

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL120825\
 Data File : VL043321.D
 Acq On : 08 Dec 2025 19:56
 Operator : SY/MD
 Sample : Q3798-03
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Quant Time: Dec 09 00:15:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

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

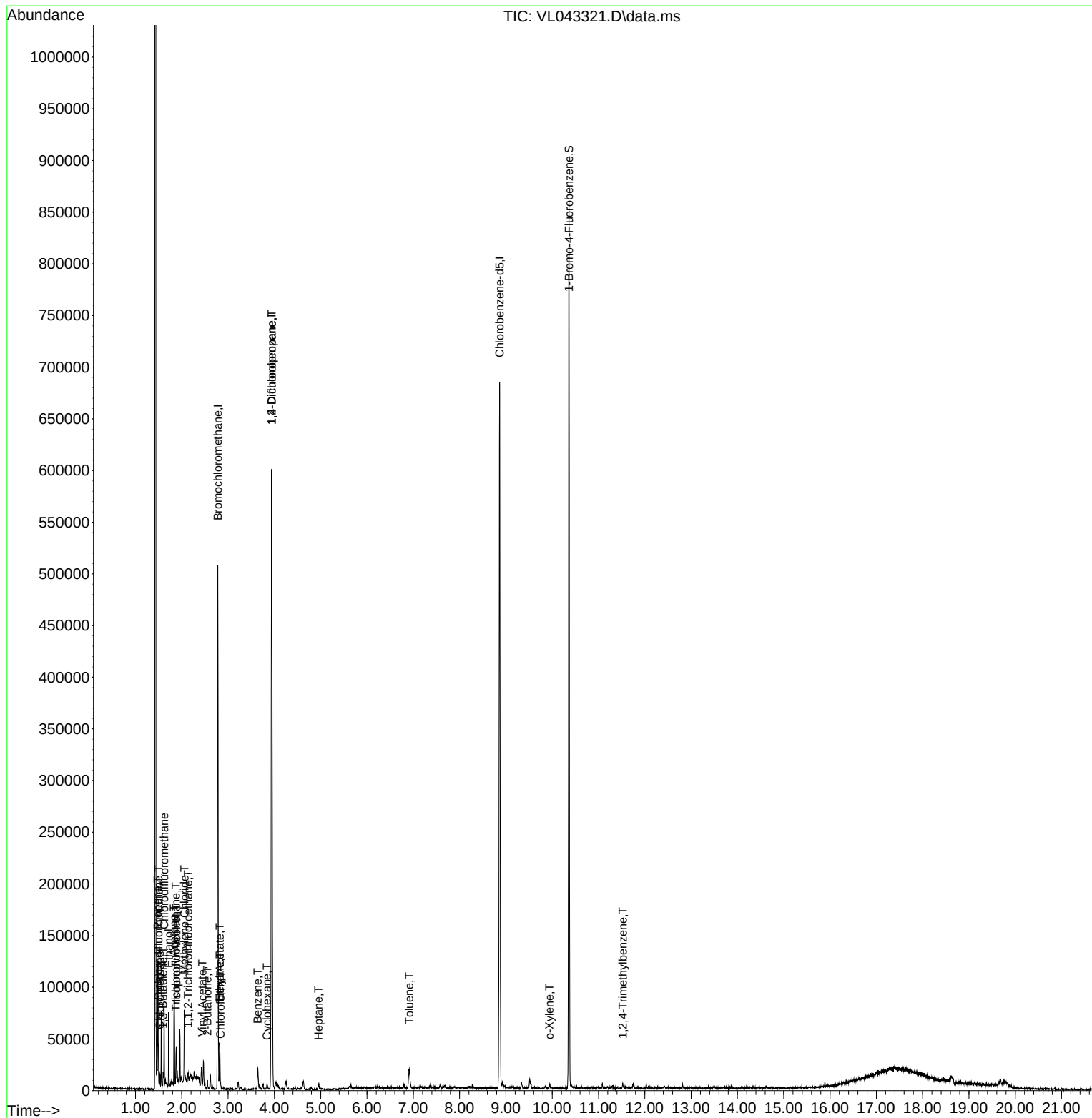
Internal Standards						
1) Bromochloromethane	2.777	49	134420	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.942	114	341367	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.865	117	271316	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.361	95	196407	9.876	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.800%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.495	85	8595	0.453	ppbv	96
3) Chlorodifluoromethane	1.618	51	1221	0.065	ppbv	99
4) Chloromethane	1.528	50	3346	0.472	ppbv	90
9) Propene	1.483	41	10844	1.370	ppbv #	1
10) Heptane	4.952	43	953	0.040	ppbv #	53
11) Trichlorofluoromethane	1.874	101	5475	0.298	ppbv	95
12) 1,1,2-Trichlorotrifluo...	2.136	101	1114	0.078	ppbv	89
13) Ethanol	1.716	45	22982	8.255	ppbv	97
15) Acetone	1.832	43	40438	2.165	ppbv #	90
16) 1,3-Butadiene	1.596	39	2357	0.283	ppbv #	69
19) Isopropyl Alcohol	1.881	45	12157	1.152	ppbv #	41
20) Methylene Chloride	2.059	84	8568	0.838	ppbv	88
23) Vinyl Acetate	2.444	43	1674	0.074	ppbv #	64
25) Ethyl Acetate	2.819	43	6188	0.154	ppbv #	74
26) Hexane	2.819	57	8138	0.461	ppbv #	40
29) Chloroform	2.839	83	770	0.031	ppbv #	66
30) Cyclohexane	3.839	84	663	0.045	ppbv #	1
34) 2-Butanone	2.554	43	5099	0.212	ppbv	99
36) Benzene	3.641	78	10979	0.336	ppbv	97
39) 1,2-Dichloropropane	3.942	63	86258	7.209	ppbv #	25
53) Toluene	6.910	91	12676	0.327	ppbv	99
60) o-Xylene	9.943	91	1952	0.047	ppbv	94
74) 1,2,4-Trimethylbenzene	11.523	105	1402	0.030	ppbv #	61

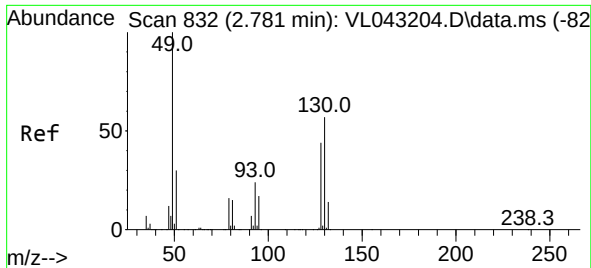
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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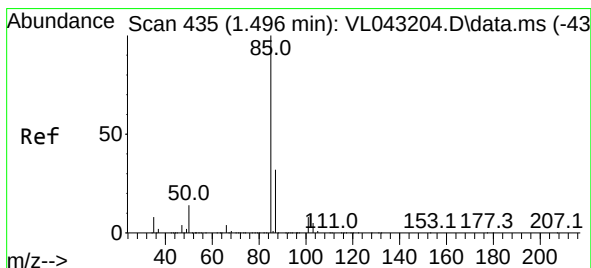
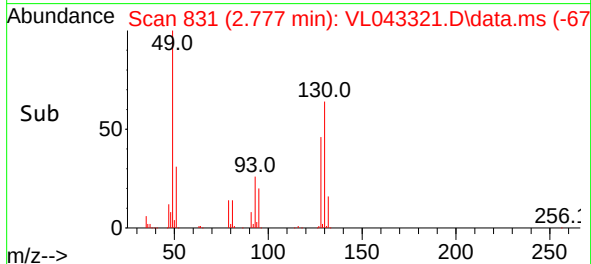
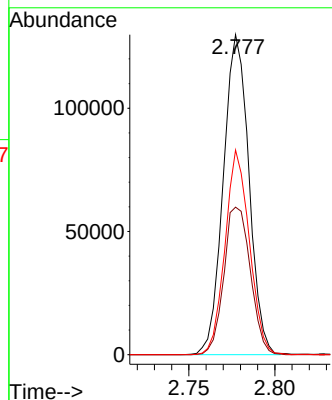
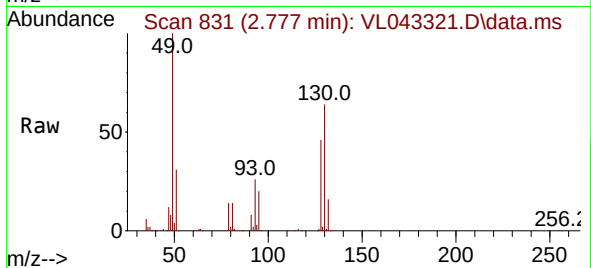




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.777 min Scan# 831
Delta R.T. -0.004 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

