

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL042125\
 Data File : VL042407.D
 Acq On : 21 Apr 2025 16:20
 Operator : SY/MD
 Sample : Q1844-01 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

Quant Time: Apr 22 02:56:00 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Apr 18 02:14:00 2025
 Response via : Initial Calibration

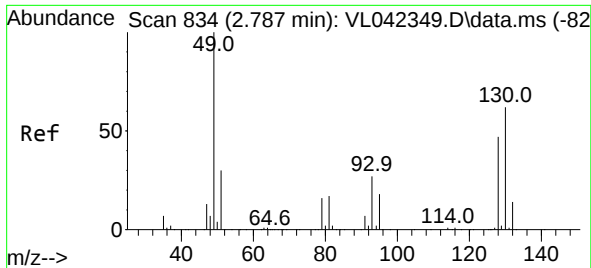
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	122634	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.956	114	335724	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.879	117	286487	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	257025	10.918	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	= 109.200%	
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.496	85	6122	0.283	ppbv	100
3) Chlorodifluoromethane	1.473	51	21859	1.059	ppbv #	84
4) Chloromethane	1.557	50	1511	0.176	ppbv	89
9) Propene	1.557	41	56366	5.999	ppbv	99
10) Heptane	4.982	43	969	0.037	ppbv #	1
13) Ethanol	1.722	45	18964	12.698	ppbv	79
15) Acetone	1.836	43	49251	2.453	ppbv #	47
16) 1,3-Butadiene	1.622	39	487797	50.802	ppbv #	11
19) Isopropyl Alcohol	1.887	45	10924	0.980	ppbv #	33
20) Methylene Chloride	2.062	84	1633	0.208	ppbv	89
21) Allyl Chloride	1.651	41	16698	1.205	ppbv #	21
22) trans-1,2-Dichloroethene	2.719	96	5433	0.606	ppbv	88
23) Vinyl Acetate	2.457	43	1143	0.141	ppbv #	34
25) Ethyl Acetate	2.826	43	8511	0.172	ppbv #	74
26) Hexane	2.826	57	10426	0.520	ppbv #	32
27) Carbon Disulfide	2.150	76	13713	0.639	ppbv #	1
29) Chloroform	2.849	83	20993	0.741	ppbv	97
31) cis-1,2-Dichloroethene	2.719	61	9200	0.483	ppbv	93
34) 2-Butanone	2.561	43	5134	0.193	ppbv	97
36) Benzene	3.651	78	2527	0.070	ppbv #	92
38) Trichloroethene	4.545	130	97602	6.167	ppbv	96
39) 1,2-Dichloropropane	3.956	63	94844	7.029	ppbv #	23
52) Tetrachloroethene	8.247	164	3985113	284.725	ppbv	91
53) Toluene	6.933	91	9622	0.221	ppbv	95
58) Ethyl Benzene	9.351	91	2651	0.047	ppbv	92
60) o-Xylene	9.963	91	4818	0.105	ppbv	92
71) 2-Chlorotoluene	10.989	91	2753	0.052	ppbv	74
72) 4-Ethyltoluene	11.125	105	2159	0.038	ppbv #	74
73) 1,3,5-Trimethylbenzene	11.199	105	2767	0.056	ppbv #	80
74) 1,2,4-Trimethylbenzene	11.533	105	8060	0.139	ppbv #	64

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

Quant Time: Apr 22 02:56:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041725AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
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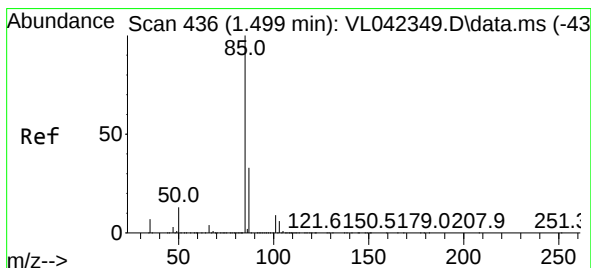
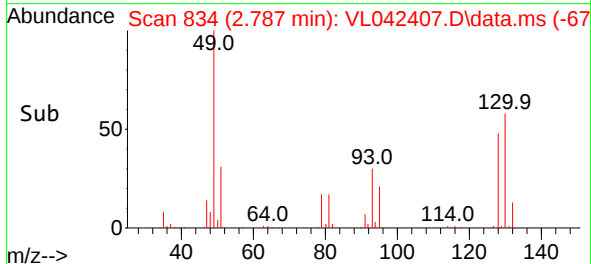
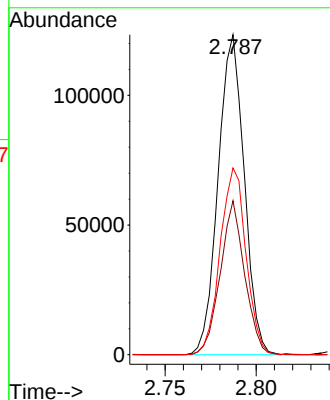
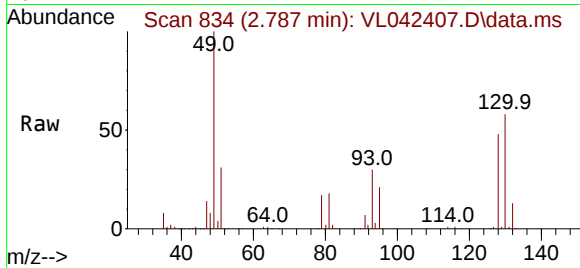




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.000 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

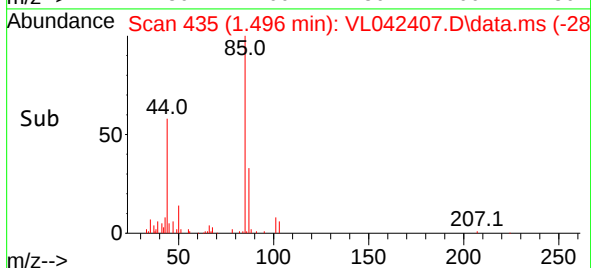
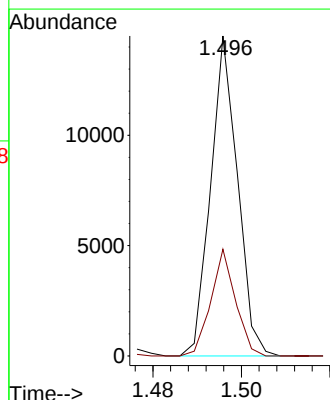
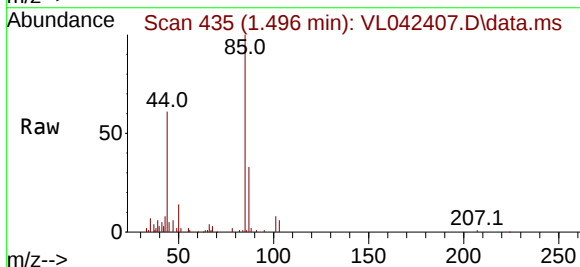
Instrument :
MSVOA_L
ClientSampleId :
SV1

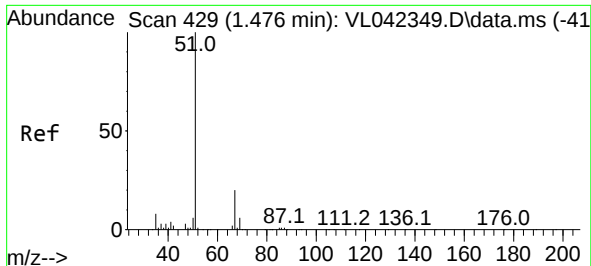
Tgt Ion: 49 Resp: 122634
Ion Ratio Lower Upper
49 100
128 44.9 22.8 68.4
130 58.1 29.3 88.0



#2
Dichlorodifluoromethane
Concen: 0.283 ppbv
RT: 1.496 min Scan# 435
Delta R.T. -0.003 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion: 85 Resp: 6122
Ion Ratio Lower Upper
85 100
87 33.3 26.6 39.8

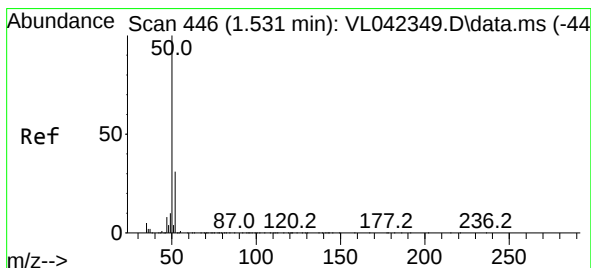
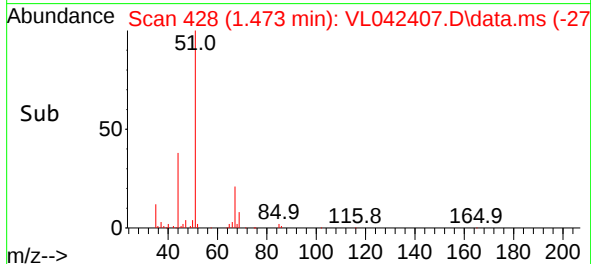
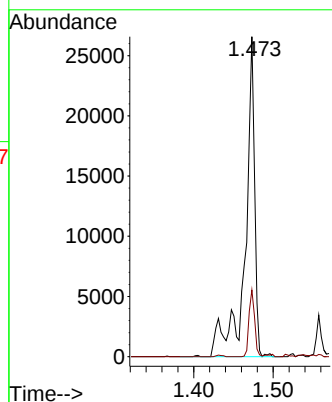
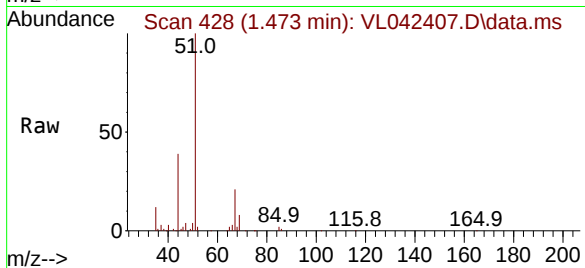




#3
Chlorodifluoromethane
Concen: 1.059 ppbv
RT: 1.473 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

