

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL051425\
 Data File : VL042544.D
 Acq On : 14 May 2025 15:54
 Operator : SY/MD
 Sample : Q2037-01DL 20X
 Misc : 400mL/MSVOA_L
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

Quant Time: May 15 01:36:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL051225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Tue May 13 02:07:03 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.790	49	137653	10.000	ppbv	0.01
33) 1,4-Difluorobenzene	3.962	114	397066	10.000	ppbv	0.02
55) Chlorobenzene-d5	8.885	117	349633	10.000	ppbv	0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	293760	9.656	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.600%

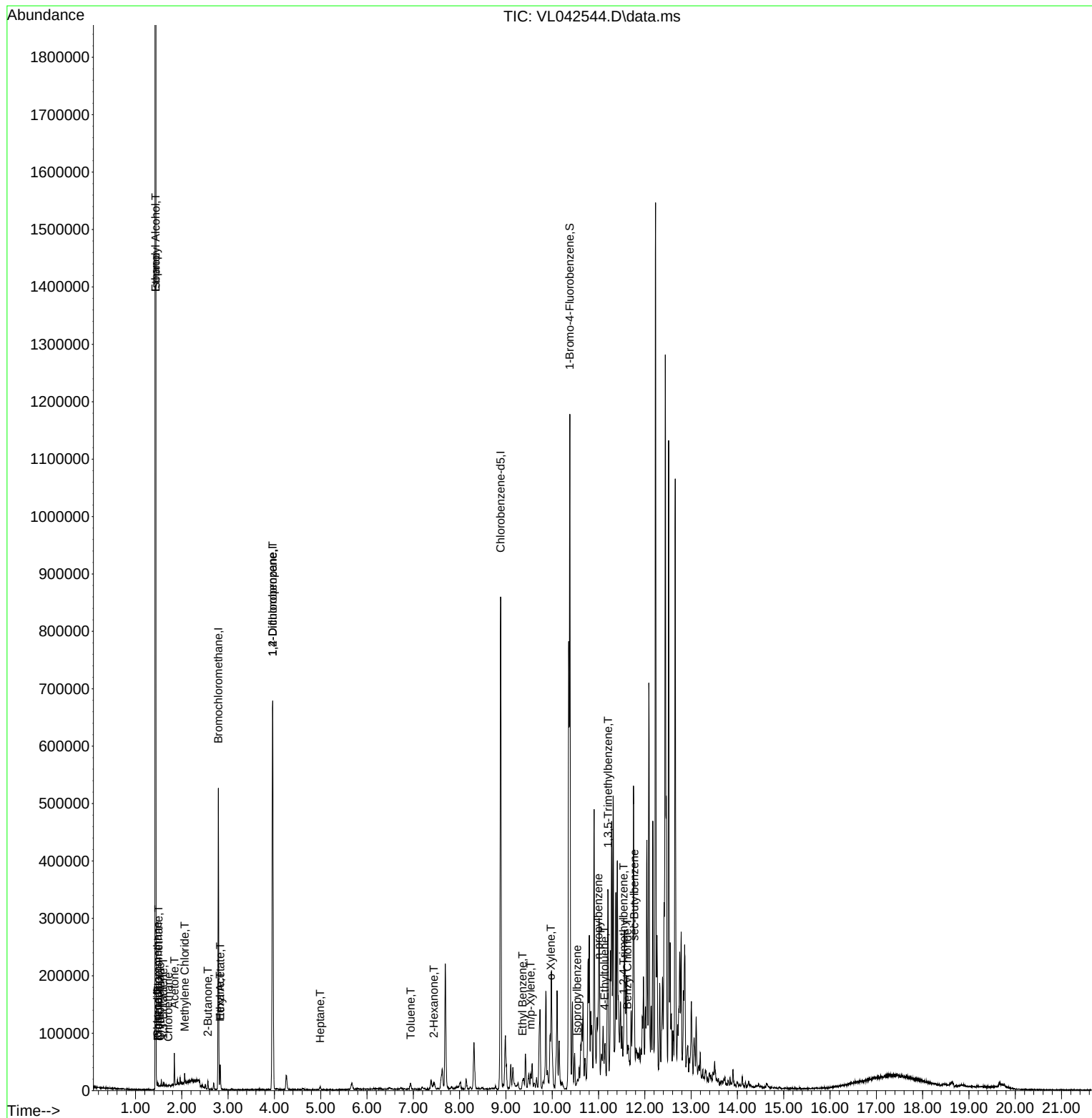
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.499	85	889	0.040	ppbv #	77
3) Chlorodifluoromethane	1.476	51	4486	0.197	ppbv #	86
4) Chloromethane	1.531	50	296	0.032	ppbv #	42
7) Chloroethane	1.706	64	115	0.031	ppbv #	43
9) Propene	1.483	41	746	0.151	ppbv #	1
10) Heptane	4.988	43	786	0.042	ppbv #	1
13) Ethanol	1.434	45	215879	162.468	ppbv #	16
15) Acetone	1.839	43	23132	1.043	ppbv	98
16) 1,3-Butadiene	1.602	39	562	0.057	ppbv #	47
19) Isopropyl Alcohol	1.434	45	215879	18.067	ppbv #	95
20) Methylene Chloride	2.065	84	2692	0.351	ppbv #	85
25) Ethyl Acetate	2.829	43	7093	0.184	ppbv #	81
26) Hexane	2.826	57	9406	0.593	ppbv #	37
34) 2-Butanone	2.560	43	9156	0.350	ppbv	96
39) 1,2-Dichloropropane	3.962	63	100892	7.698	ppbv #	17
51) 2-Hexanone	7.445	43	5105	0.223	ppbv #	31
53) Toluene	6.943	91	5241	0.152	ppbv #	63
58) Ethyl Benzene	9.357	91	5927	0.124	ppbv	91
59) m/p-Xylene	9.532	91	14563	0.344	ppbv #	100
60) o-Xylene	9.969	91	10124	0.245	ppbv	98
62) Isopropylbenzene	10.539	105	4621	0.074	ppbv	96
64) n-propylbenzene	10.995	120	1532	0.097	ppbv #	1
66) Benzyl Chloride	11.623	91	312	0.041	ppbv #	33
67) sec-Butylbenzene	11.772	105	7476	0.091	ppbv #	78
72) 4-Ethyltoluene	11.128	105	6298	0.123	ppbv #	58
73) 1,3,5-Trimethylbenzene	11.205	105	9651	0.216	ppbv	99
74) 1,2,4-Trimethylbenzene	11.539	105	17344	0.316	ppbv #	65