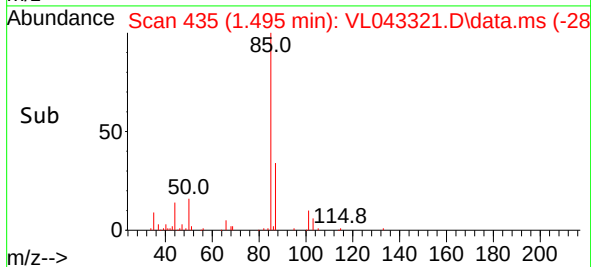
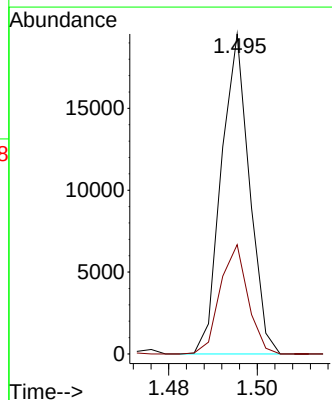
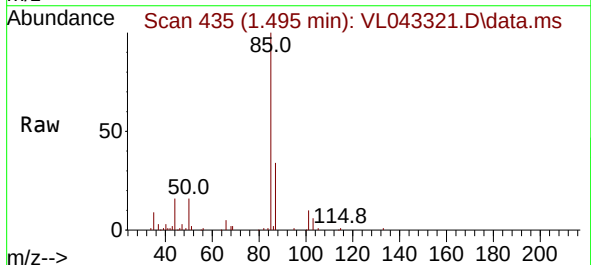
Instrument :
MSVOA_L
ClientSampleId :
OA1

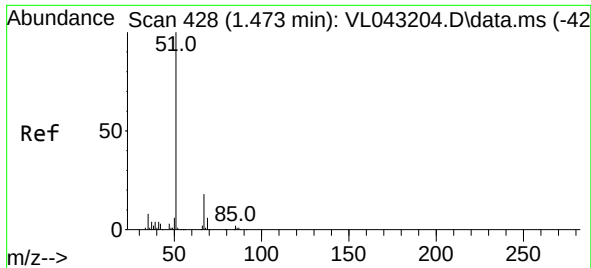
Tgt Ion: 49 Resp: 134420
Ion Ratio Lower Upper
49 100
128 47.7 23.0 69.0
130 60.8 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.453 ppbv
RT: 1.495 min Scan# 435
Delta R.T. -0.000 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 85 Resp: 8595
Ion Ratio Lower Upper
85 100
87 34.2 25.4 38.2

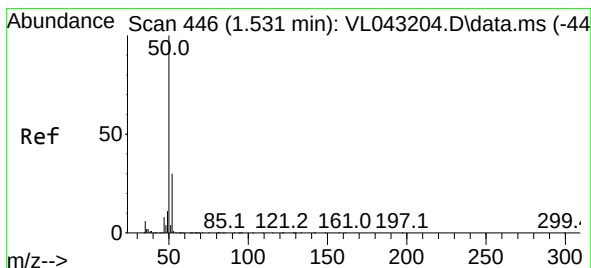
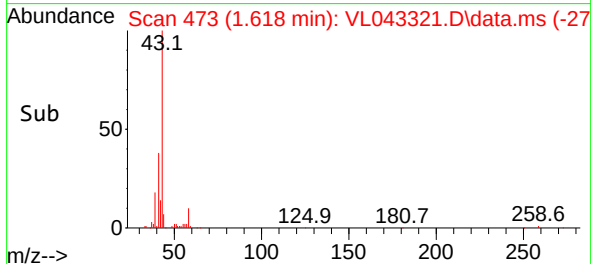
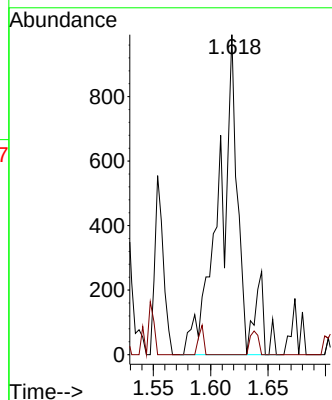
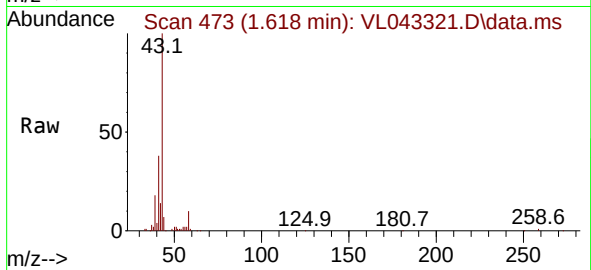




#3
Chlorodifluoromethane
Concen: 0.065 ppbv
RT: 1.618 min Scan# 41
Delta R.T. 0.145 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

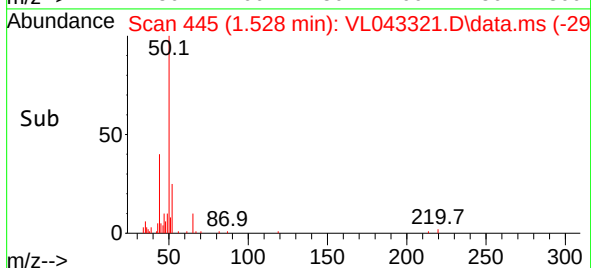
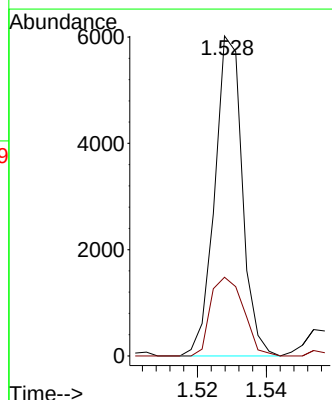
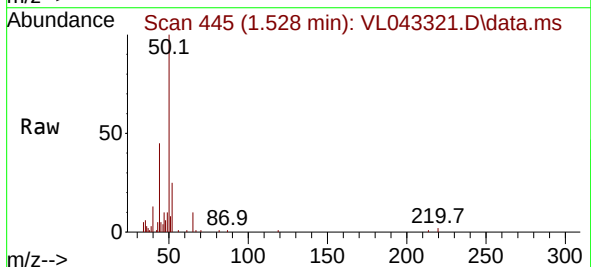
Instrument :
MSVOA_L
ClientSampleId :
OA1

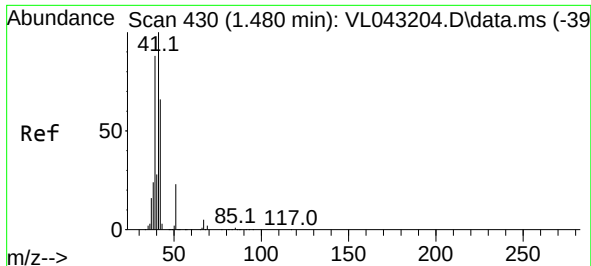
Tgt Ion: 51 Resp: 1221
Ion Ratio Lower Upper
51 100
67 18.9 14.9 22.3



#4
Chloromethane
Concen: 0.472 ppbv
RT: 1.528 min Scan# 445
Delta R.T. -0.004 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 50 Resp: 3346
Ion Ratio Lower Upper
50 100
52 24.6 24.1 36.1





#9

Propene

Concen: 1.370 ppbv

RT: 1.483 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL043321.D

Acq: 08 Dec 2025 19:56

Instrument :

MSVOA_L

ClientSampleId :

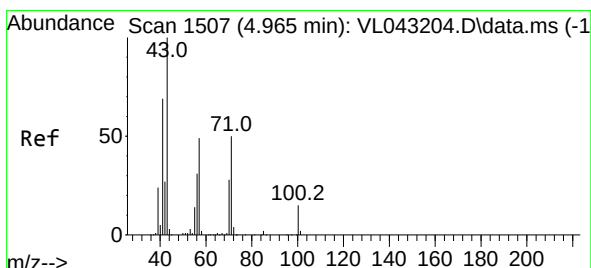
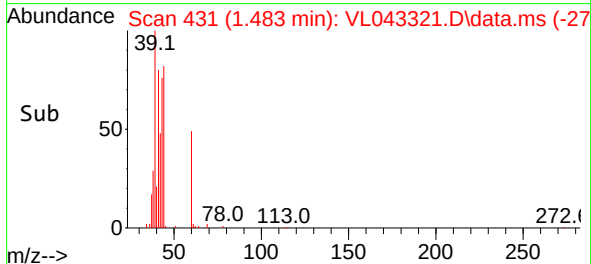
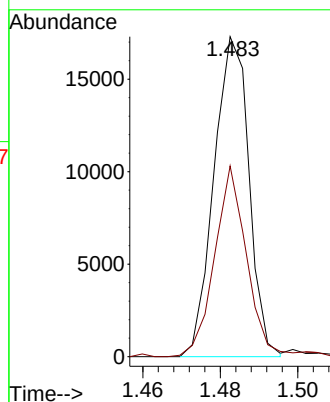
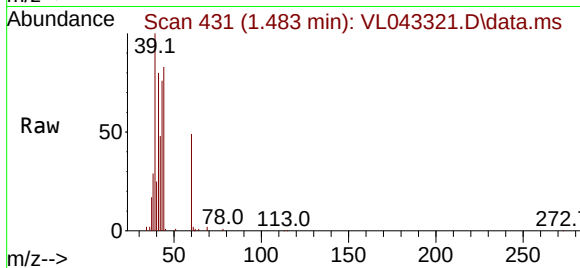
OA1

