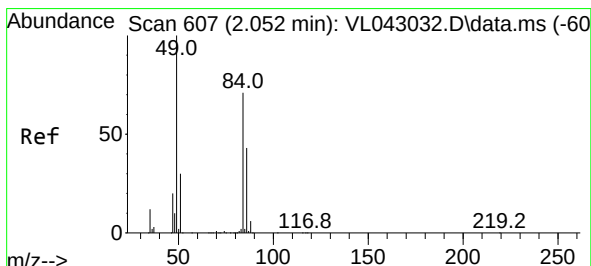
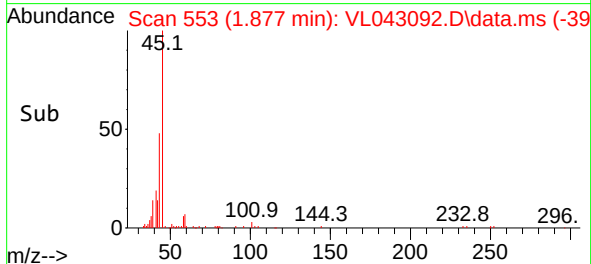
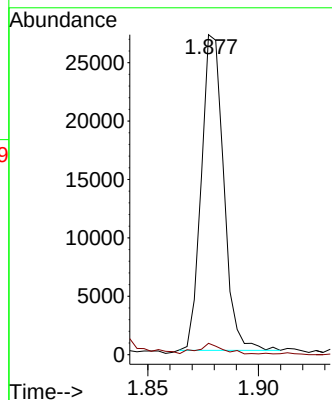
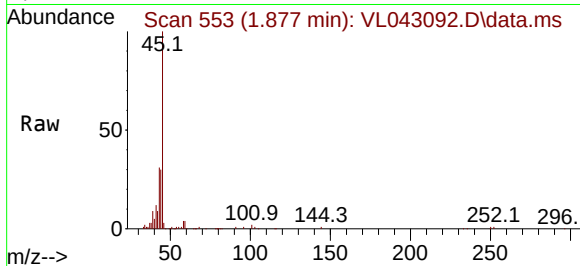




#19
Isopropyl Alcohol
Concen: 1.475 ppbv
RT: 1.877 min Scan# 511
Delta R.T. -0.000 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

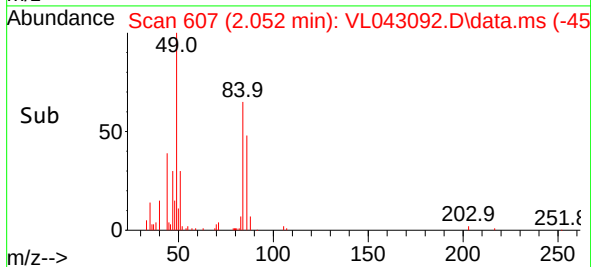
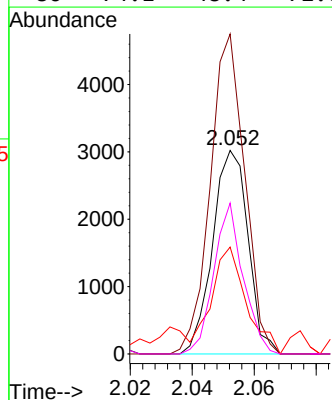
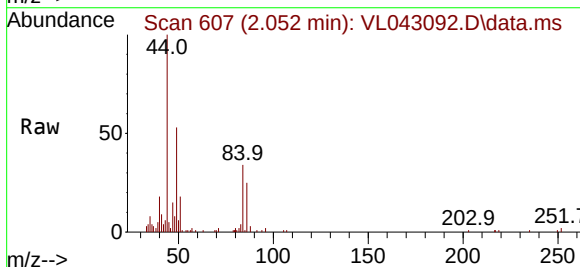
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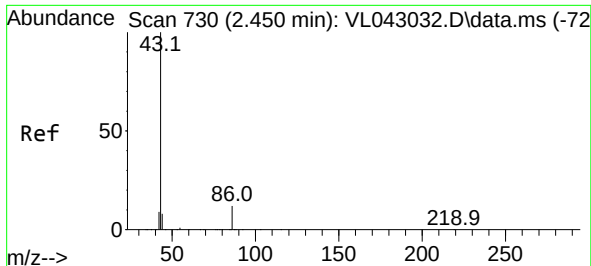
Tgt Ion: 45 Resp: 19030
Ion Ratio Lower Upper
45 100
58 312.9 42.3 63.5#



#20
Methylene Chloride
Concen: 0.204 ppbv
RT: 2.052 min Scan# 607
Delta R.T. -0.000 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 84 Resp: 2400
Ion Ratio Lower Upper
84 100
49 155.0 112.5 168.7
51 52.5 34.2 51.2#
86 74.1 48.4 72.6#