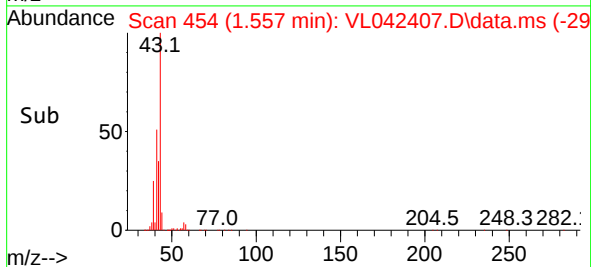
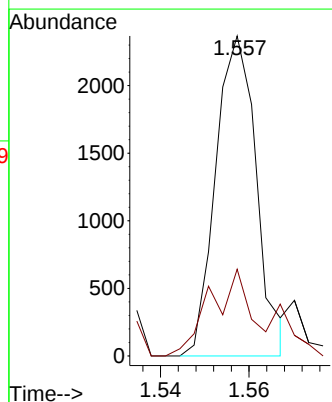
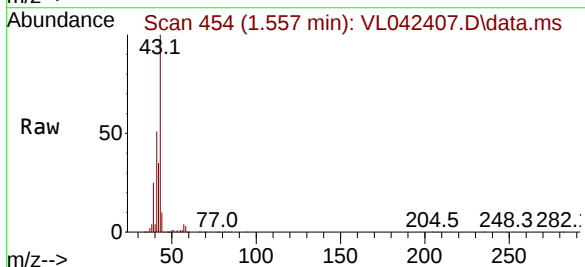
Instrument :
MSVOA_L
ClientSampleId :
SV1

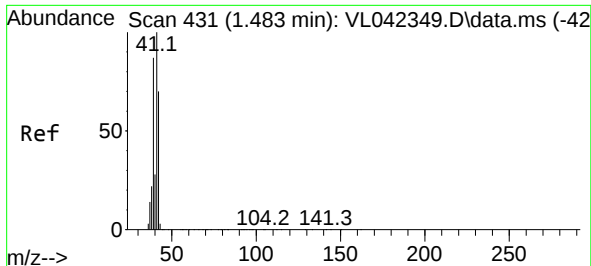
Tgt Ion: 51 Resp: 21859
Ion Ratio Lower Upper
51 100
67 13.1 16.2 24.4#



#4
Chloromethane
Concen: 0.176 ppbv
RT: 1.557 min Scan# 454
Delta R.T. 0.026 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion: 50 Resp: 1511
Ion Ratio Lower Upper
50 100
52 24.9 24.7 37.1





#9

Propene

Concen: 5.999 ppbv

RT: 1.557 min Scan# 41

Delta R.T. 0.075 min

Lab File: VL042407.D

Acq: 21 Apr 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

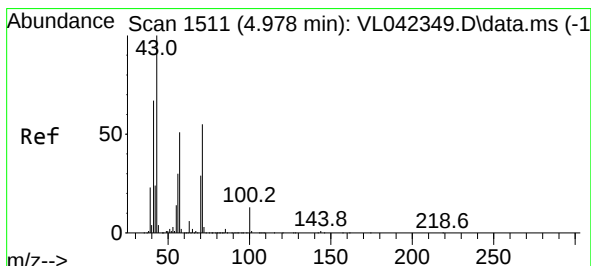
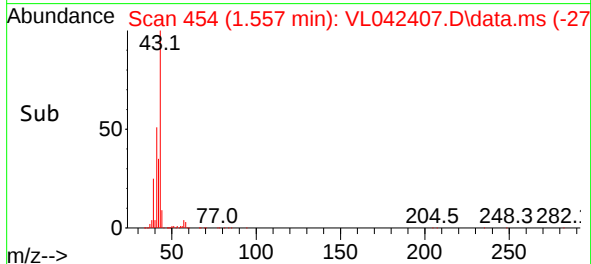
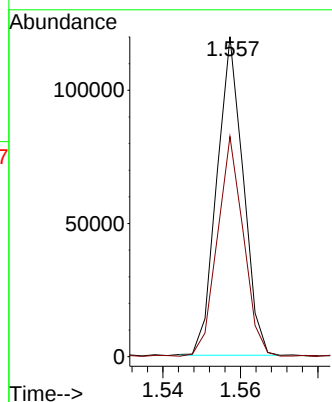
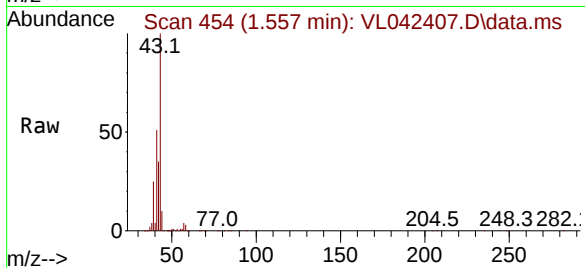
SV1

Tgt Ion: 41 Resp: 56366

Ion Ratio Lower Upper

41 100

42 69.9 56.2 84.4



#10

Heptane

Concen: 0.037 ppbv

RT: 4.982 min Scan# 1512

Delta R.T. 0.004 min

Lab File: VL042407.D

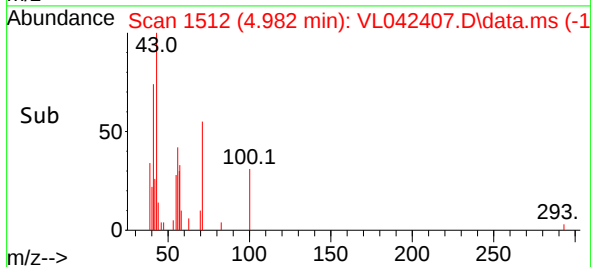
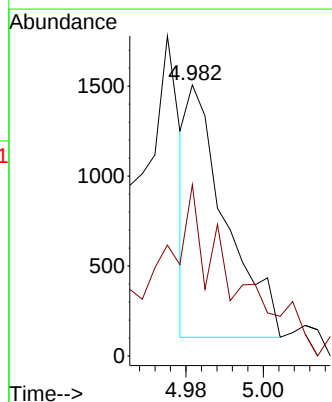
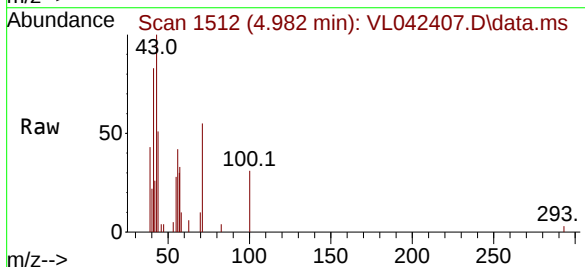
Acq: 21 Apr 2025 16:20

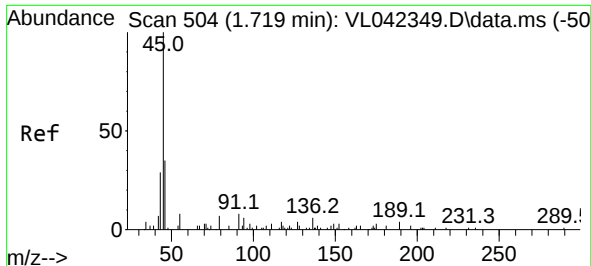
Tgt Ion: 43 Resp: 969

Ion Ratio Lower Upper

43 100

57 166.6 39.9 59.9#

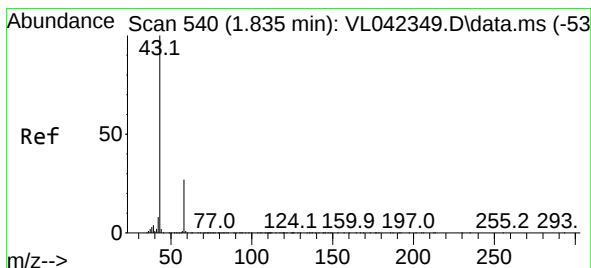
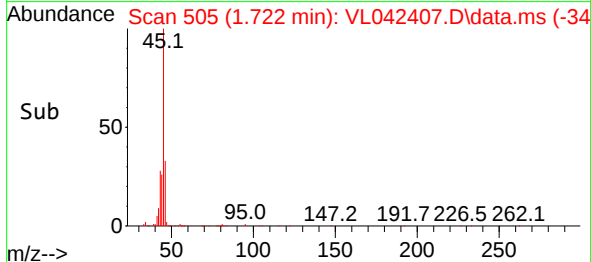
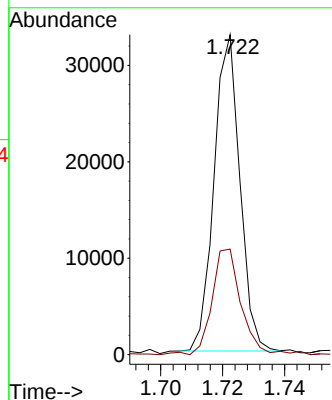
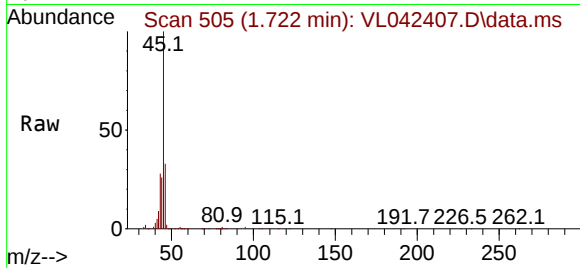




#13
 Ethanol
 Concen: 12.698 ppbv
 RT: 1.722 min Scan# 50
 Delta R.T. 0.004 min
 Lab File: VL042407.D
 Acq: 21 Apr 2025 16:20

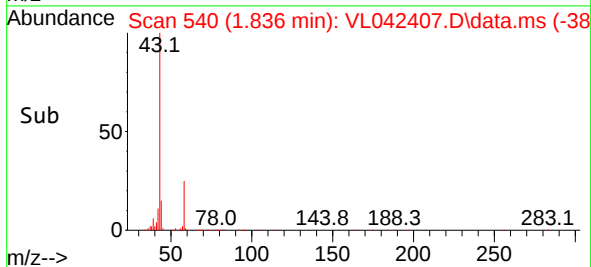
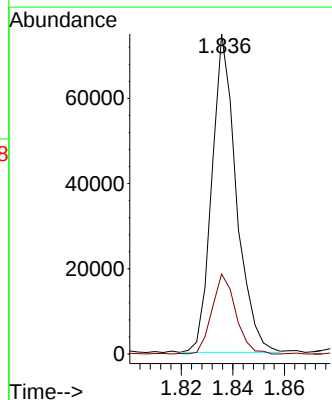
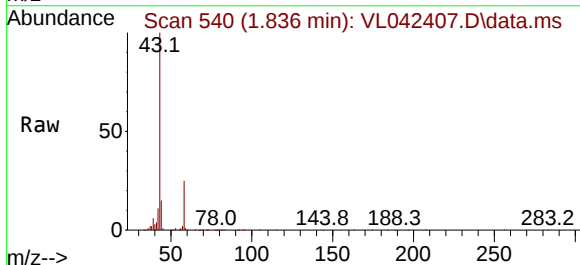
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