Tgt Ion: 41 Resp: 10844

Ion Ratio Lower Upper

41 100

42 55.9 3.7 5.5#



#10

Heptane

Concen: 0.040 ppbv

RT: 4.952 min Scan# 1503

Delta R.T. -0.013 min

Lab File: VL043321.D

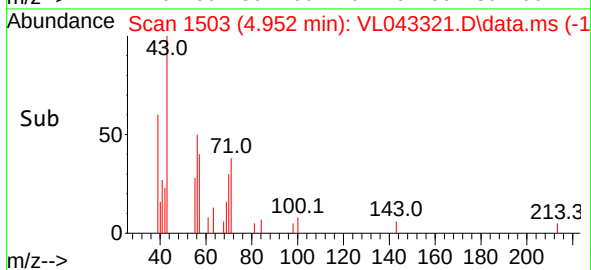
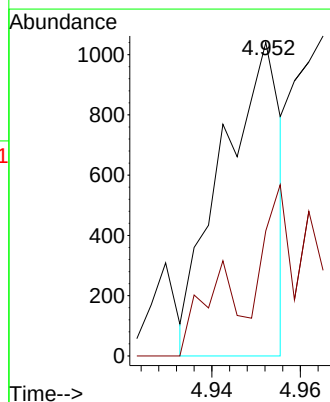
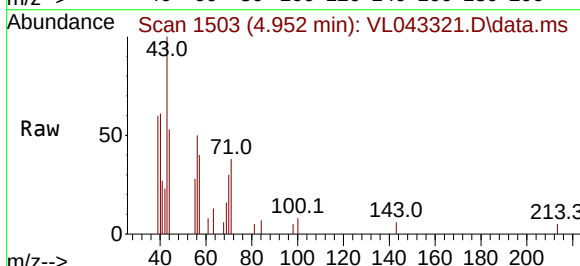
Acq: 08 Dec 2025 19:56

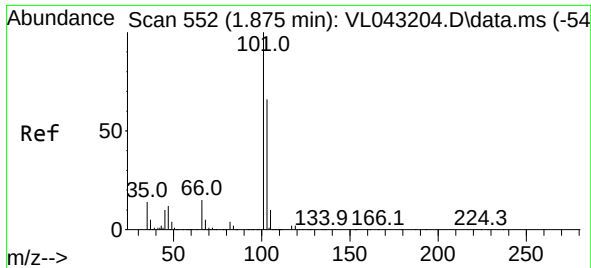
Tgt Ion: 43 Resp: 953

Ion Ratio Lower Upper

43 100

57 82.2 39.7 59.5#

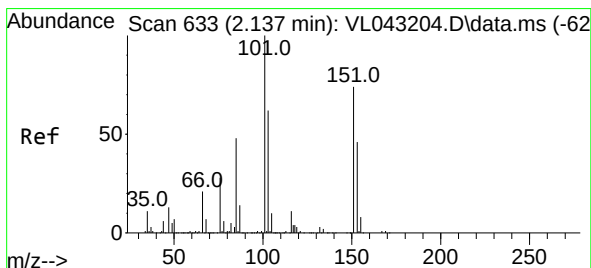
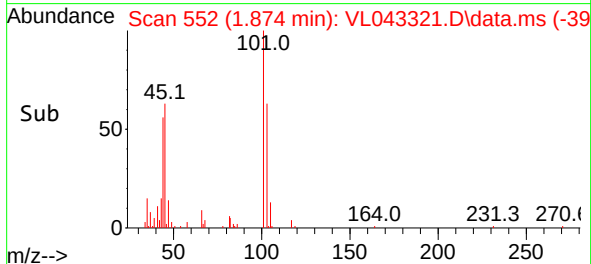
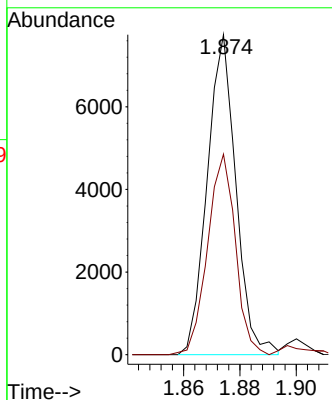
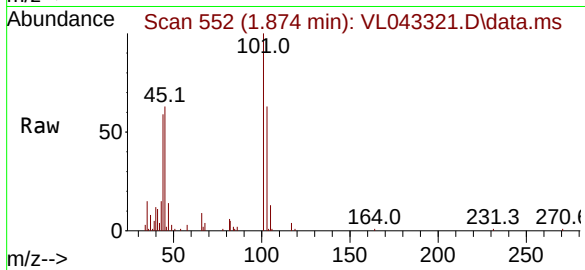




#11
 Trichlorofluoromethane
 Concen: 0.298 ppbv
 RT: 1.874 min Scan# 511
 Delta R.T. -0.000 min
 Lab File: VL043321.D
 Acq: 08 Dec 2025 19:56

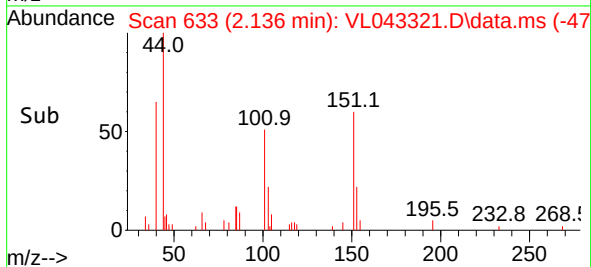
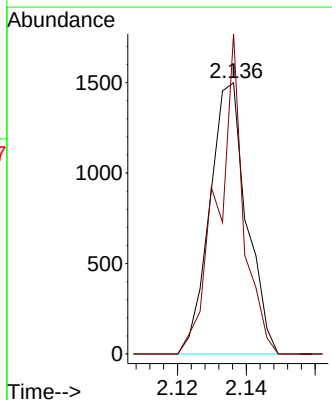
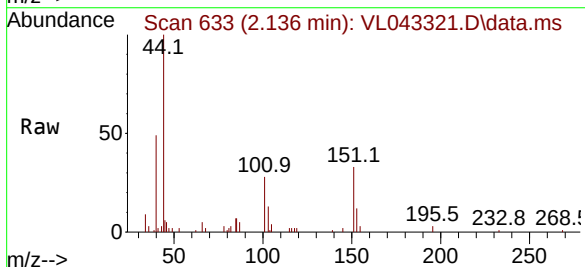
Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

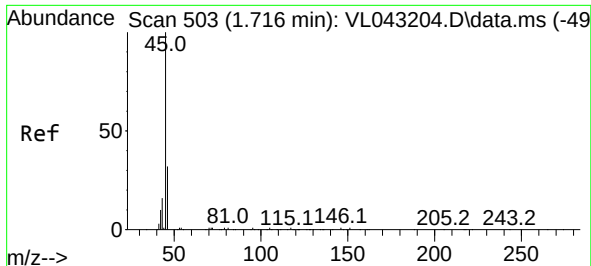
Tgt Ion:101 Resp: 5475
 Ion Ratio Lower Upper
 101 100
 103 62.0 52.6 79.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.078 ppbv
 RT: 2.136 min Scan# 633
 Delta R.T. -0.000 min
 Lab File: VL043321.D
 Acq: 08 Dec 2025 19:56