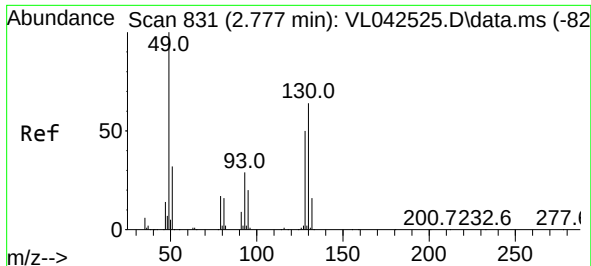
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: May 15 01:36:52 2025
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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
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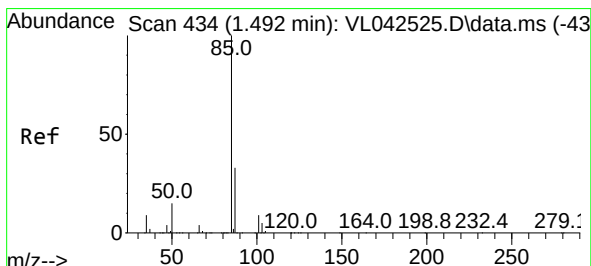
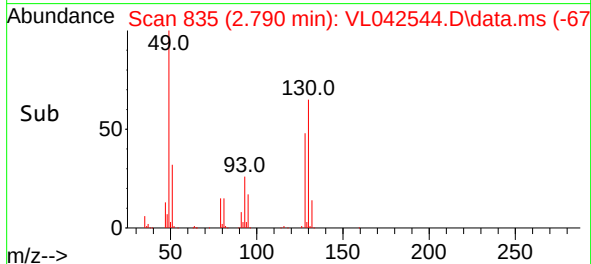
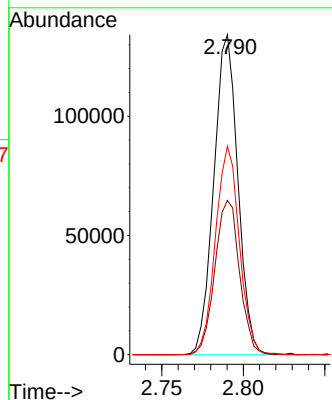
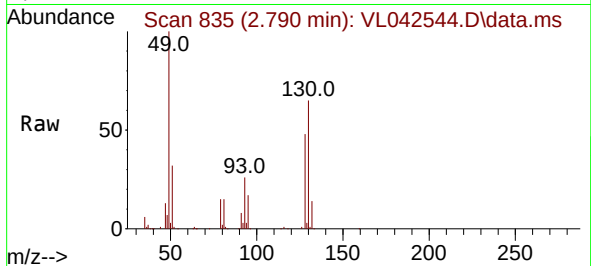