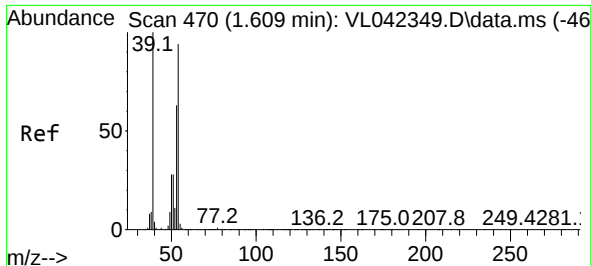
Tgt Ion: 45 Resp: 18964
 Ion Ratio Lower Upper
 45 100
 46 39.7 21.9 87.7



#15
 Acetone
 Concen: 2.453 ppbv
 RT: 1.836 min Scan# 540
 Delta R.T. 0.000 min
 Lab File: VL042407.D
 Acq: 21 Apr 2025 16:20

Tgt Ion: 43 Resp: 49251
 Ion Ratio Lower Upper
 43 100
 58 0.0 22.4 33.6#





#16

1,3-Butadiene

Concen: 50.802 ppbv

RT: 1.622 min Scan# 41

Delta R.T. 0.013 min

Lab File: VL042407.D

Acq: 21 Apr 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

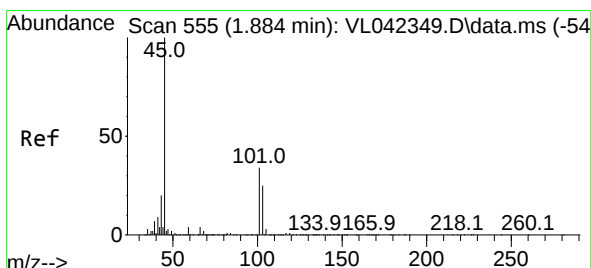
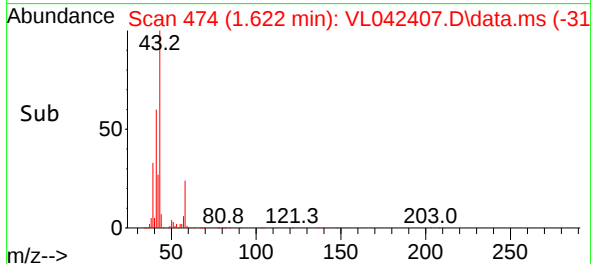
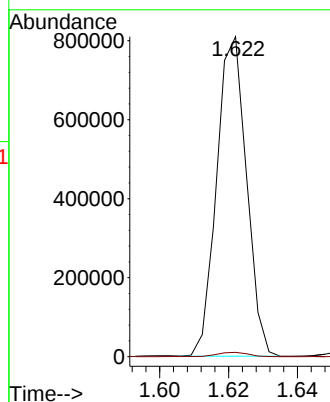
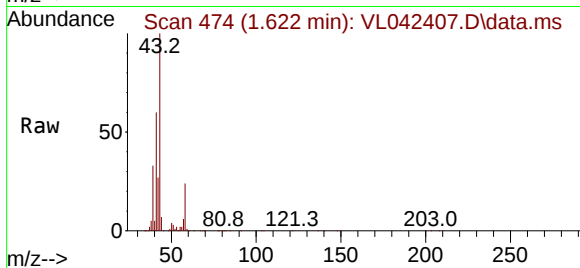
SV1

Tgt Ion: 39 Resp: 487797

Ion Ratio Lower Upper

39 100

54 1.6 64.9 97.3#



#19

Isopropyl Alcohol

Concen: 0.980 ppbv

RT: 1.887 min Scan# 556

Delta R.T. 0.004 min

Lab File: VL042407.D

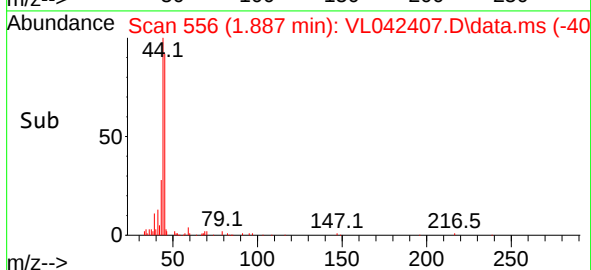
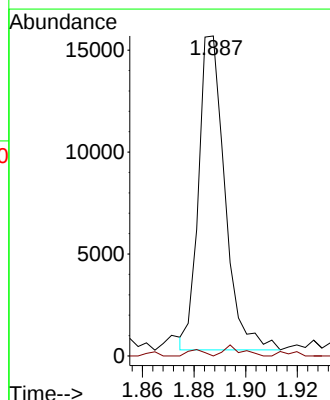
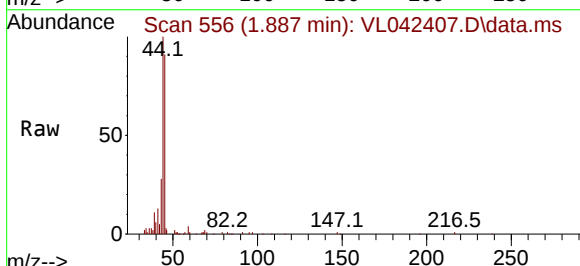
Acq: 21 Apr 2025 16:20

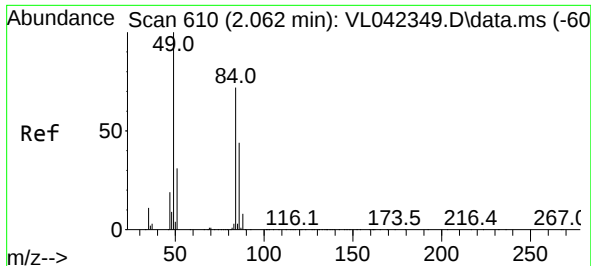
Tgt Ion: 45 Resp: 10924

Ion Ratio Lower Upper

45 100

58 0.0 34.5 51.7#

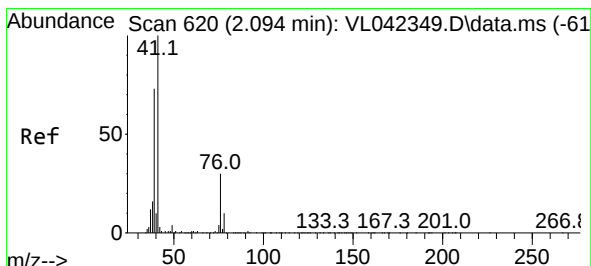
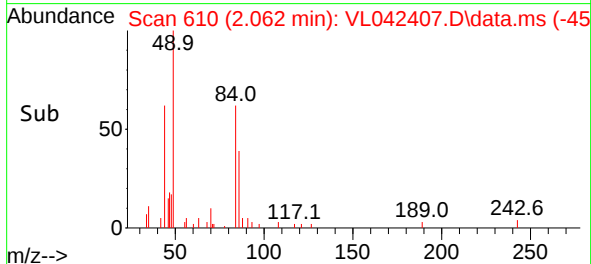
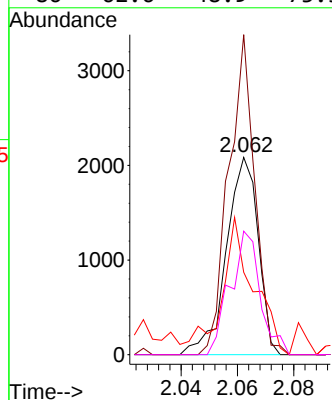
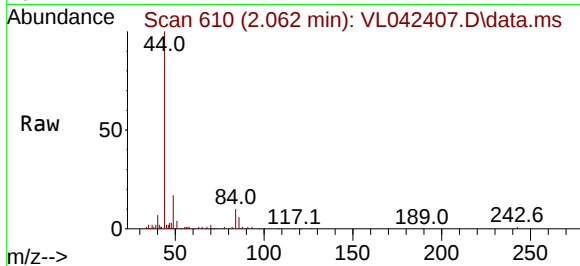




#20
Methylene Chloride
Concen: 0.208 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.000 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

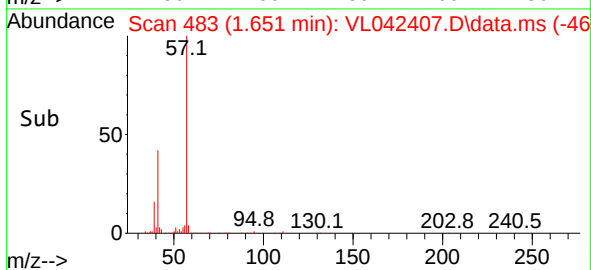
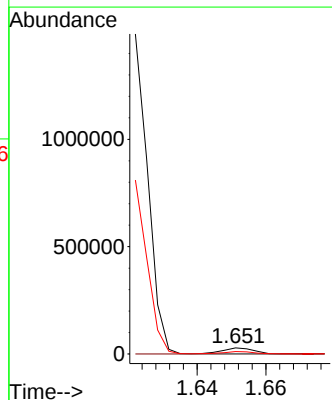
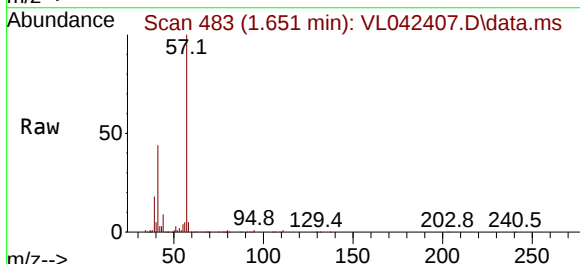
Instrument :
MSVOA_1
ClientSampleId :
SV1