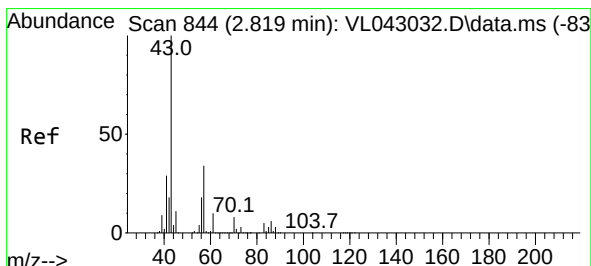
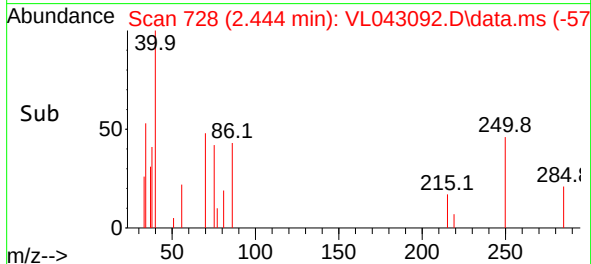
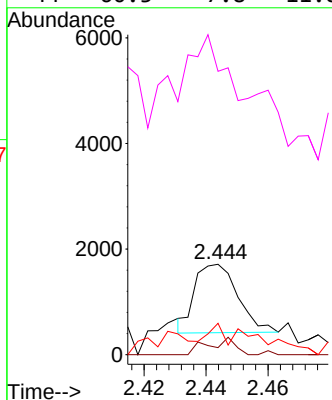
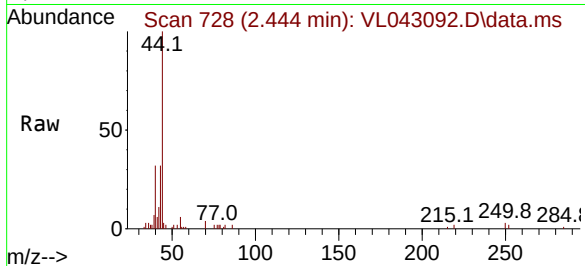




#23
 Vinyl Acetate
 Concen: 0.218 ppbv
 RT: 2.444 min Scan# 71
 Delta R.T. -0.007 min
 Lab File: VL043092.D
 Acq: 09 Oct 2025 17:17

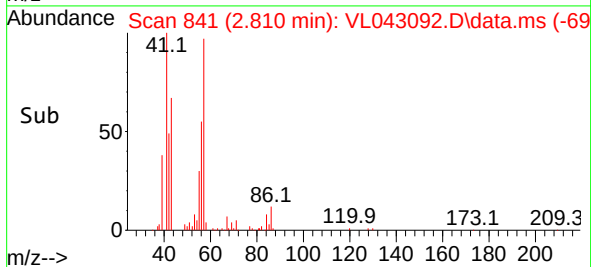
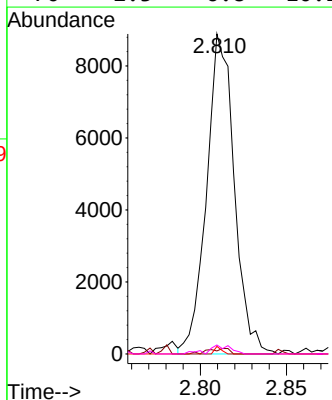
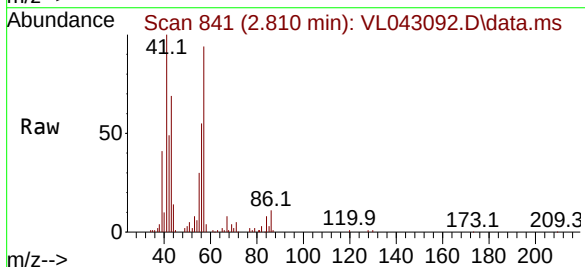
Instrument :
 MSVOA_1
 ClientSampleId :
 SV6DL

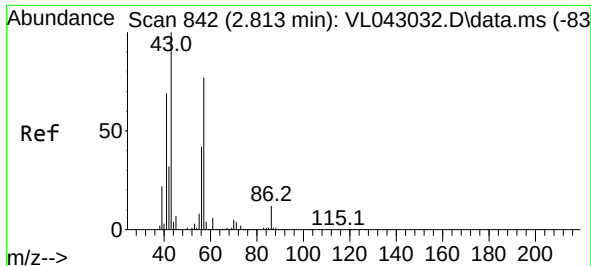
Tgt Ion:	43	Resp:	1246
Ion	Ratio	Lower	Upper
43	100		
86	10.4	7.5	11.3
42	23.3	8.4	12.6#
44	60.3	7.8	11.8#



#25
 Ethyl Acetate
 Concen: 0.147 ppbv
 RT: 2.810 min Scan# 841
 Delta R.T. -0.010 min
 Lab File: VL043092.D
 Acq: 09 Oct 2025 17:17

Tgt Ion:	43	Resp:	9963
Ion	Ratio	Lower	Upper
43	100		
45	1.3	8.3	12.5#
61	0.0	7.5	11.3#
70	2.3	6.8	10.2#

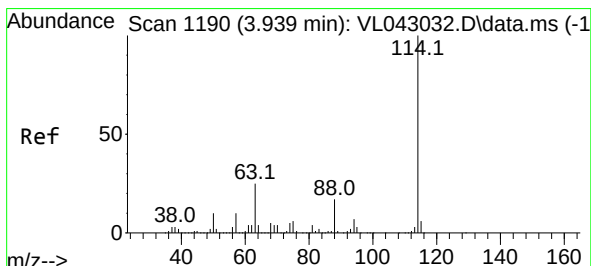
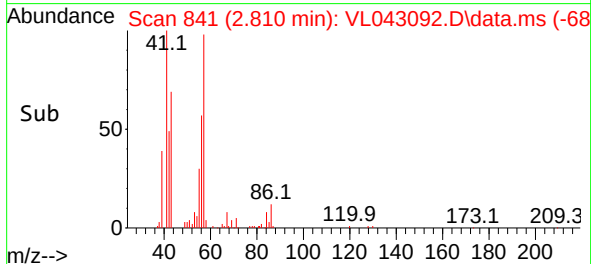
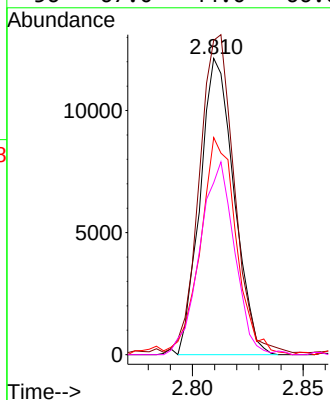
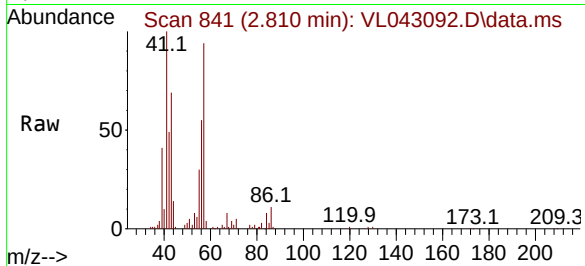