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.790 min Scan# 81
 Delta R.T. 0.013 min
 Lab File: VL042544.D
 Acq: 14 May 2025 15:54

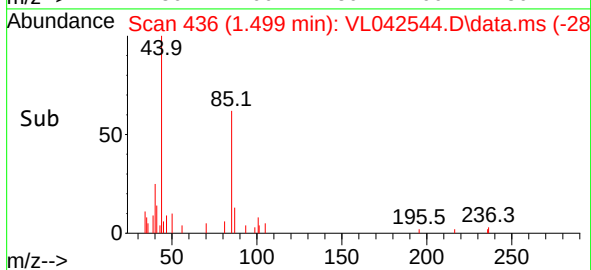
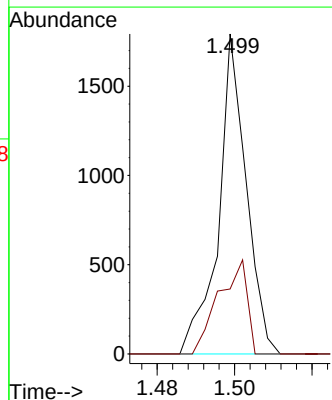
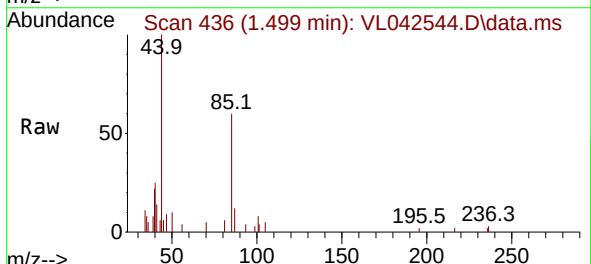
Instrument :
 MSVOA_L
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 SV1DL

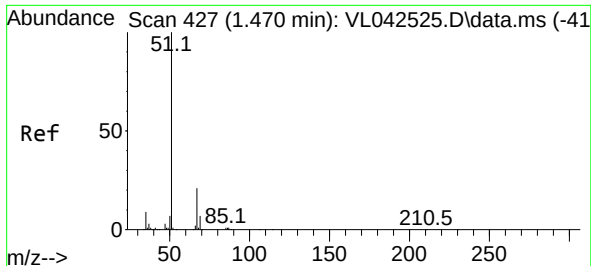
Tgt Ion: 49 Resp: 137653
 Ion Ratio Lower Upper
 49 100
 128 49.5 24.9 74.6
 130 64.7 32.5 97.5



#2
 Dichlorodifluoromethane
 Concen: 0.040 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.006 min
 Lab File: VL042544.D
 Acq: 14 May 2025 15:54