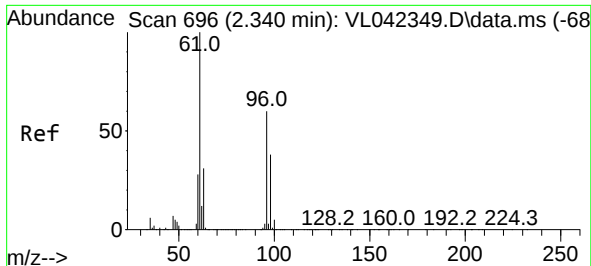
Tgt Ion:	84	Resp:	1633
Ion	Ratio	Lower	Upper
84	100		
49	158.0	111.6	167.4
51	38.4	35.1	52.7
86	62.6	48.9	73.3



#21
Allyl Chloride
Concen: 1.205 ppbv
RT: 1.651 min Scan# 483
Delta R.T. -0.443 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion:	41	Resp:	16698
Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.8	37.2#
39	0.0	60.6	90.8#

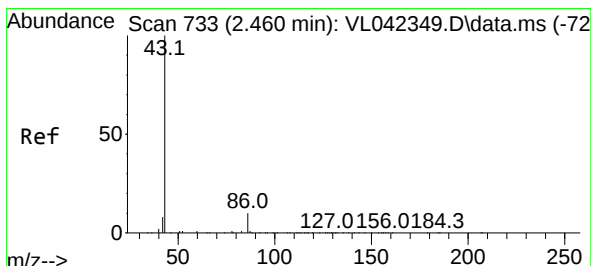
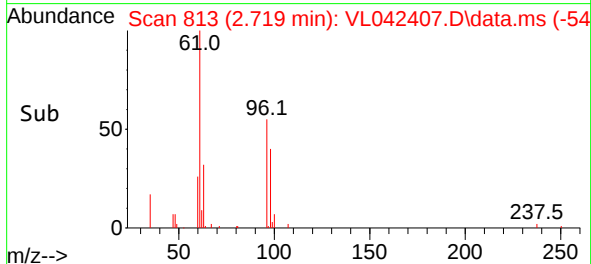
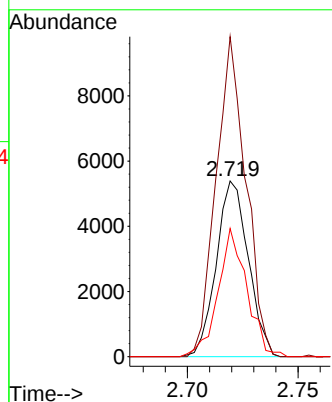
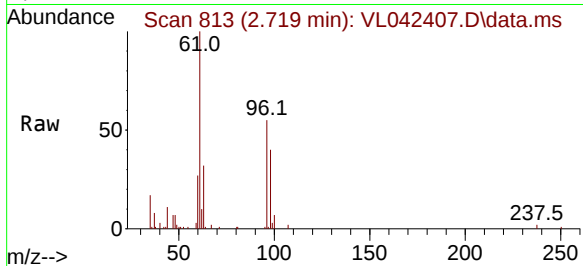




#22
trans-1,2-Dichloroethene
Concen: 0.606 ppbv
RT: 2.719 min Scan# 81
Delta R.T. 0.379 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

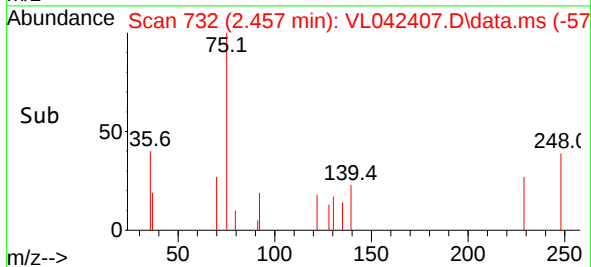
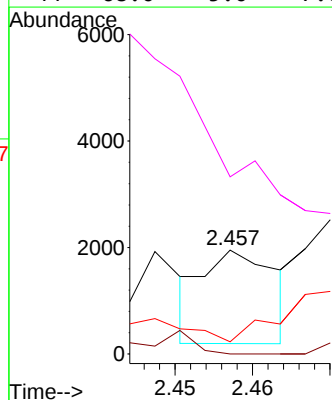
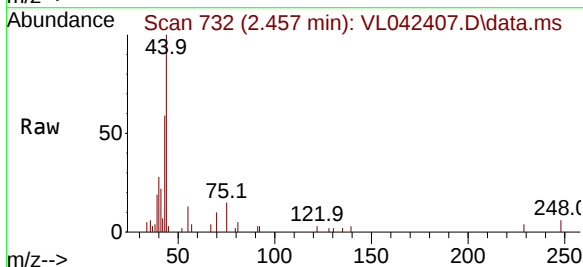
Instrument :
MSVOA_L
ClientSampleId :
SV1

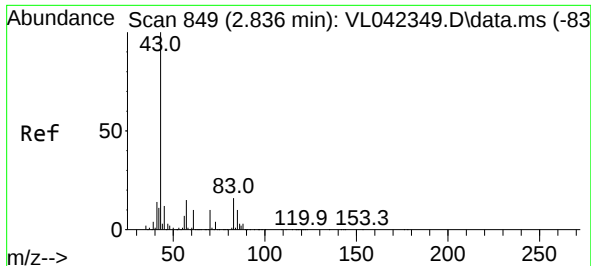
Tgt Ion: 96 Resp: 5433
Ion Ratio Lower Upper
96 100
61 182.2 133.7 200.5
98 73.0 50.3 75.5



#23
Vinyl Acetate
Concen: 0.141 ppbv
RT: 2.457 min Scan# 732
Delta R.T. -0.003 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion: 43 Resp: 1143
Ion Ratio Lower Upper
43 100
86 0.0 6.5 9.7#
42 0.0 7.8 11.8#
44 68.0 5.0 7.6#

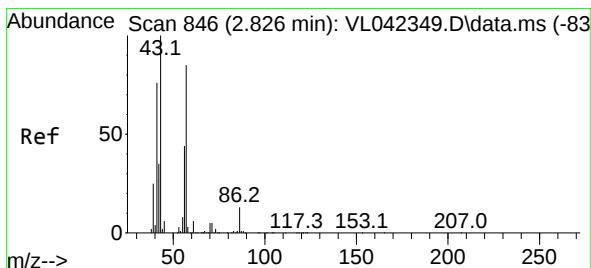
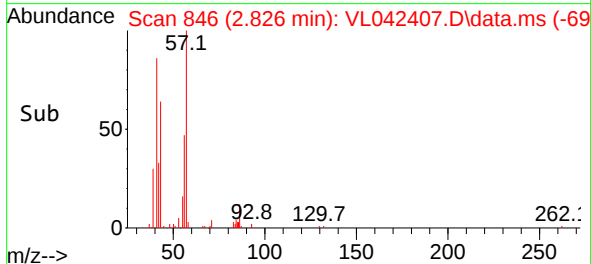
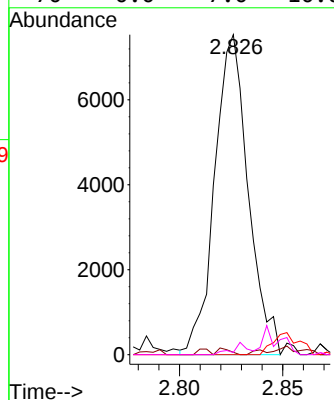
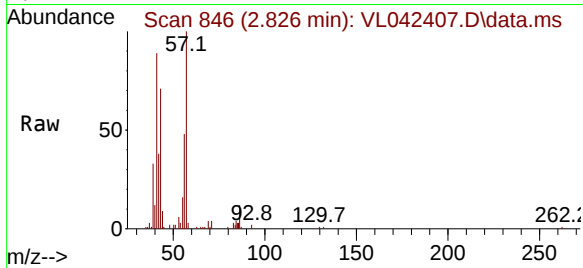




#25
Ethyl Acetate
Concen: 0.172 ppbv
RT: 2.826 min Scan# 849
Delta R.T. -0.009 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

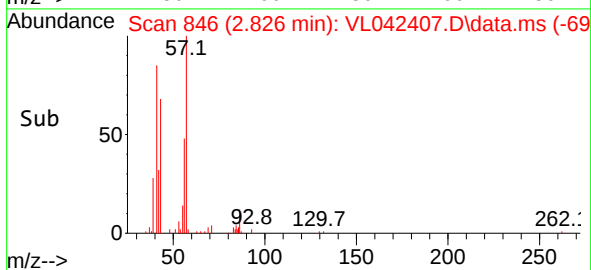
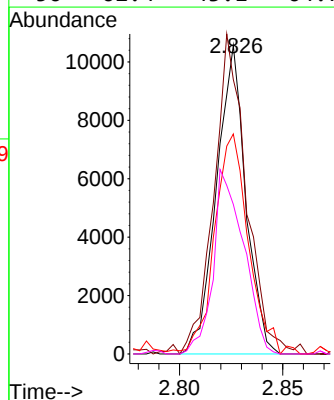
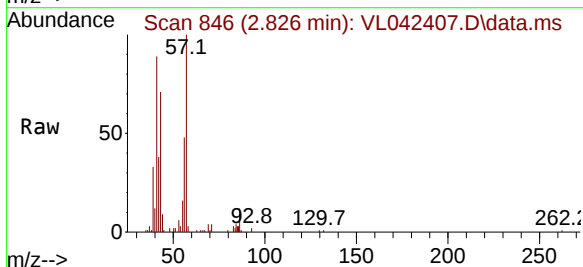
Instrument :
MSVOA_L
ClientSampleId :
SV1

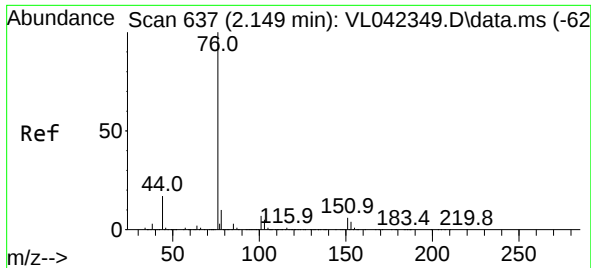
Tgt Ion:	43	Resp:	8511
Ion Ratio	Lower	Upper	
43	100		
45	0.0	8.3	12.5#
61	0.0	7.3	10.9#
70	0.0	7.0	10.6#



#26
Hexane
Concen: 0.520 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.000 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion:	57	Resp:	10426
Ion Ratio	Lower	Upper	
57	100		
41	114.2	77.9	116.9
43	85.0	208.4	312.6#
56	62.4	43.1	64.7