#26
Hexane
Concen: 0.497 ppbv
RT: 2.810 min Scan# 841
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

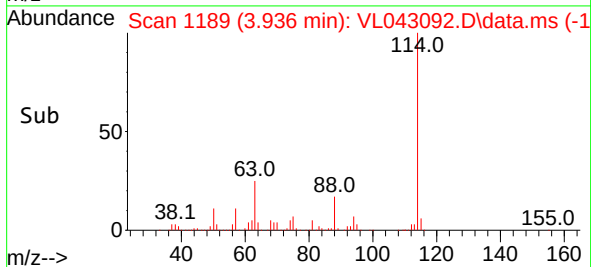
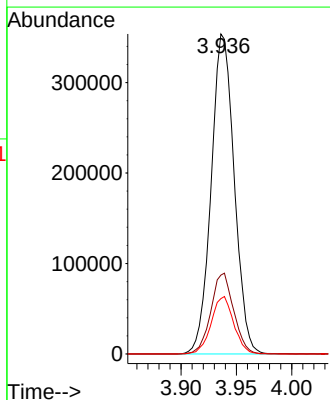
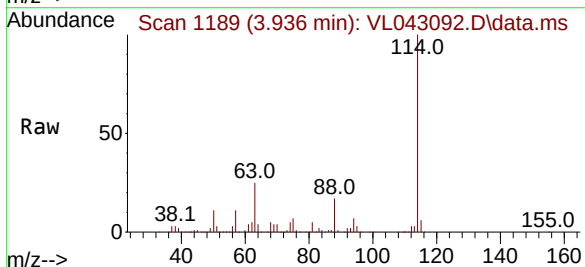
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

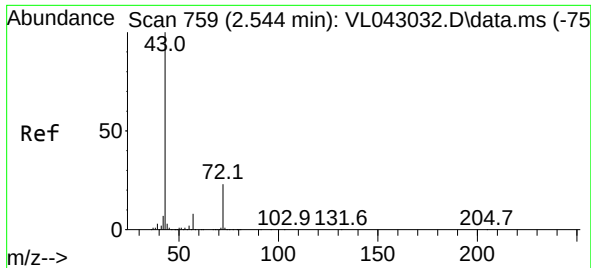
Tgt Ion: 57 Resp: 12903
Ion Ratio Lower Upper
57 100
41 114.8 76.1 114.1#
43 81.0 201.4 302.0#
56 67.0 44.0 66.0#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.936 min Scan# 1189
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 114 Resp: 513474
Ion Ratio Lower Upper
114 100
63 25.1 19.4 29.2
88 17.5 13.9 20.9

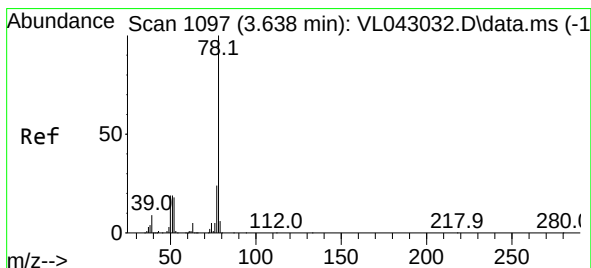
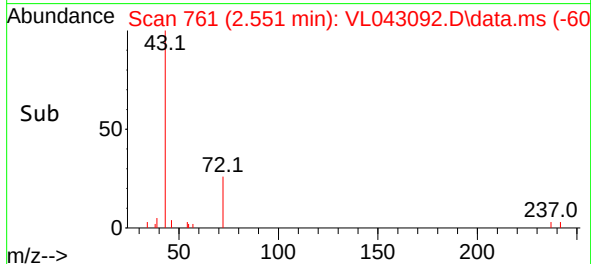
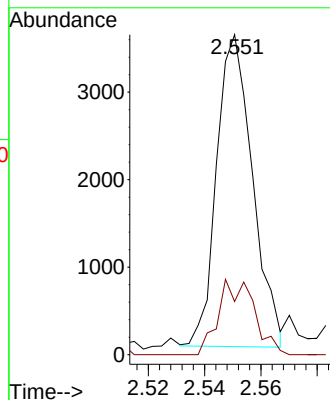
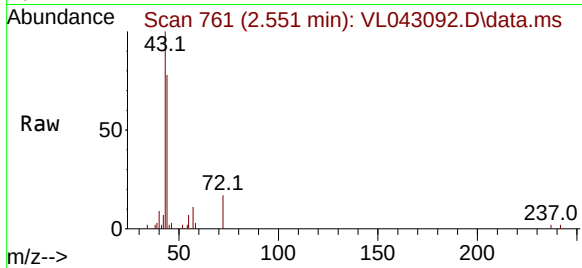




#34
2-Butanone
Concen: 0.090 ppbv
RT: 2.551 min Scan# 701
Delta R.T. 0.006 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