Tgt Ion: 85 Resp: 889
 Ion Ratio Lower Upper
 85 100
 87 20.3 26.8 40.2#

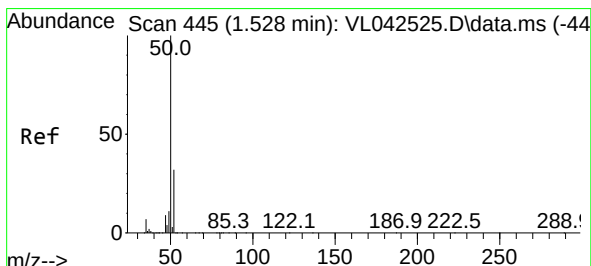
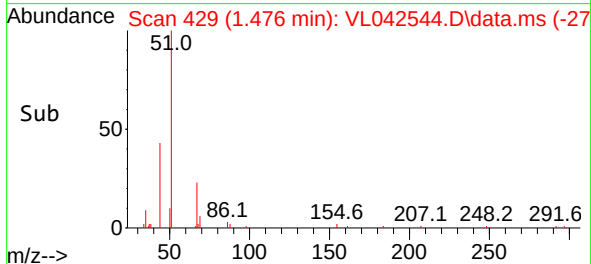
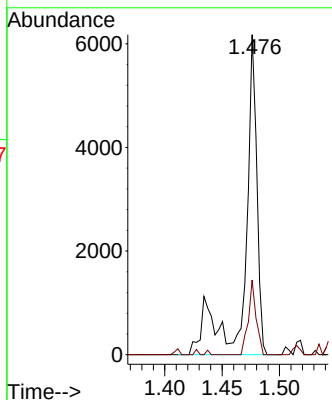
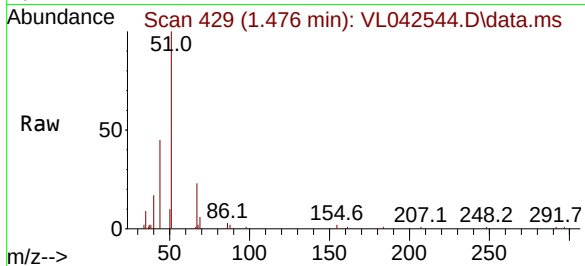




#3
Chlorodifluoromethane
Concen: 0.197 ppbv
RT: 1.476 min Scan# 41
Delta R.T. 0.006 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

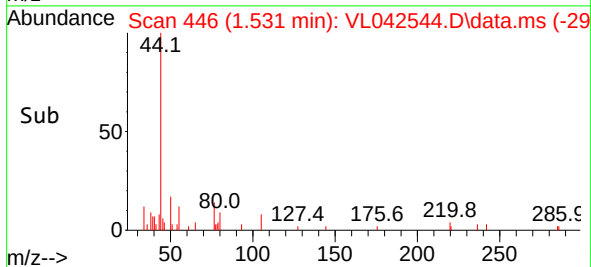
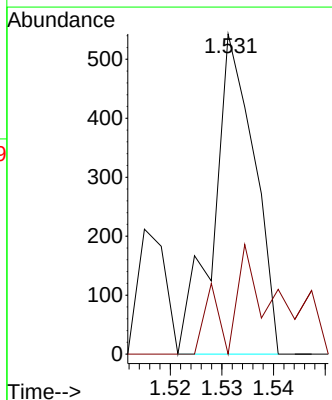
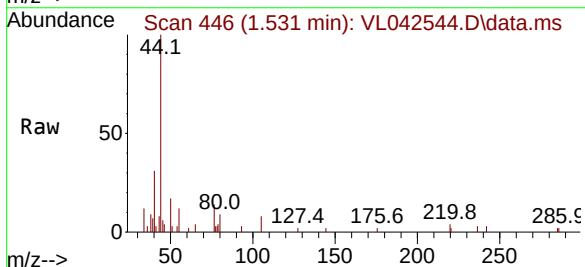
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

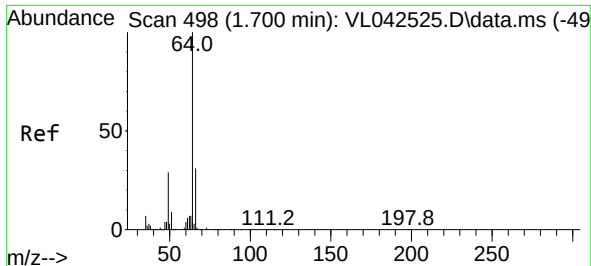
Tgt Ion: 51 Resp: 4486
Ion Ratio Lower Upper
51 100
67 15.2 17.4 26.0#



#4
Chloromethane
Concen: 0.032 ppbv
RT: 1.531 min Scan# 446
Delta R.T. 0.003 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