Tgt Ion:101 Resp: 1114
 Ion Ratio Lower Upper
 101 100
 151 83.0 59.2 88.8

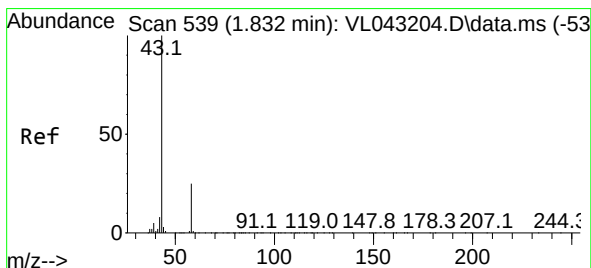
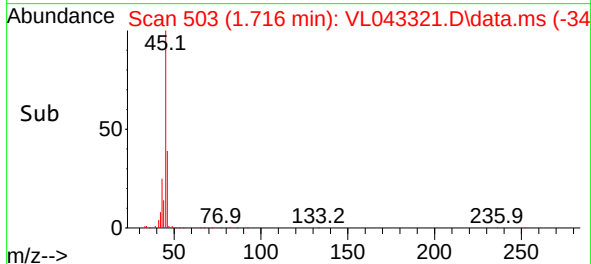
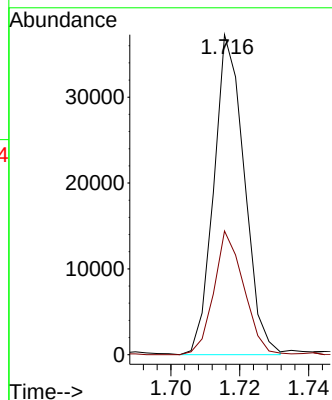
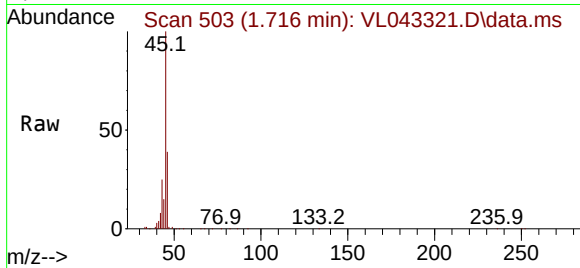




#13
Ethanol
Concen: 8.255 ppbv
RT: 1.716 min Scan# 503
Delta R.T. -0.000 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

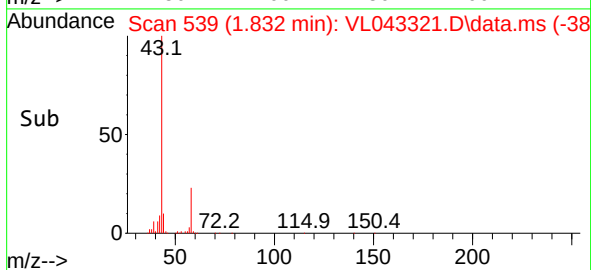
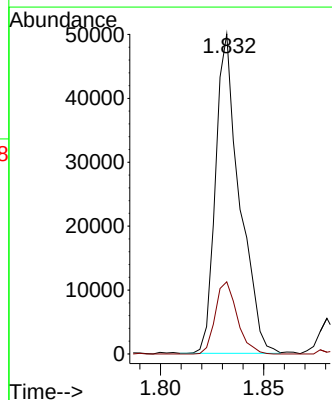
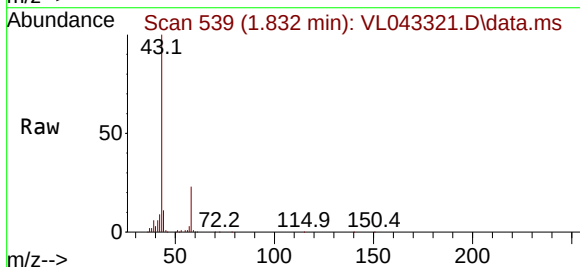
Instrument :
MSVOA_L
ClientSampleId :
OA1

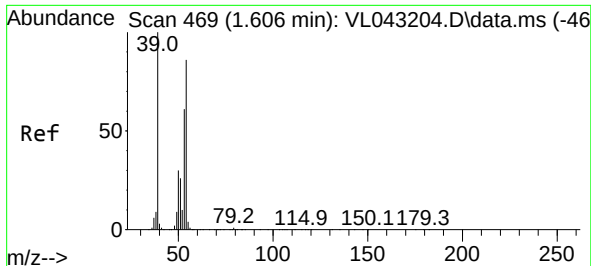
Tgt Ion: 45 Resp: 22982
Ion Ratio Lower Upper
45 100
46 39.0 15.0 59.8



#15
Acetone
Concen: 2.165 ppbv
RT: 1.832 min Scan# 539
Delta R.T. -0.000 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 43 Resp: 40438
Ion Ratio Lower Upper
43 100
58 20.6 20.7 31.1#

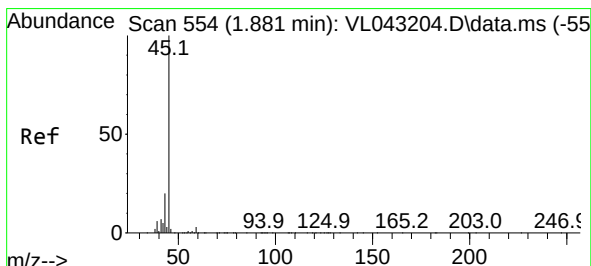
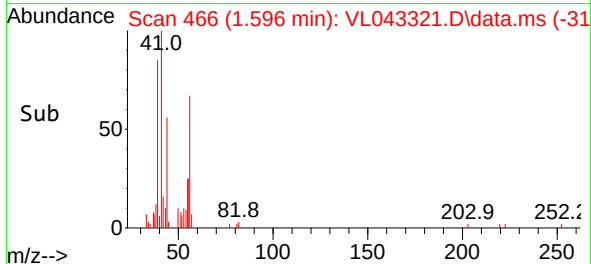
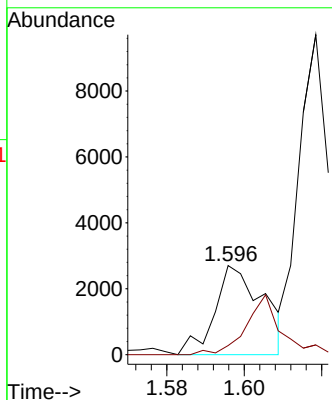
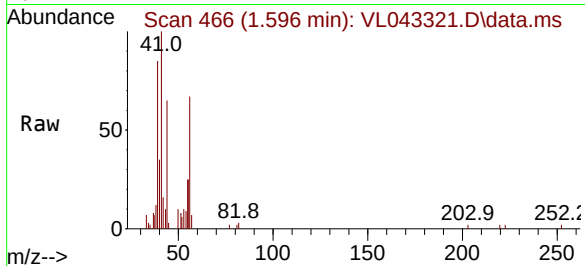




#16
1,3-Butadiene
Concen: 0.283 ppbv
RT: 1.596 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

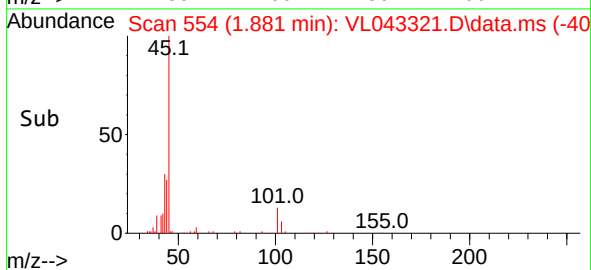
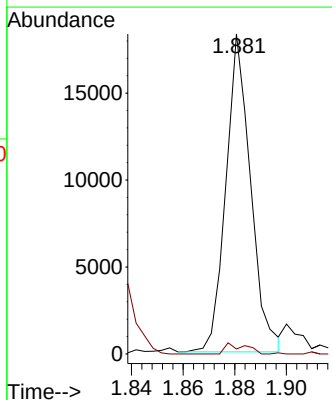
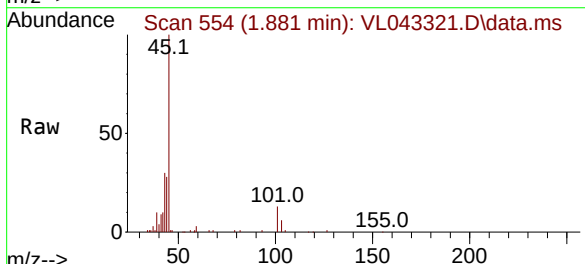
Instrument :
MSVOA_L
ClientSampleId :
OA1

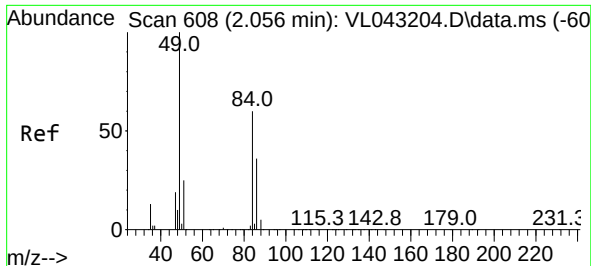
Tgt Ion: 39 Resp: 2357
Ion Ratio Lower Upper
39 100
54 48.2 59.4 89.2#



#19
Isopropyl Alcohol
Concen: 1.152 ppbv
RT: 1.881 min Scan# 554
Delta R.T. -0.000 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 45 Resp: 12157
Ion Ratio Lower Upper
45 100
58 2.9 31.3 46.9#