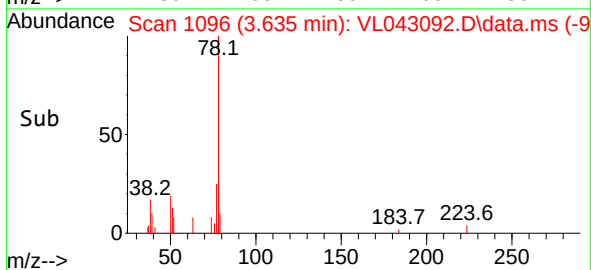
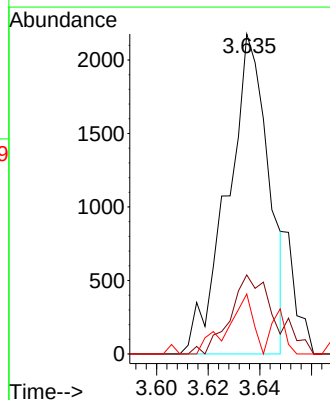
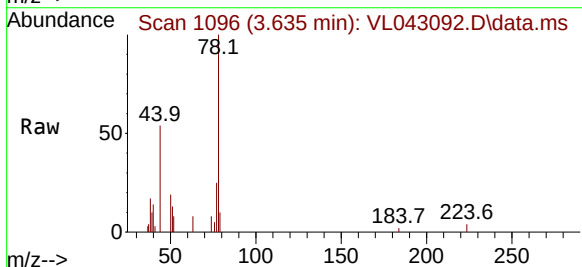
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

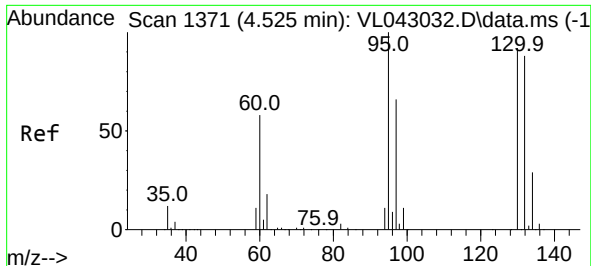
Tgt Ion: 43 Resp: 3151
Ion Ratio Lower Upper
43 100
72 24.0 18.4 27.6



#36
Benzene
Concen: 0.049 ppbv
RT: 3.635 min Scan# 1096
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 78 Resp: 2406
Ion Ratio Lower Upper
78 100
77 24.7 19.2 28.8
50 18.8 14.9 22.3



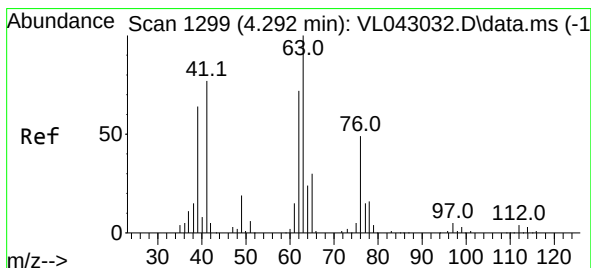
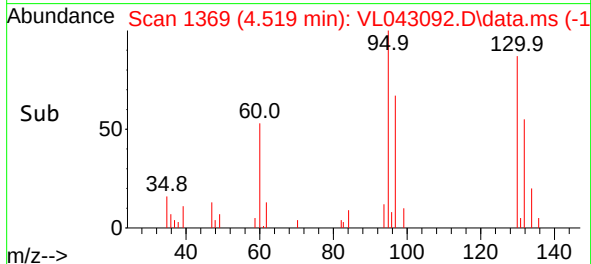
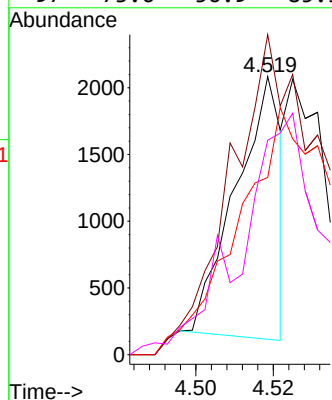
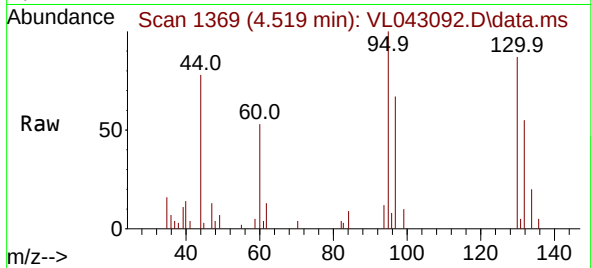


#38
Trichloroethene
Concen: 0.078 ppbv
RT: 4.519 min Scan# 1190
Delta R.T. -0.007 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Instrument :
MSVOA_L
ClientSampleId :
SV6DL

Tgt Ion:130 Resp: 1598

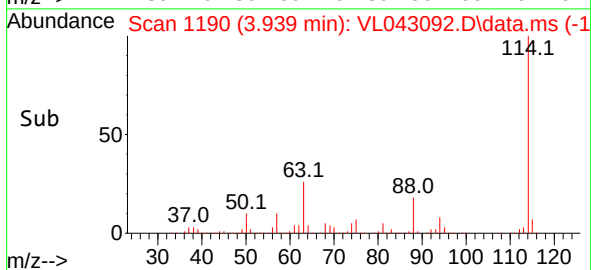
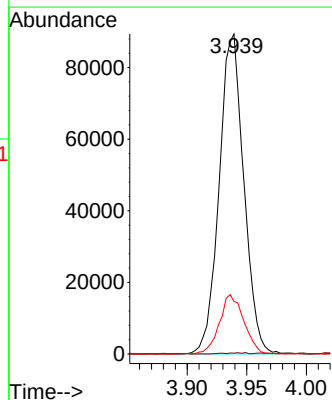
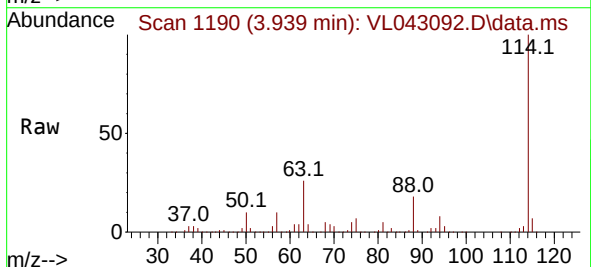
Ion	Ratio	Lower	Upper
130	100		
95	109.5	86.4	129.6
132	59.9	75.7	113.5#
97	73.6	56.9	85.3