#27

Carbon Disulfide

Concen: 0.639 ppbv

RT: 2.150 min Scan# 61

Delta R.T. 0.000 min

Lab File: VL042407.D

Acq: 21 Apr 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

SV1

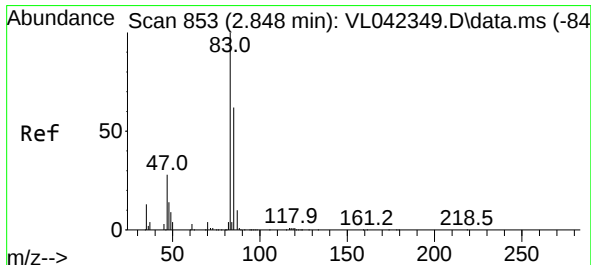
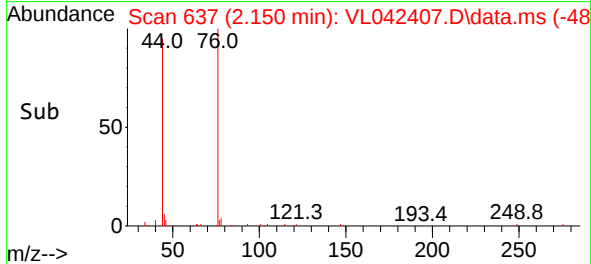
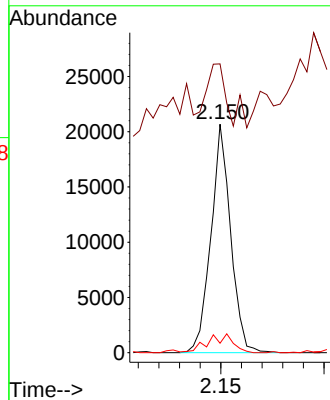
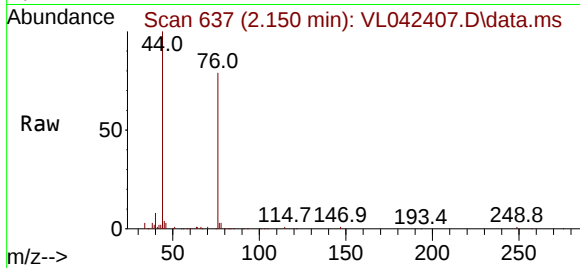
Tgt Ion: 76 Resp: 13713

Ion Ratio Lower Upper

76 100

44 621.4 15.5 23.3#

78 11.2 9.3 13.9



#29

Chloroform

Concen: 0.741 ppbv

RT: 2.849 min Scan# 853

Delta R.T. 0.000 min

Lab File: VL042407.D

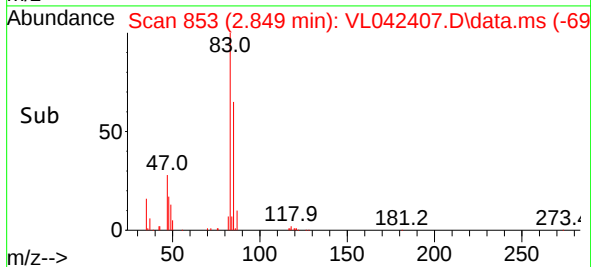
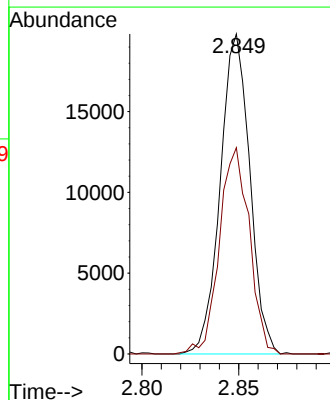
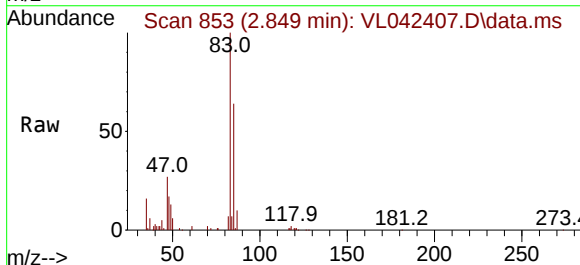
Acq: 21 Apr 2025 16:20

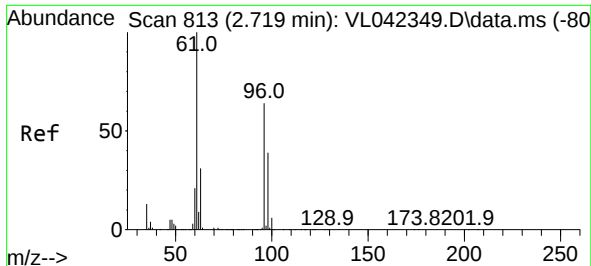
Tgt Ion: 83 Resp: 20993

Ion Ratio Lower Upper

83 100

85 64.4 50.0 75.0

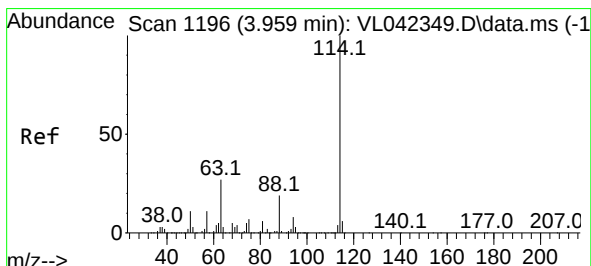
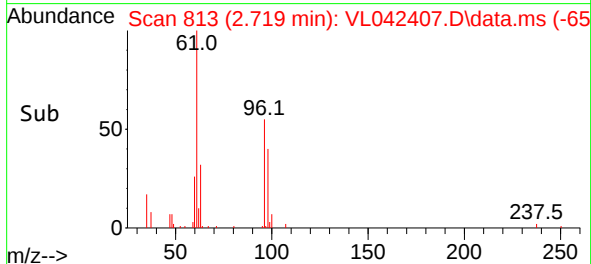
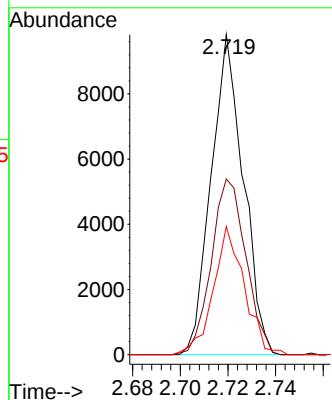
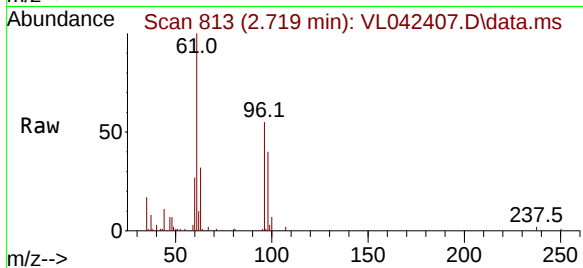




#31
 cis-1,2-Dichloroethene
 Concen: 0.483 ppbv
 RT: 2.719 min Scan# 813
 Delta R.T. 0.000 min
 Lab File: VL042407.D
 Acq: 21 Apr 2025 16:20

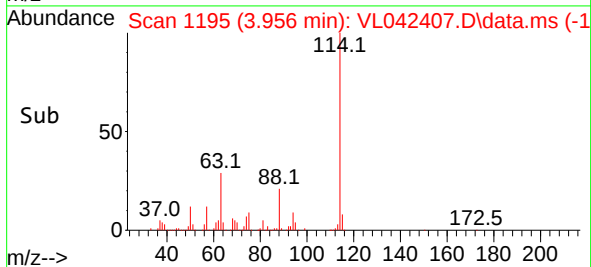
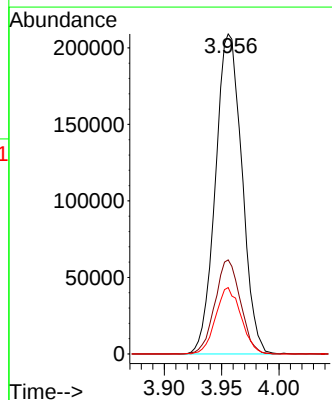
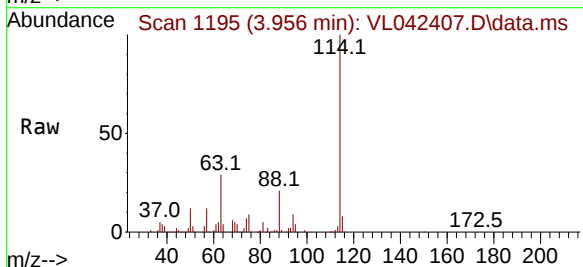
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

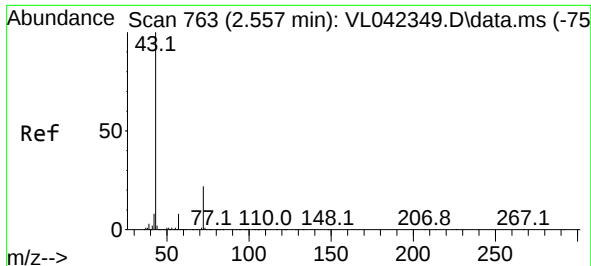
Tgt Ion: 61 Resp: 9200
 Ion Ratio Lower Upper
 61 100
 96 54.9 50.8 76.2
 98 39.1 30.9 46.3



#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.956 min Scan# 1195
 Delta R.T. -0.003 min
 Lab File: VL042407.D
 Acq: 21 Apr 2025 16:20

Tgt Ion: 114 Resp: 335724
 Ion Ratio Lower Upper
 114 100
 63 28.3 21.8 32.6
 88 19.9 15.5 23.3