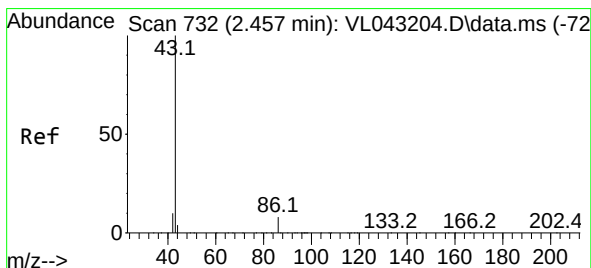
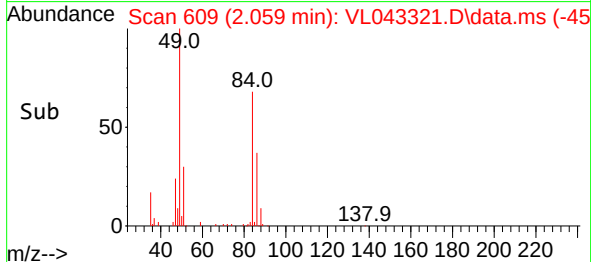
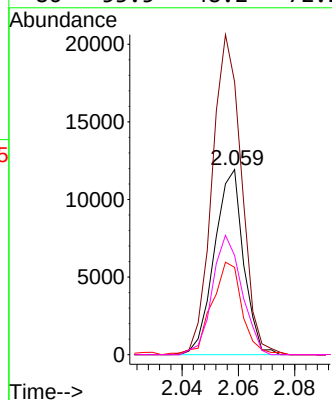
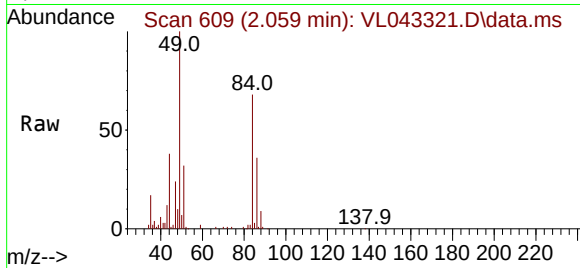


#20
Methylene Chloride
Concen: 0.838 ppbv
RT: 2.059 min Scan# 608
Delta R.T. 0.003 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Instrument :
MSVOA_L
ClientSampleId :
OA1

Tgt Ion: 84 Resp: 8568

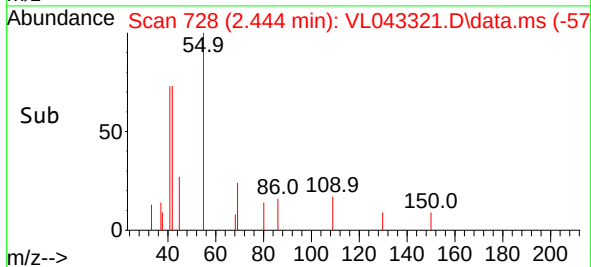
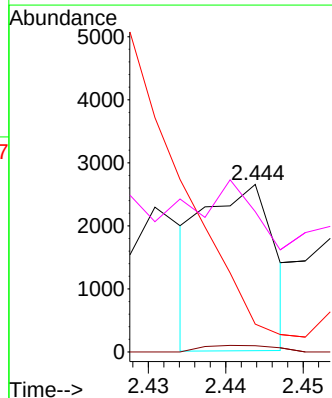
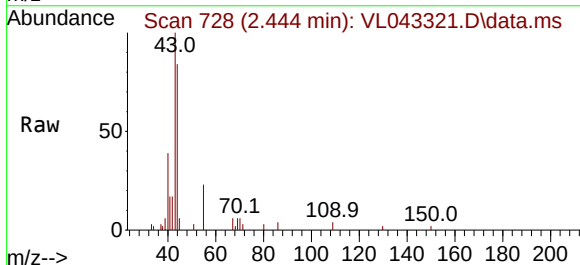
Ion	Ratio	Lower	Upper
84	100		
49	146.3	132.9	199.3
51	46.4	34.8	52.2
86	53.5	48.2	72.2

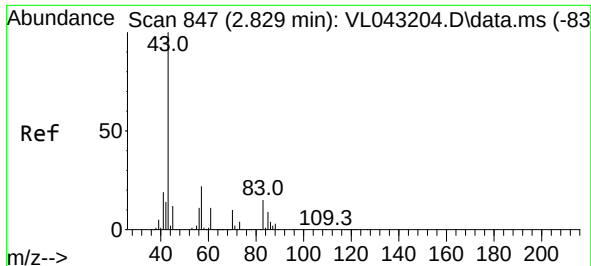


#23
Vinyl Acetate
Concen: 0.074 ppbv
RT: 2.444 min Scan# 728
Delta R.T. -0.013 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 43 Resp: 1674

Ion	Ratio	Lower	Upper
43	100		
86	8.1	6.2	9.2
42	13.2	8.0	12.0#
44	52.5	4.0	6.0#

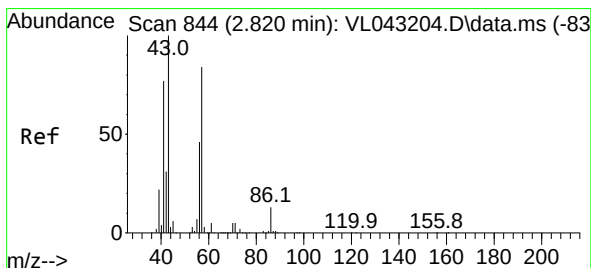
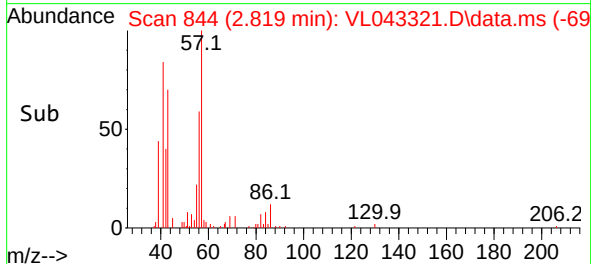
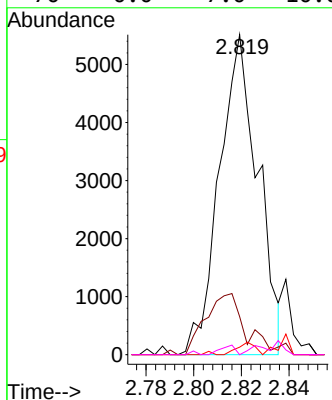
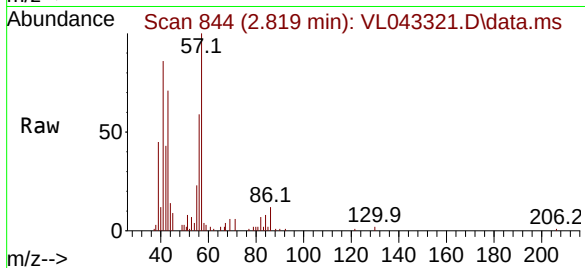




#25
Ethyl Acetate
Concen: 0.154 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.010 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

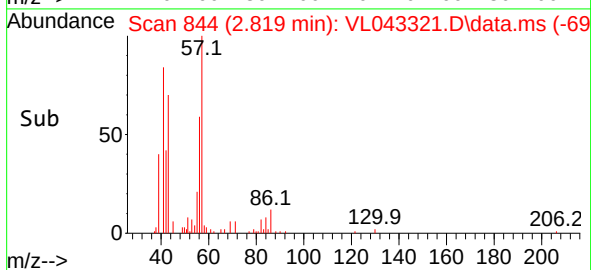
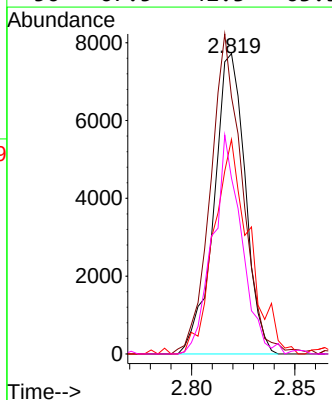
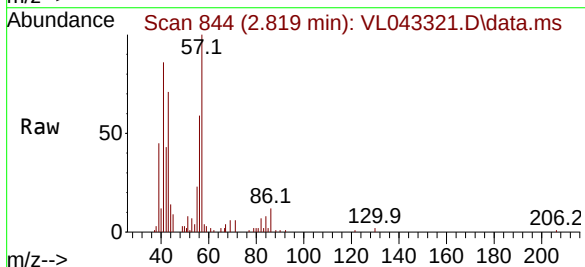
Instrument :
MSVOA_L
ClientSampleId :
OA1