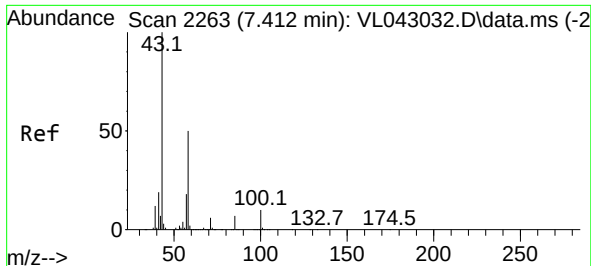


#39
1,2-Dichloropropane
Concen: 7.058 ppbv
RT: 3.939 min Scan# 1190
Delta R.T. -0.353 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 63 Resp: 128349

Ion	Ratio	Lower	Upper
63	100		
41	0.1	61.6	92.4#
62	16.4	58.1	87.1#

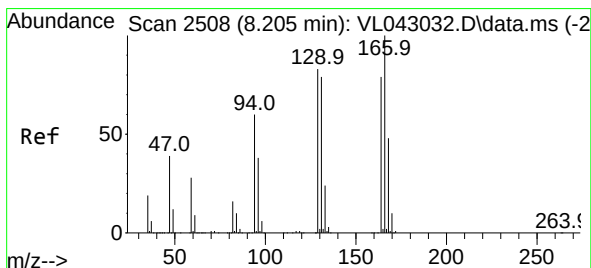
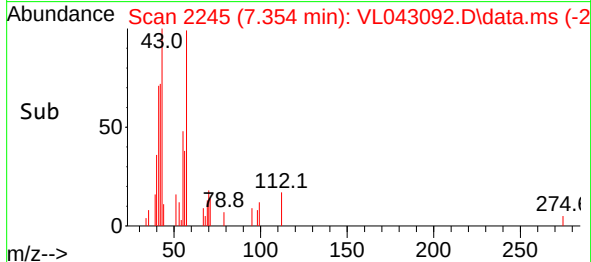
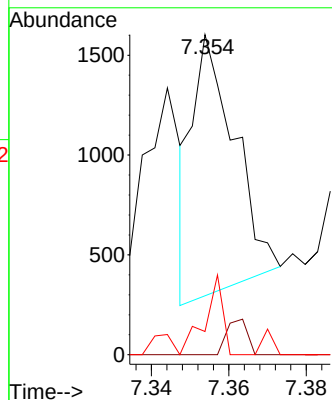
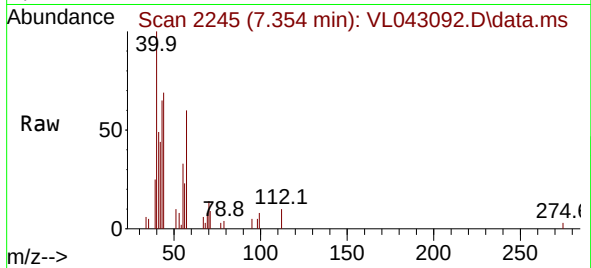




#51
2-Hexanone
Concen: 0.033 ppbv
RT: 7.354 min Scan# 21
Delta R.T. -0.058 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

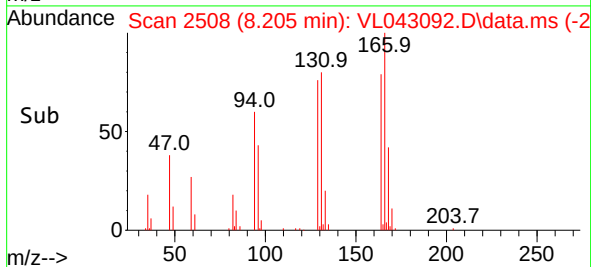
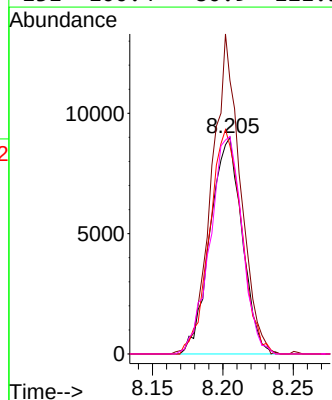
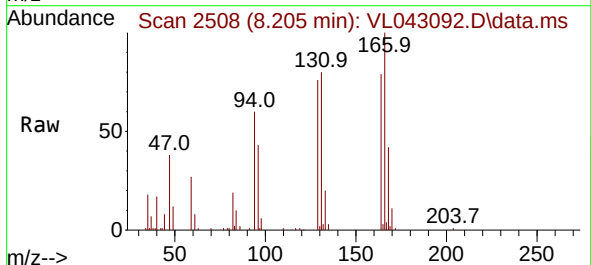
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

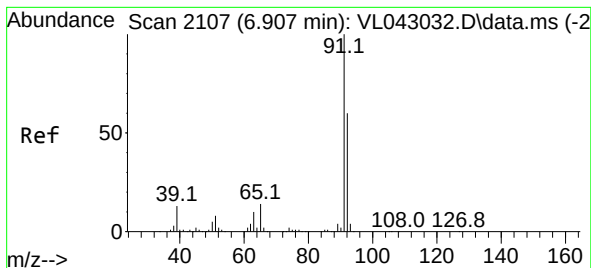
Tgt Ion: 43 Resp: 989
Ion Ratio Lower Upper
43 100
58 6.6 39.1 58.7#
98 22.0 0.5 0.7#



#52
Tetrachloroethene
Concen: 0.782 ppbv
RT: 8.205 min Scan# 2508
Delta R.T. -0.000 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 164 Resp: 14210
Ion Ratio Lower Upper
164 100
166 126.3 101.8 152.8
129 96.1 84.5 126.7
131 100.4 80.9 121.3