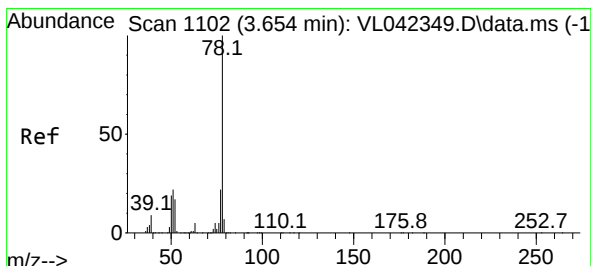
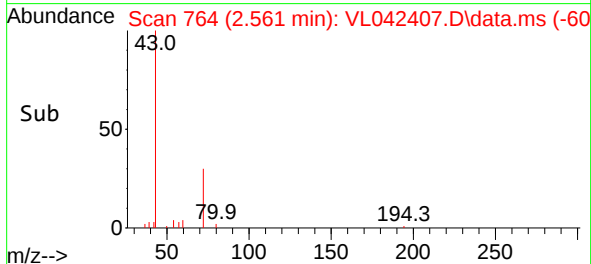
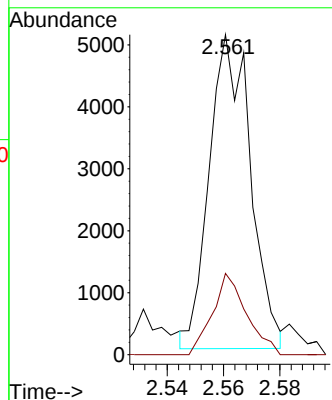
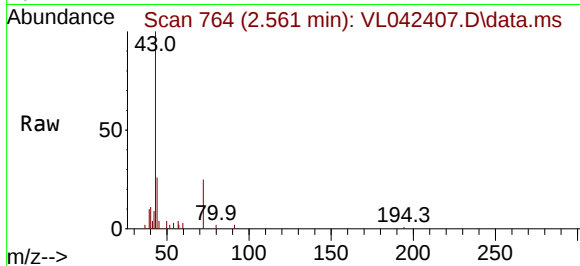




#34
2-Butanone
Concen: 0.193 ppbv
RT: 2.561 min Scan# 764
Delta R.T. 0.004 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

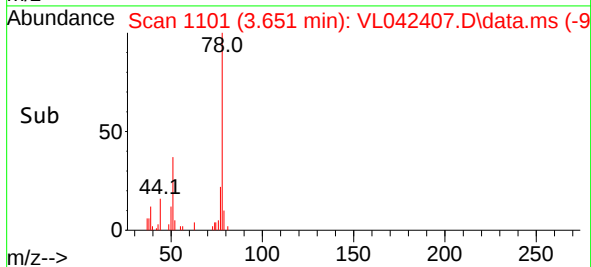
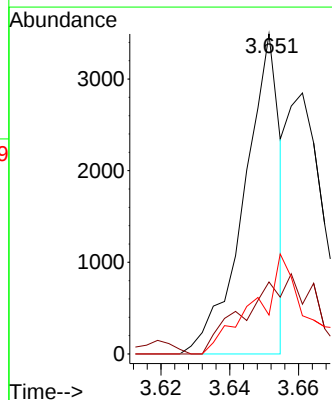
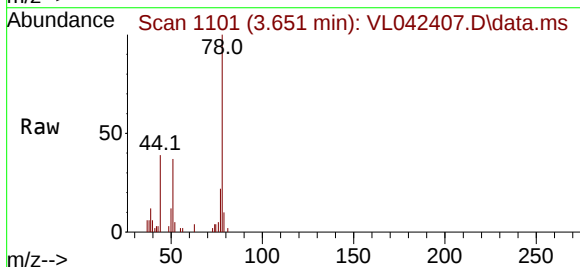
Instrument :
MSVOA_L
ClientSampleId :
SV1

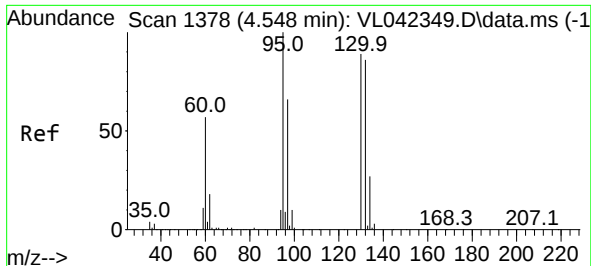
Tgt Ion: 43 Resp: 5134
Ion Ratio Lower Upper
43 100
72 21.4 18.2 27.2



#36
Benzene
Concen: 0.070 ppbv
RT: 3.651 min Scan# 1101
Delta R.T. -0.003 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion: 78 Resp: 2527
Ion Ratio Lower Upper
78 100
77 21.0 17.4 26.0
50 12.2 15.5 23.3#

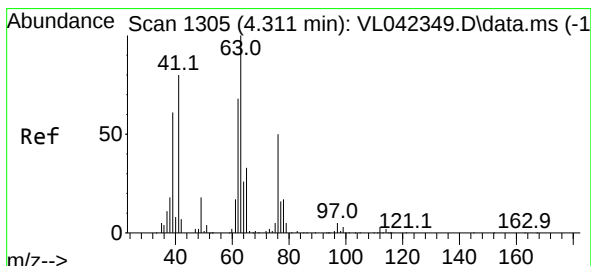
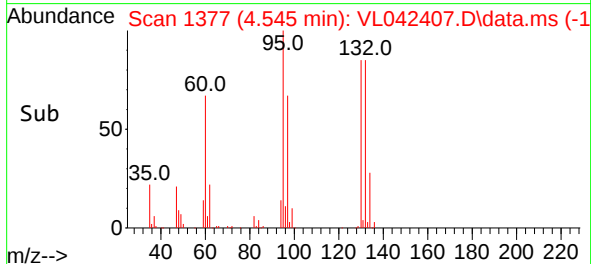
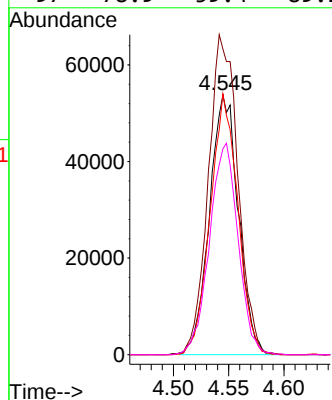
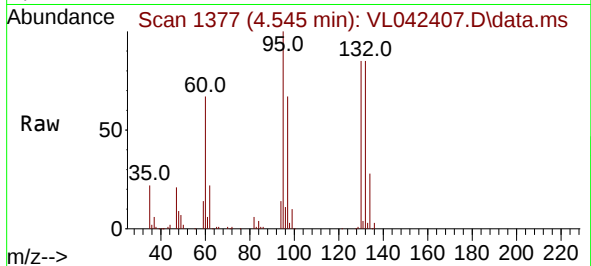




#38
 Trichloroethene
 Concen: 6.167 ppbv
 RT: 4.545 min Scan# 1195
 Delta R.T. -0.003 min
 Lab File: VL042407.D
 Acq: 21 Apr 2025 16:20

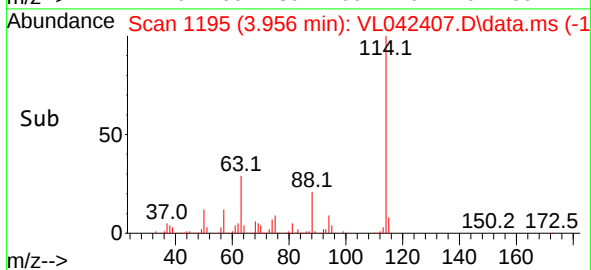
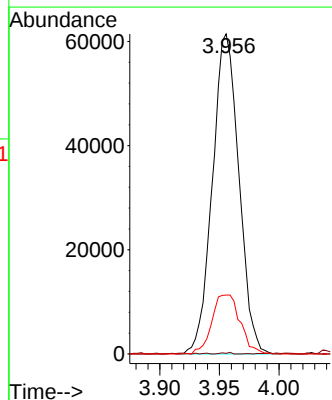
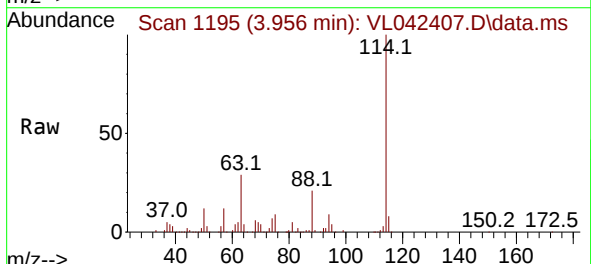
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

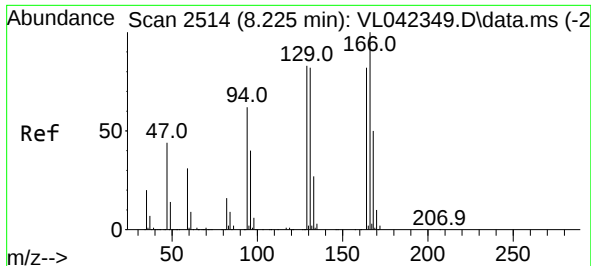
Tgt Ion:130	Resp:	97602
Ion	Ratio	Lower Upper
130	100	
95	117.4	89.8 134.6
132	100.3	77.7 116.5
97	78.9	59.4 89.2



#39
 1,2-Dichloropropane
 Concen: 7.029 ppbv
 RT: 3.956 min Scan# 1195
 Delta R.T. -0.356 min
 Lab File: VL042407.D
 Acq: 21 Apr 2025 16:20

Tgt Ion: 63	Resp:	94844
Ion	Ratio	Lower Upper
63	100	
41	0.1	64.2 96.2#
62	18.4	54.3 81.5#



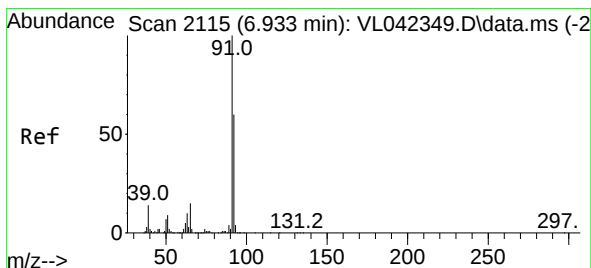
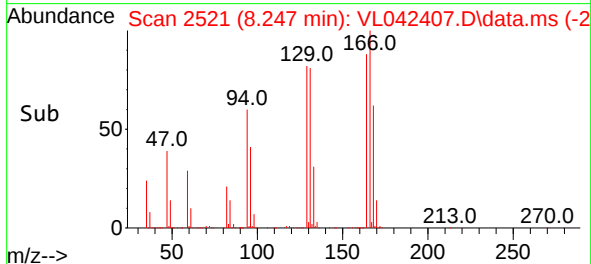
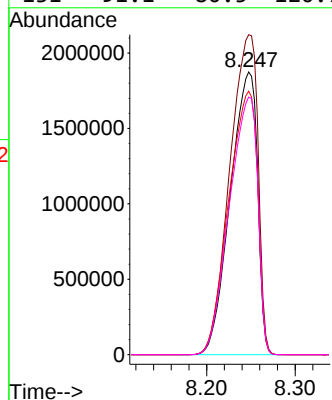
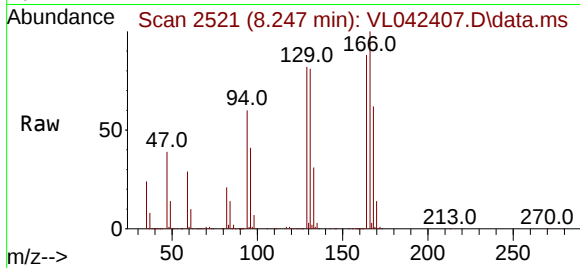