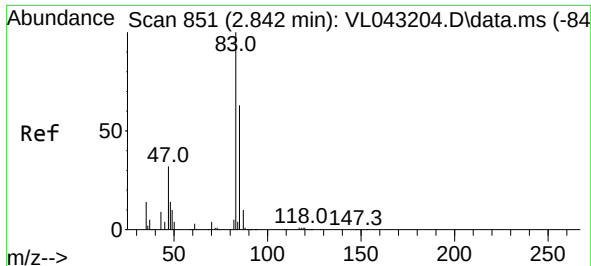
Tgt Ion: 43	Resp: 6188
Ion Ratio	Lower Upper
43 100	
45 20.7	8.1 12.1#
61 0.0	7.0 10.4#
70 0.0	7.0 10.6#



#26
Hexane
Concen: 0.461 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.000 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 57	Resp: 8138
Ion Ratio	Lower Upper
57 100	
41 108.4	74.6 111.8
43 82.2	179.0 268.4#
56 67.5	42.3 63.5#





#29

Chloroform

Concen: 0.031 ppbv

RT: 2.839 min Scan# 81

Delta R.T. -0.004 min

Lab File: VL043321.D

Acq: 08 Dec 2025 19:56

Instrument :

MSVOA_L

ClientSampleId :

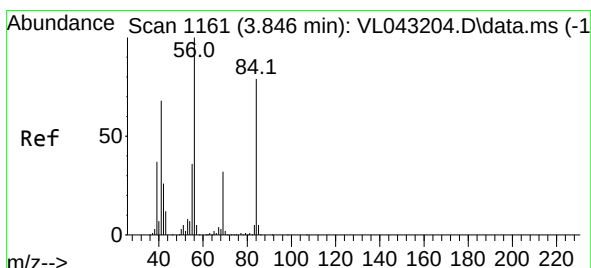
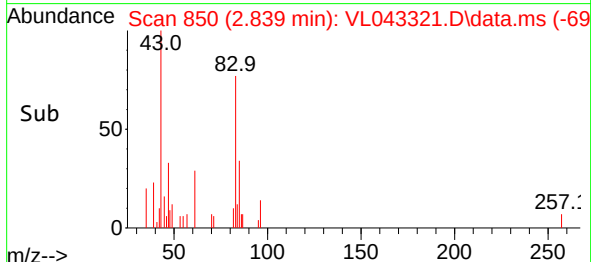
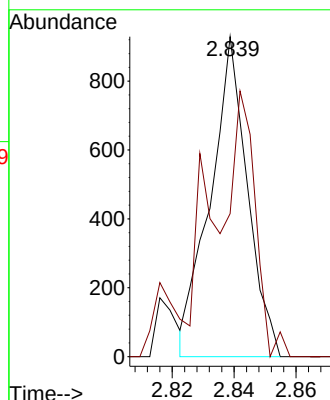
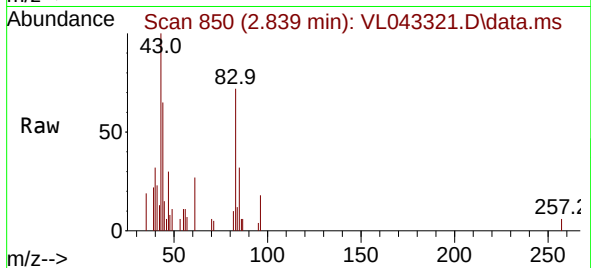
OA1

Tgt Ion: 83 Resp: 770

Ion Ratio Lower Upper

83 100

85 36.9 50.5 75.7#



#30

Cyclohexane

Concen: 0.045 ppbv

RT: 3.839 min Scan# 1159

Delta R.T. -0.007 min

Lab File: VL043321.D

Acq: 08 Dec 2025 19:56

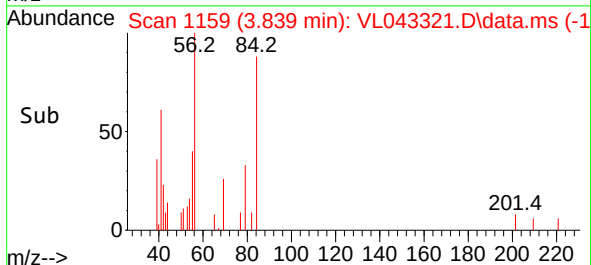
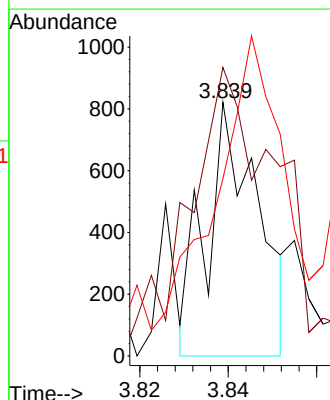
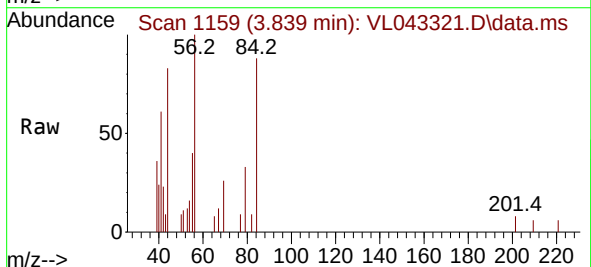
Tgt Ion: 84 Resp: 663

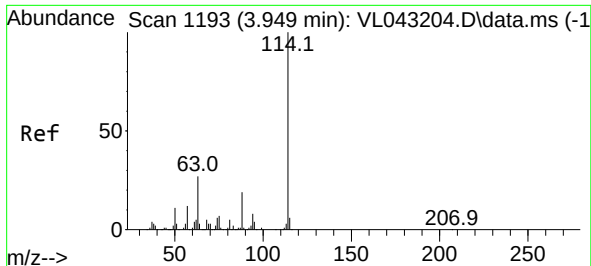
Ion Ratio Lower Upper

84 100

56 198.0 104.7 157.1#

41 237.6 69.0 103.6#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.942 min Scan# 1191

Delta R.T. -0.007 min

Lab File: VL043321.D

Acq: 08 Dec 2025 19:56

Instrument :

MSVOA_L

ClientSampleId :

OA1

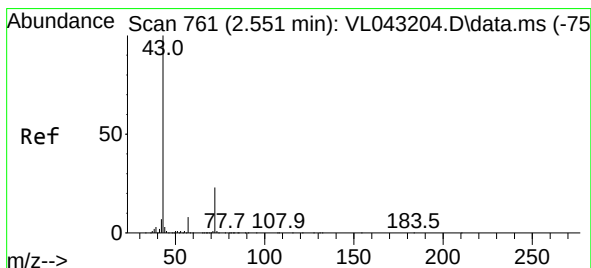
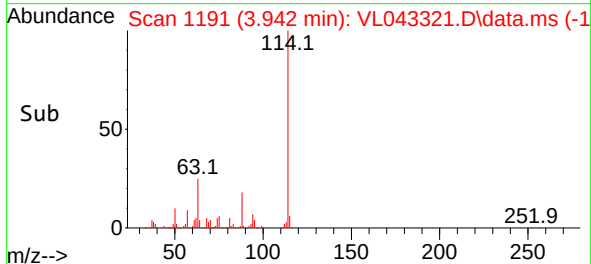
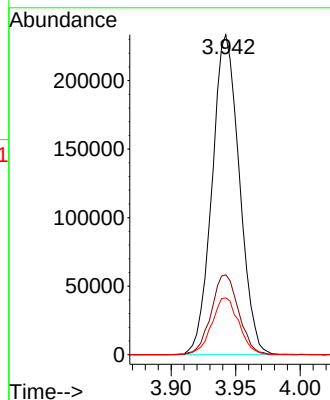
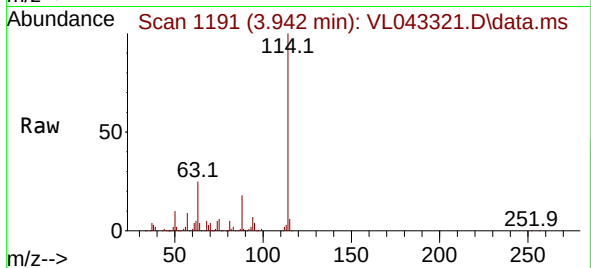
Tgt Ion:114 Resp: 341367