#53

Toluene

Concen: 0.159 ppbv

RT: 6.907 min Scan# 2107

Delta R.T. -0.000 min

Lab File: VL043092.D

Acq: 09 Oct 2025 17:17

Instrument :

MSVOA_L

ClientSampleId :

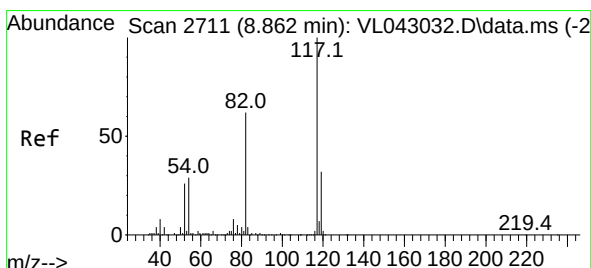
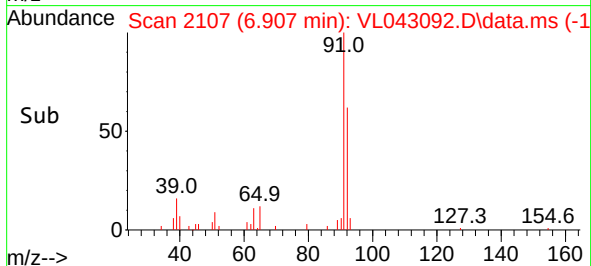
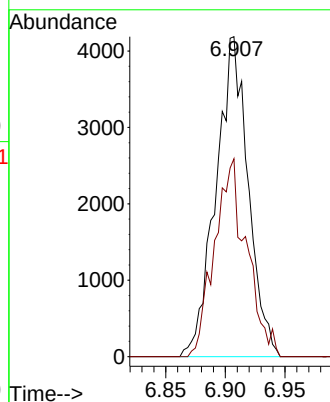
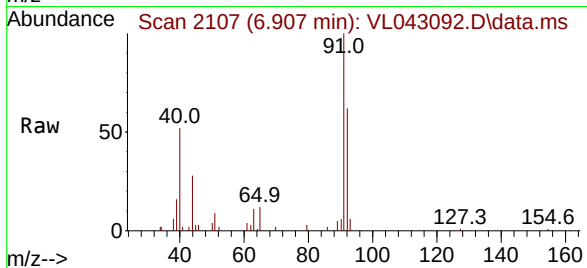
SV6DL

Tgt Ion: 91 Resp: 7891

Ion Ratio Lower Upper

91 100

92 61.6 47.8 71.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.862 min Scan# 2711

Delta R.T. -0.000 min

Lab File: VL043092.D

Acq: 09 Oct 2025 17:17

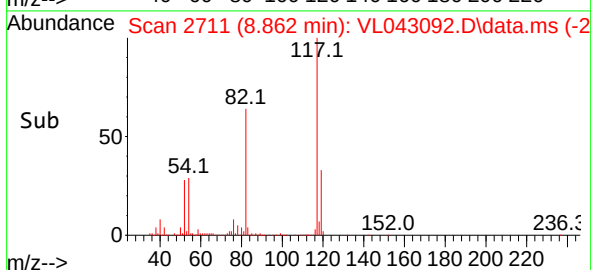
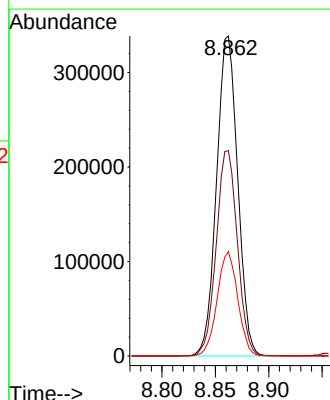
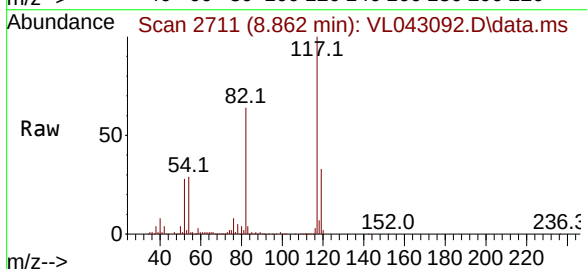
Tgt Ion: 117 Resp: 466022