#52
Tetrachloroethene
Concen: 284.725 ppbv
RT: 8.247 min Scan# 2115
Delta R.T. 0.023 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Instrument :
MSVOA_L
ClientSampleId :
SV1

Tgt Ion:164 Resp: 3985113

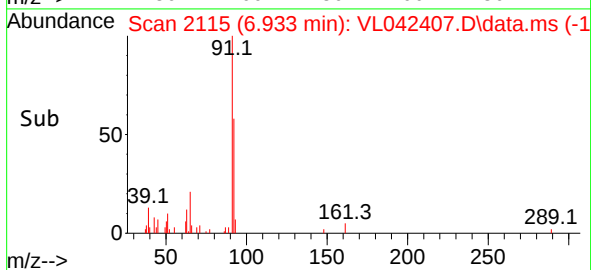
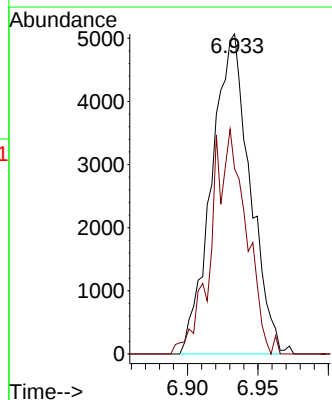
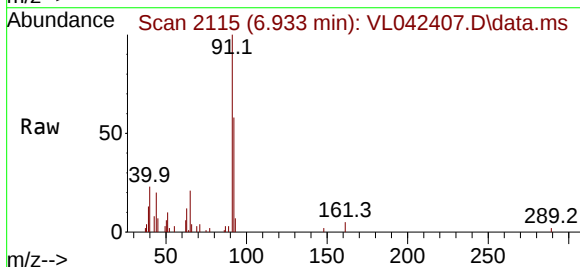
Ion	Ratio	Lower	Upper
164	100		
166	113.2	98.2	147.2
129	93.2	81.8	122.8
131	91.1	80.5	120.7

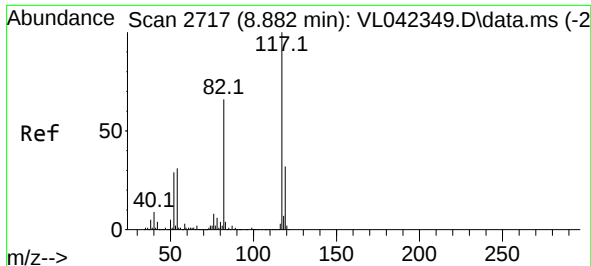


#53
Toluene
Concen: 0.221 ppbv
RT: 6.933 min Scan# 2115
Delta R.T. 0.000 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion: 91 Resp: 9622

Ion	Ratio	Lower	Upper
91	100		
92	63.9	48.2	72.4

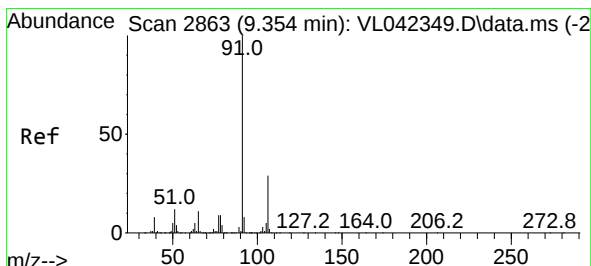
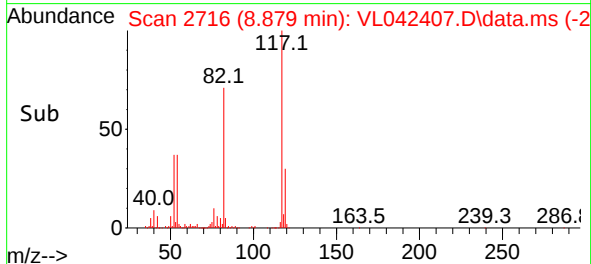
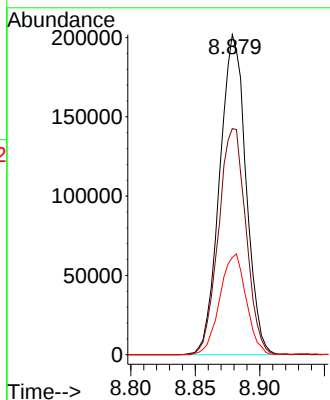
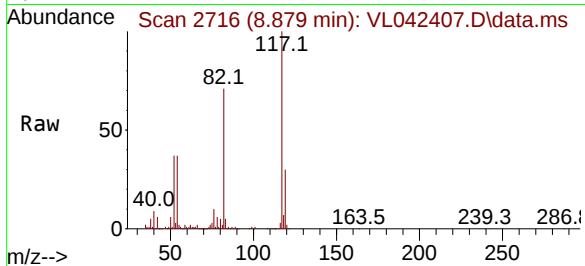




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.879 min Scan# 21
Delta R.T. -0.003 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

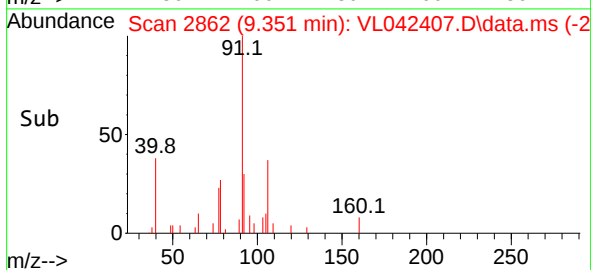
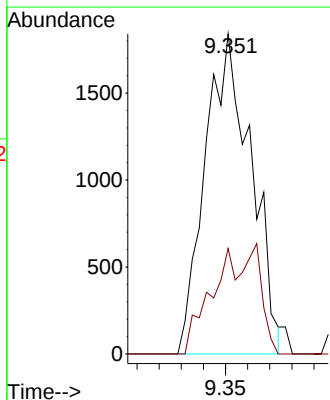
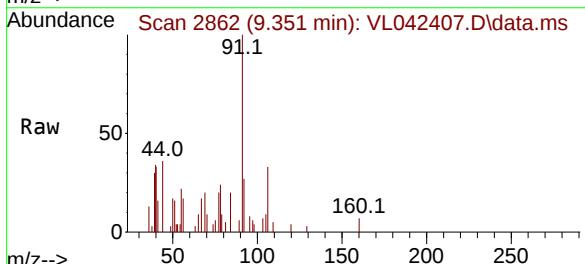
Instrument :
MSVOA_L
ClientSampleId :
SV1

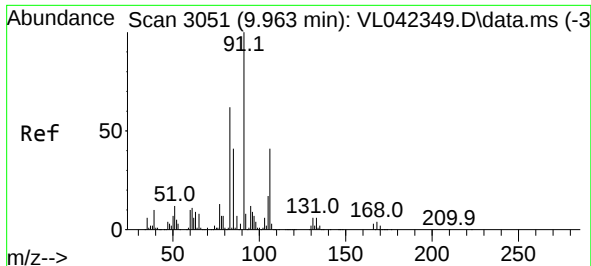
Tgt Ion:117 Resp: 286487
Ion Ratio Lower Upper
117 100
82 73.6 57.8 86.6
119 31.6 25.2 37.8



#58
Ethyl Benzene
Concen: 0.047 ppbv
RT: 9.351 min Scan# 2862
Delta R.T. -0.003 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion: 91 Resp: 2651
Ion Ratio Lower Upper
91 100
106 32.9 23.0 34.4

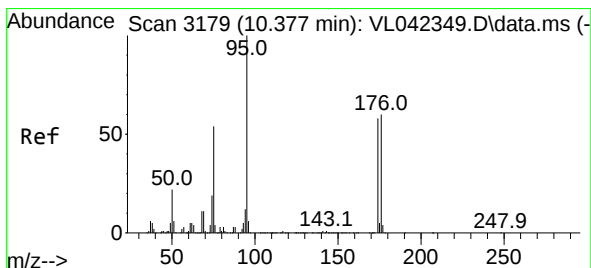
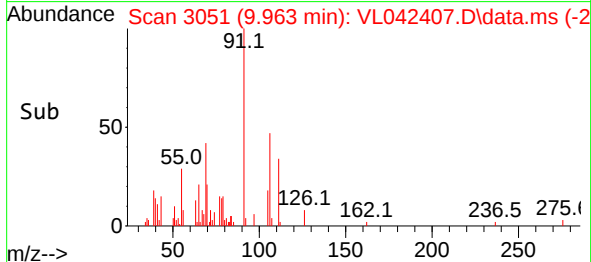
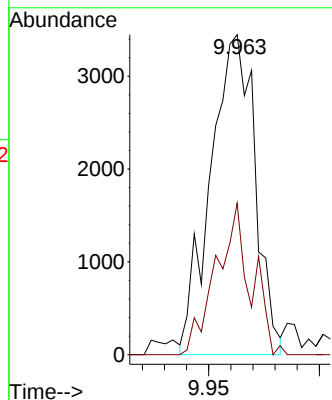
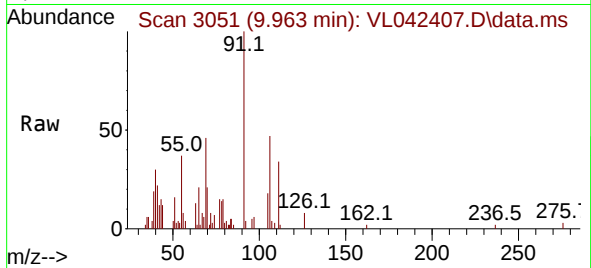




#60
o-Xylene
Concen: 0.105 ppbv
RT: 9.963 min Scan# 3051
Delta R.T. 0.000 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