Ion Ratio Lower Upper

114 100

63 25.3 21.0 31.6

88 17.8 14.9 22.3



#34

2-Butanone

Concen: 0.212 ppbv

RT: 2.554 min Scan# 762

Delta R.T. 0.003 min

Lab File: VL043321.D

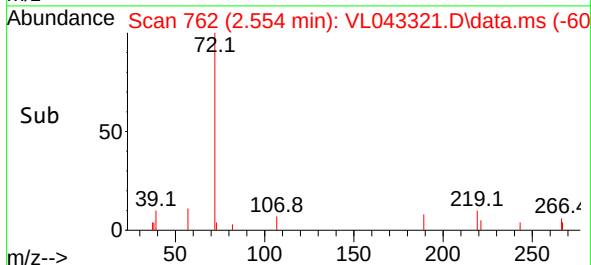
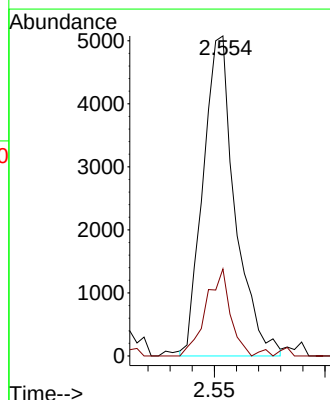
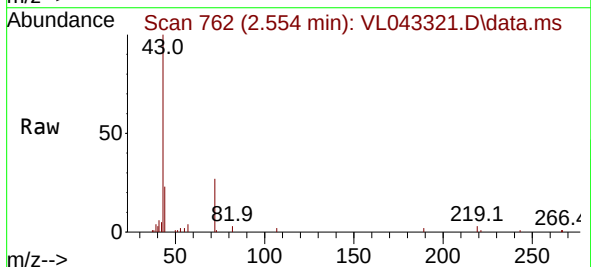
Acq: 08 Dec 2025 19:56

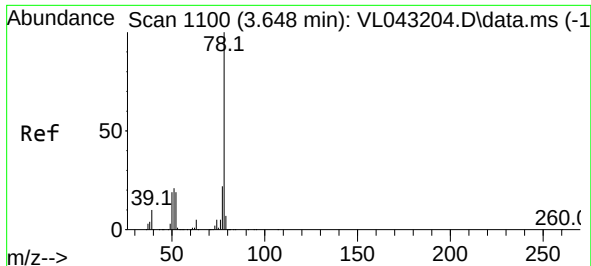
Tgt Ion: 43 Resp: 5099

Ion Ratio Lower Upper

43 100

72 22.1 18.1 27.1

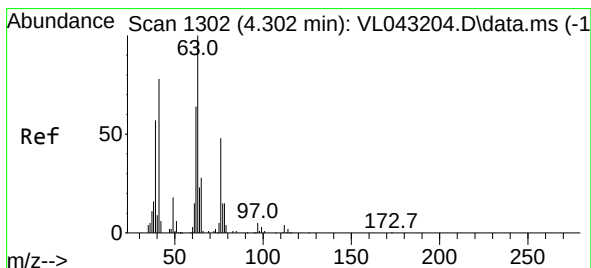
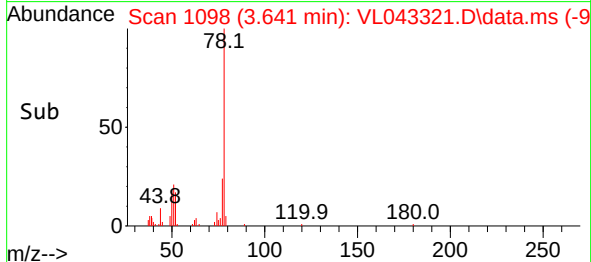
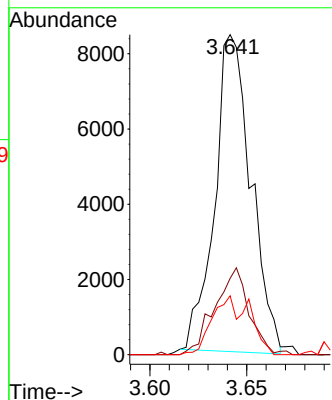
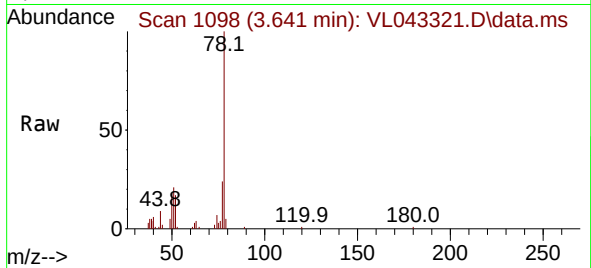




#36
Benzene
Concen: 0.336 ppbv
RT: 3.641 min Scan# 1109
Delta R.T. -0.007 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

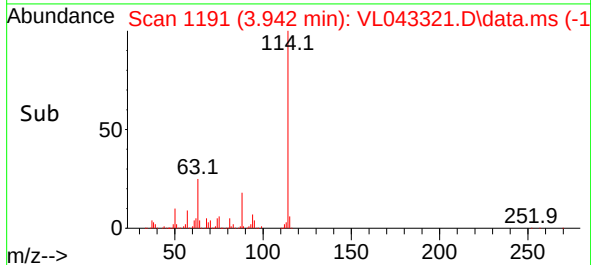
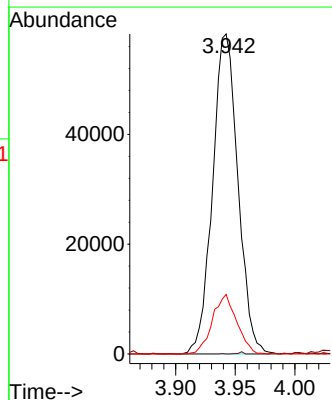
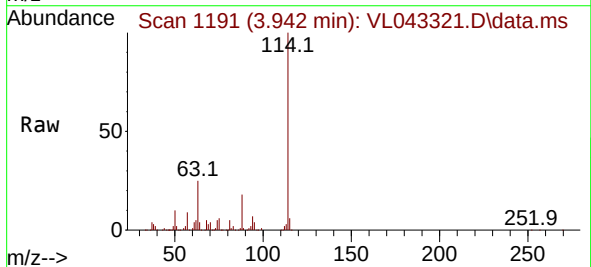
Instrument :
MSVOA_L
ClientSampleId :
OA1

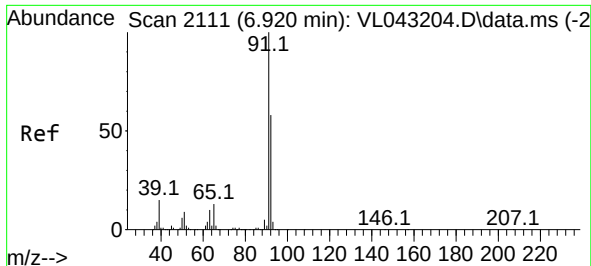
Tgt Ion: 78 Resp: 10979
Ion Ratio Lower Upper
78 100
77 24.3 17.5 26.3
50 18.7 15.5 23.3



#39
1,2-Dichloropropane
Concen: 7.209 ppbv
RT: 3.942 min Scan# 1191
Delta R.T. -0.360 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 63 Resp: 86258
Ion Ratio Lower Upper
63 100
41 0.0 62.6 93.8#
62 18.6 51.0 76.6#

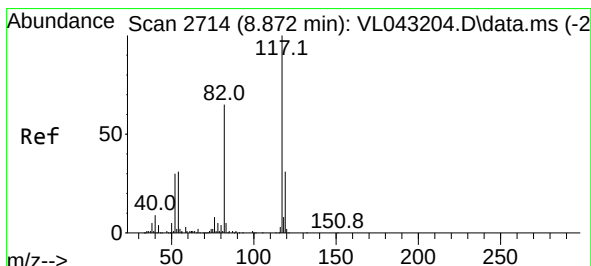
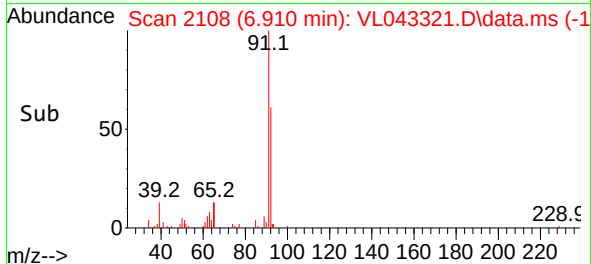
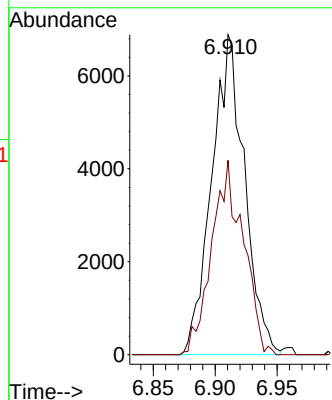
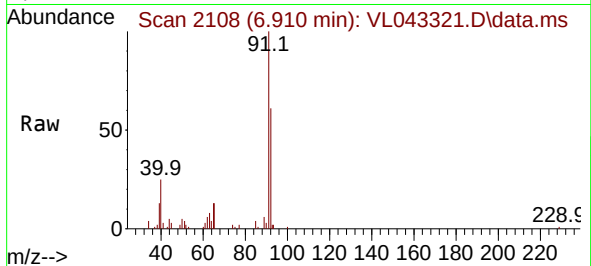