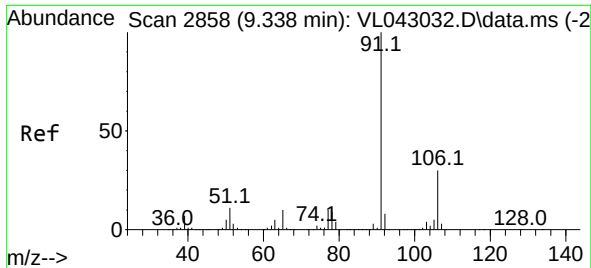
Ion Ratio Lower Upper

117 100

82 64.4 53.0 79.6

119 31.8 25.4 38.2

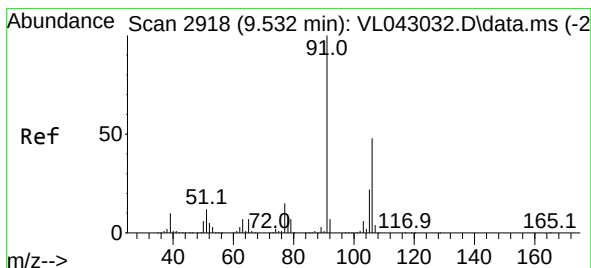
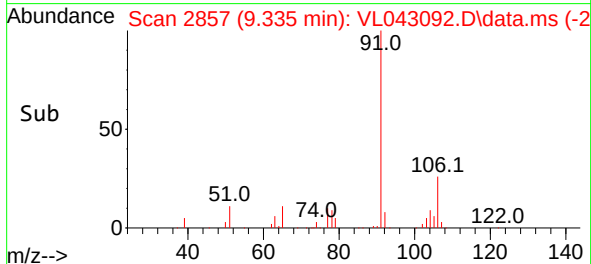
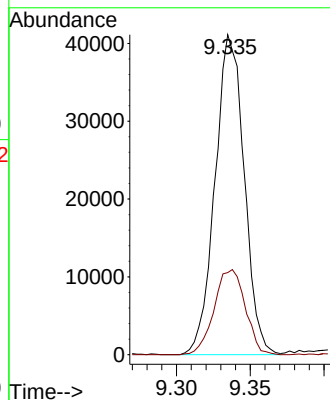
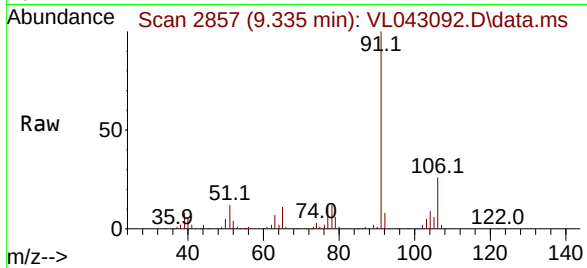




#58
Ethyl Benzene
Concen: 0.784 ppbv
RT: 9.335 min Scan# 21
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

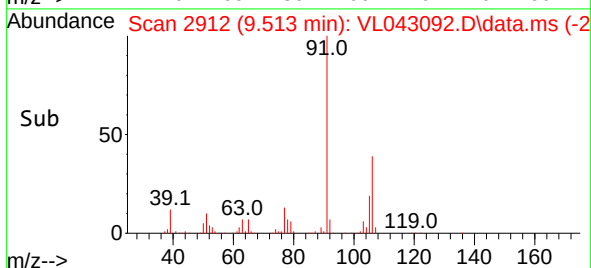
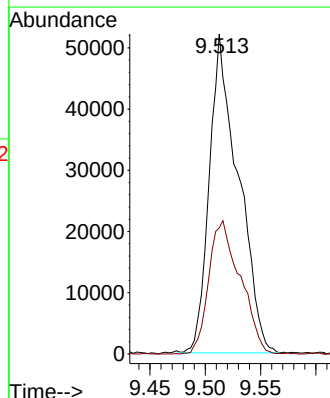
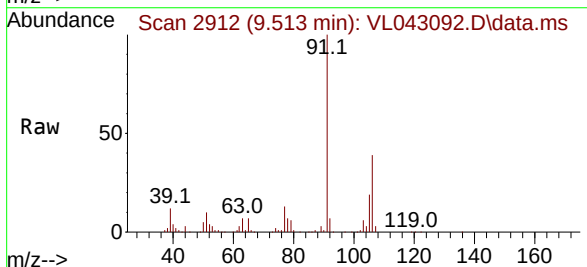
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

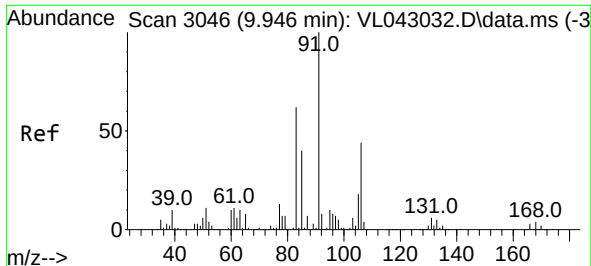
Tgt Ion: 91 Resp: 56595
Ion Ratio Lower Upper
91 100
106 25.7 24.1 36.1



#59
m/p-Xylene
Concen: 1.556 ppbv
RT: 9.513 min Scan# 2912
Delta R.T. -0.019 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 91 Resp: 94743
Ion Ratio Lower Upper
91 100
106 45.7 37.5 56.3

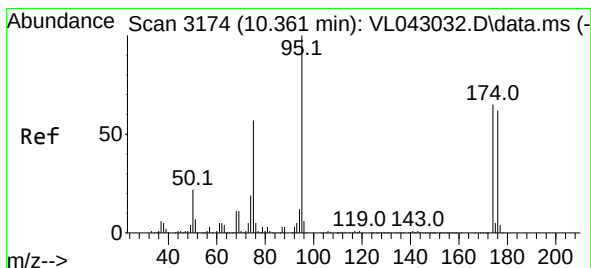
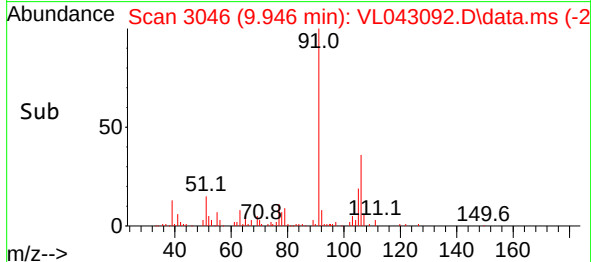
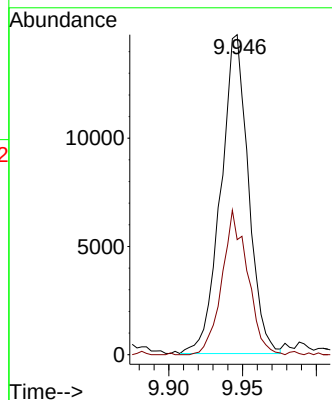
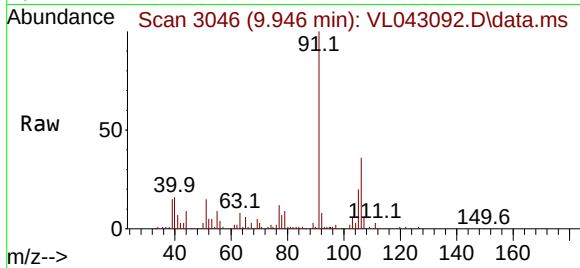