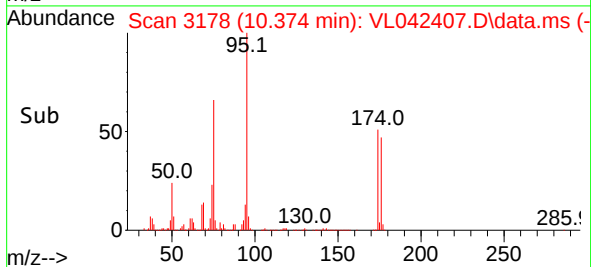
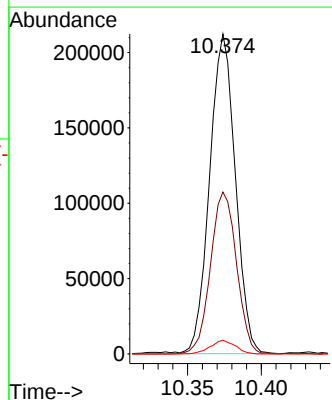
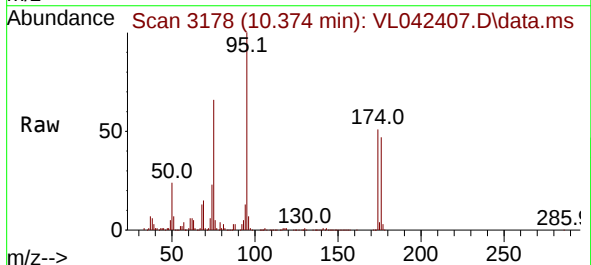
Instrument :
MSVOA_L
ClientSampleId :
SV1

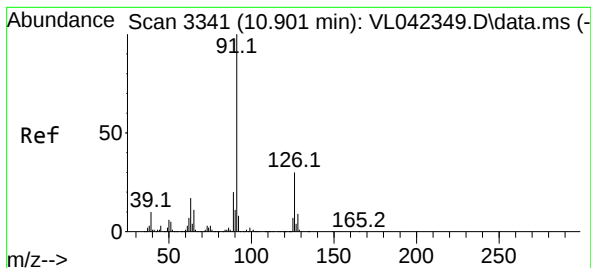
Tgt Ion: 91 Resp: 4818
Ion Ratio Lower Upper
91 100
106 37.0 21.1 63.4



#68
1-Bromo-4-Fluorobenzene
Concen: 10.918 ppbv
RT: 10.374 min Scan# 3178
Delta R.T. -0.003 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion: 95 Resp: 257025
Ion Ratio Lower Upper
95 100
174 51.3 48.5 72.7
175 4.1 3.7 5.5

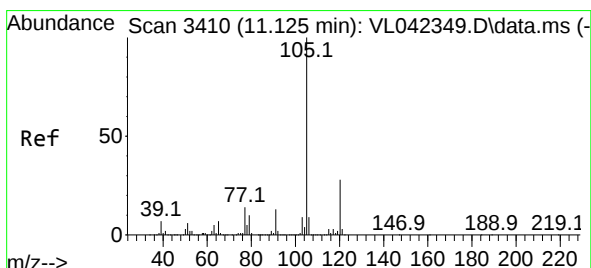
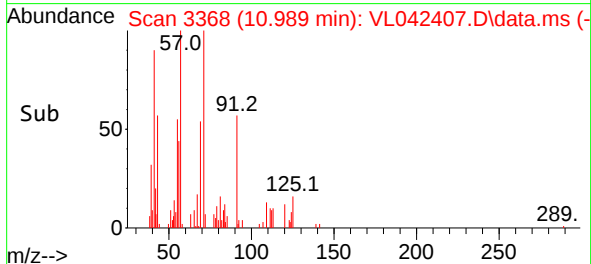
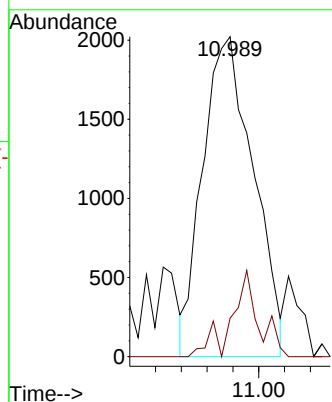
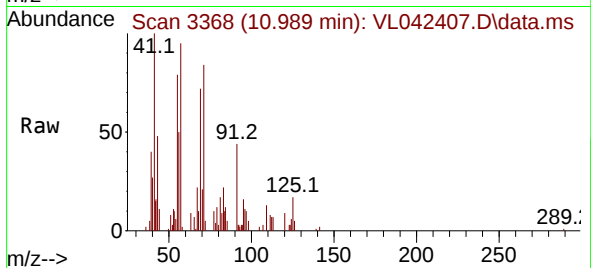




#71
2-Chlorotoluene
Concen: 0.052 ppbv
RT: 10.989 min Scan# 31
Delta R.T. 0.088 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

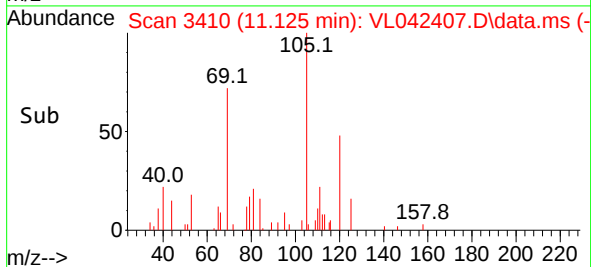
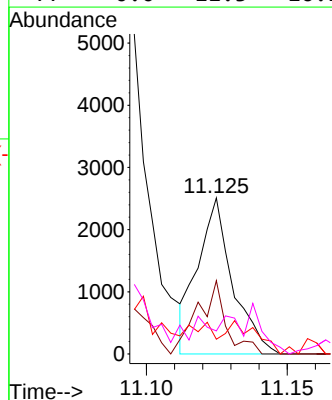
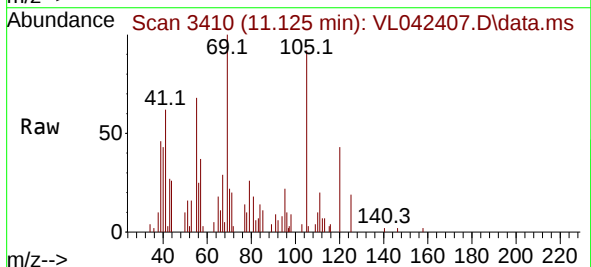
Instrument :
MSVOA_L
ClientSampleId :
SV1

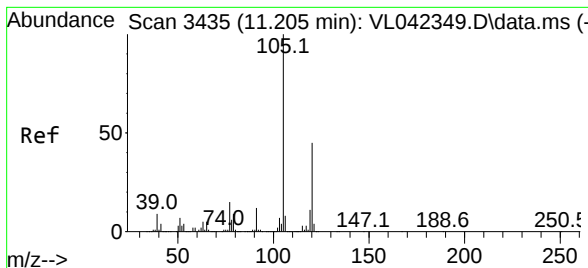
Tgt Ion: 91 Resp: 2753
Ion Ratio Lower Upper
91 100
126 14.6 11.4 45.4



#72
4-Ethyltoluene
Concen: 0.038 ppbv
RT: 11.125 min Scan# 3410
Delta R.T. 0.000 min
Lab File: VL042407.D
Acq: 21 Apr 2025 16:20

Tgt Ion:105 Resp: 2159
Ion Ratio Lower Upper
105 100
120 38.7 23.2 34.8#
91 0.0 10.4 15.6#
77 0.0 11.3 16.9#





#73

1,3,5-Trimethylbenzene

Concen: 0.056 ppbv

RT: 11.199 min Scan# 3433

Delta R.T. -0.006 min

Lab File: VL042407.D

Acq: 21 Apr 2025 16:20

Instrument :

MSVOA_1

ClientSampleId :

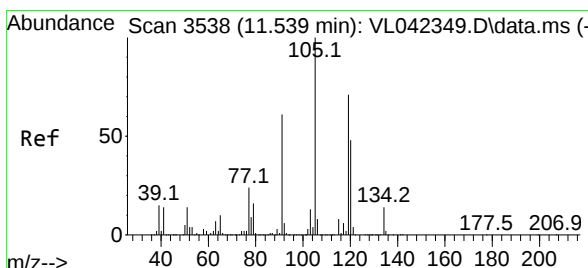
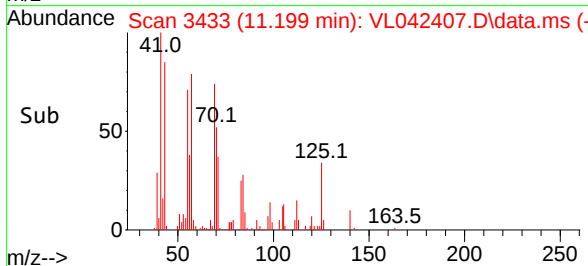
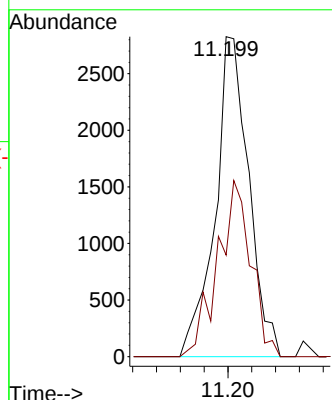
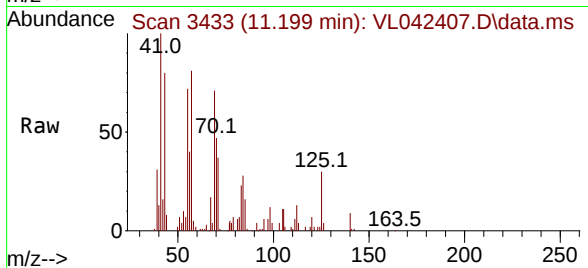
SV1

Tgt Ion:105 Resp: 2767

Ion Ratio Lower Upper

105 100

120 31.7 35.6 53.4#



#74

1,2,4-Trimethylbenzene

Concen: 0.139 ppbv

RT: 11.533 min Scan# 3536

Delta R.T. -0.006 min

Lab File: VL042407.D

Acq: 21 Apr 2025 16:20

Tgt Ion:105 Resp: 8060

Ion Ratio Lower Upper

105 100

120 40.4 38.1 57.1

91 10.0 48.8 73.2#

77 21.2 19.0 28.4