#53
Toluene
Concen: 0.327 ppbv
RT: 6.910 min Scan# 2111
Delta R.T. -0.010 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

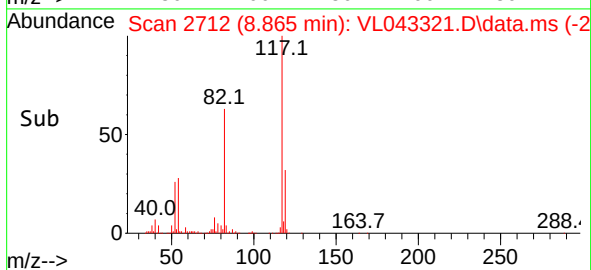
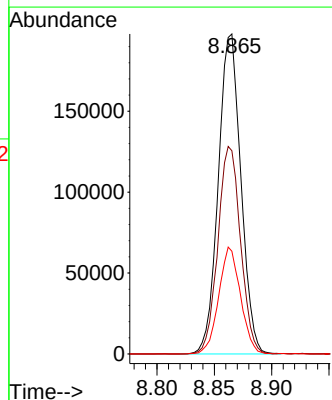
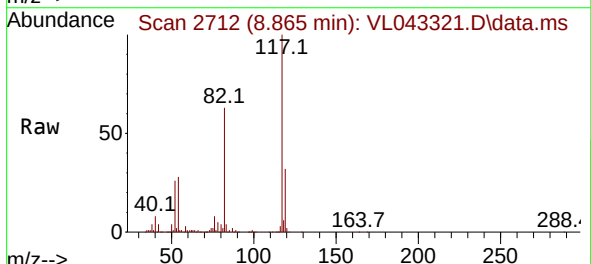
Instrument :
MSVOA_L
ClientSampleId :
OA1

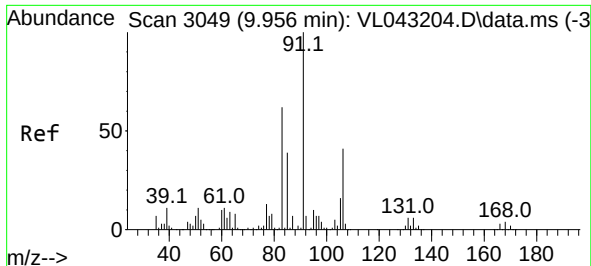
Tgt Ion: 91 Resp: 12676
Ion Ratio Lower Upper
91 100
92 58.6 47.4 71.0



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.865 min Scan# 2712
Delta R.T. -0.007 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

Tgt Ion: 117 Resp: 271316
Ion Ratio Lower Upper
117 100
82 65.0 56.1 84.1
119 32.2 25.0 37.6

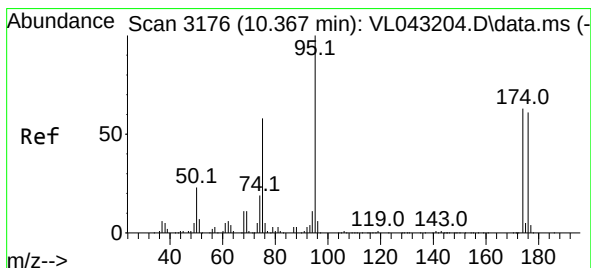
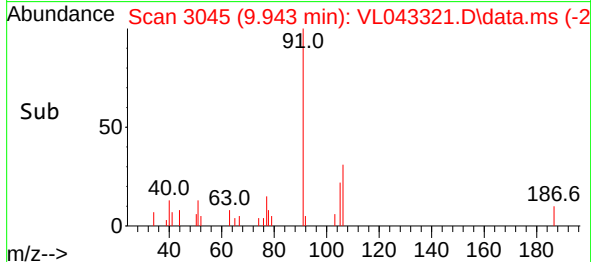
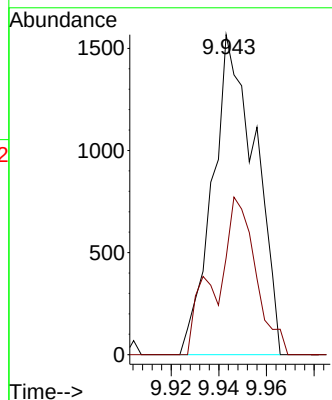
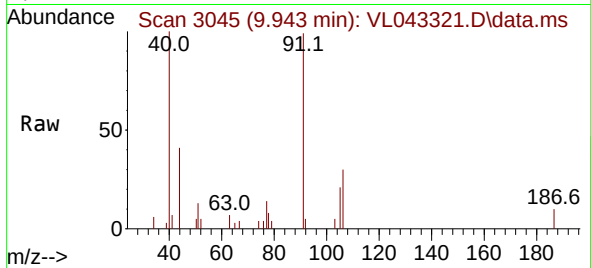




#60
o-Xylene
Concen: 0.047 ppbv
RT: 9.943 min Scan# 3049
Delta R.T. -0.013 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

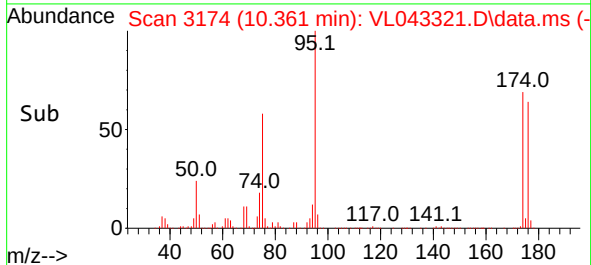
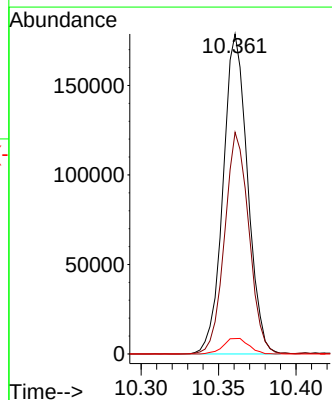
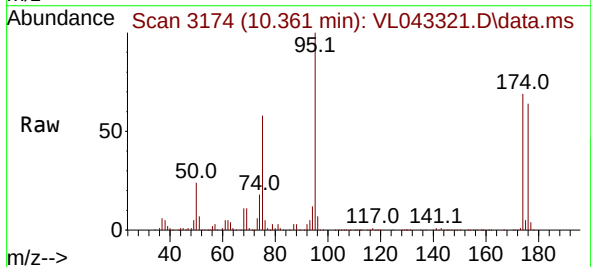
Instrument :
MSVOA_L
ClientSampleId :
OA1

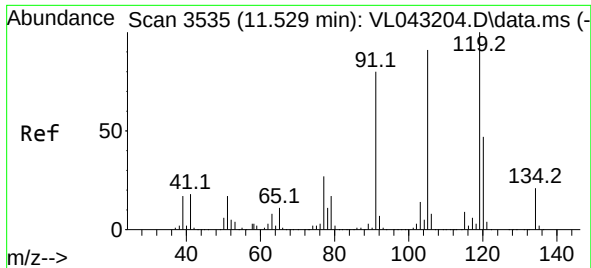
Tgt Ion: 91 Resp: 1952
Ion Ratio Lower Upper
91 100
106 45.7 20.9 62.8



#68
1-Bromo-4-Fluorobenzene
Concen: 9.876 ppbv
RT: 10.361 min Scan# 3174
Delta R.T. -0.007 min
Lab File: VL043321.D
Acq: 08 Dec 2025 19:56

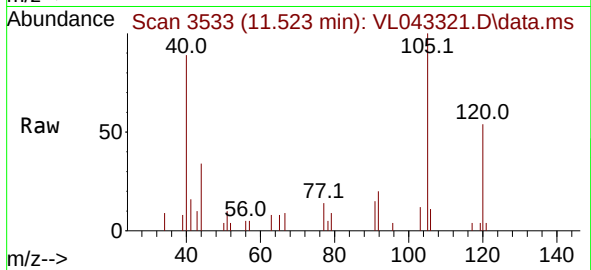
Tgt Ion: 95 Resp: 196407
Ion Ratio Lower Upper
95 100
174 69.4 50.2 75.2
175 5.1 4.1 6.1





#74
 1,2,4-Trimethylbenzene
 Concen: 0.030 ppbv
 RT: 11.523 min Scan# 31
 Delta R.T. -0.007 min
 Lab File: VL043321.D
 Acq: 08 Dec 2025 19:56

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1



Tgt Ion:	105	Resp:	1402
Ion	Ratio	Lower	Upper
105	100		
120	54.4	41.7	62.5
91	28.5	70.0	105.0#
77	13.9	23.8	35.8#