#60
o-Xylene
Concen: 0.316 ppbv
RT: 9.946 min Scan# 3046
Delta R.T. -0.000 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

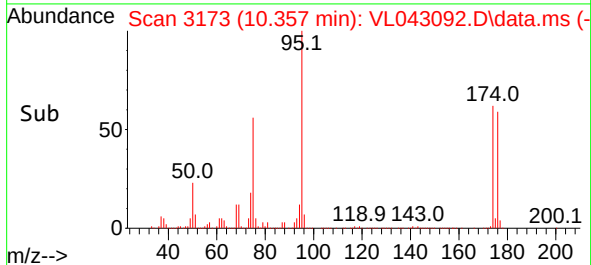
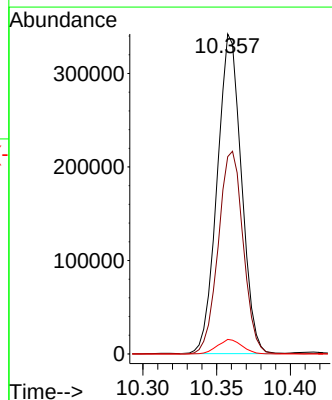
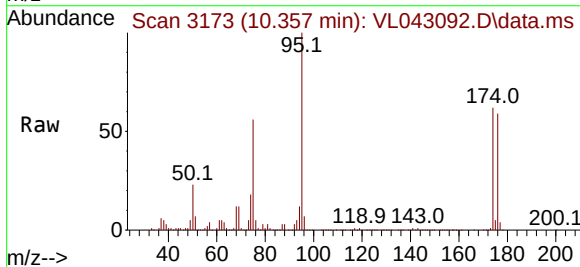
Instrument :
MSVOA_L
ClientSampleId :
SV6DL

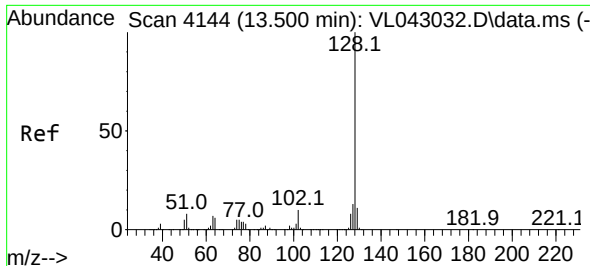
Tgt Ion: 91 Resp: 19175
Ion Ratio Lower Upper
91 100
106 42.6 21.9 65.5



#68
1-Bromo-4-Fluorobenzene
Concen: 11.636 ppbv
RT: 10.357 min Scan# 3173
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion: 95 Resp: 390643
Ion Ratio Lower Upper
95 100
174 65.4 52.3 78.5
175 4.6 3.8 5.8

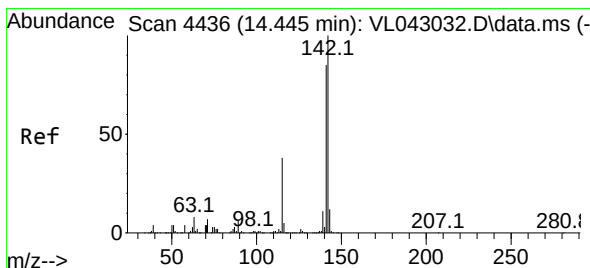
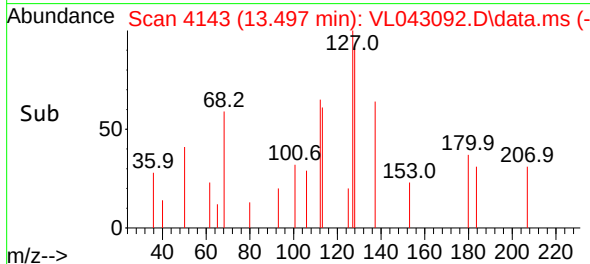
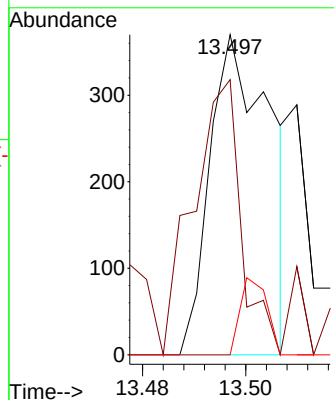
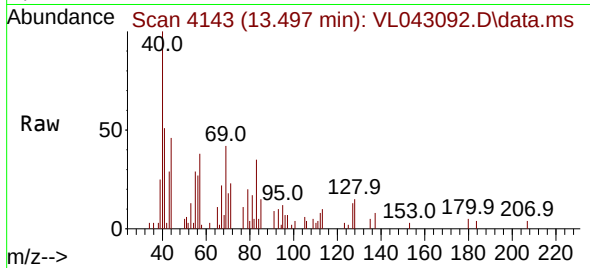




#79
Naphthalene
Concen: 0.239 ppbv
RT: 13.497 min Scan# 4144
Delta R.T. -0.003 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Instrument :
MSVOA_L
ClientSampleId :
SV6DL

Tgt Ion:128 Resp: 303
Ion Ratio Lower Upper
128 100
127 85.9 10.6 16.0#
129 0.0 8.8 13.2#



#80
Naphthalene,2-methyl-
Concen: 0.679 ppbv
RT: 14.461 min Scan# 4441
Delta R.T. 0.016 min
Lab File: VL043092.D
Acq: 09 Oct 2025 17:17

Tgt Ion:142 Resp: 516
Ion Ratio Lower Upper
142 100
141 74.0 66.6 100.0
115 52.3 30.1 45.1#