Tgt Ion: 50 Resp: 296
Ion Ratio Lower Upper
50 100
52 0.0 25.9 38.9#

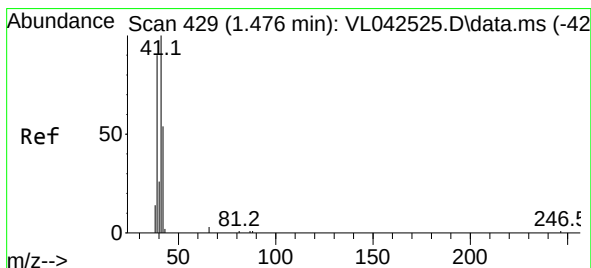
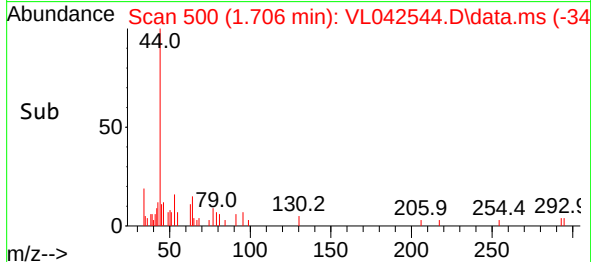
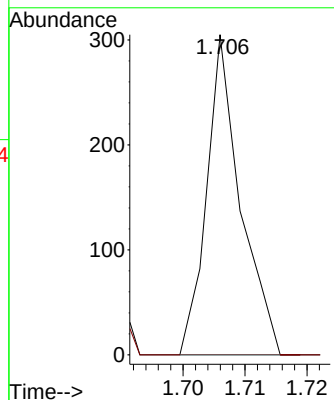
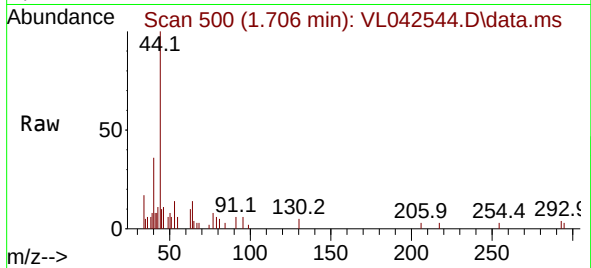




#7
Chloroethane
Concen: 0.031 ppbv
RT: 1.706 min Scan# 501
Delta R.T. 0.006 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

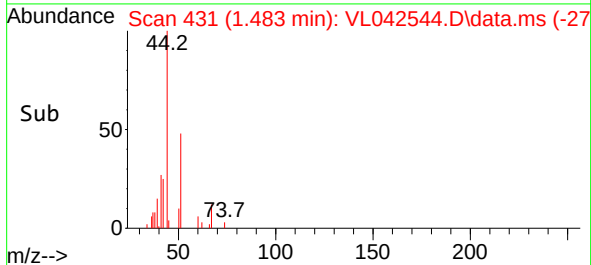
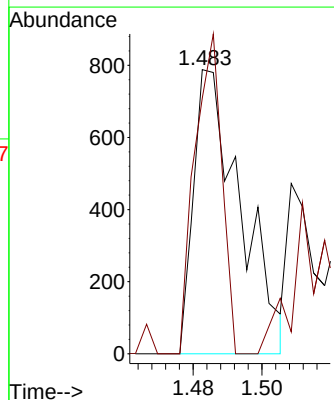
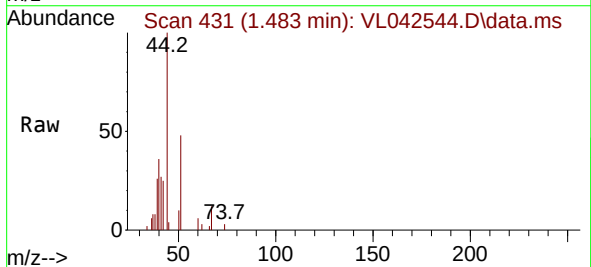
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

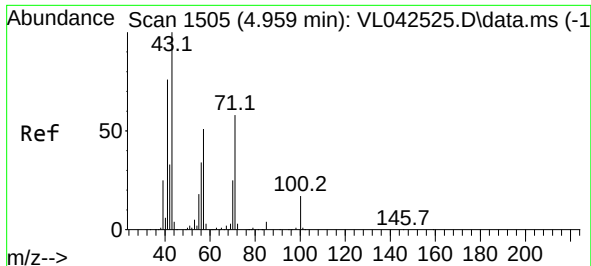
Tgt Ion: 64 Resp: 115
Ion Ratio Lower Upper
64 100
66 0.0 25.1 37.7#



#9
Propene
Concen: 0.151 ppbv
RT: 1.483 min Scan# 431
Delta R.T. 0.006 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

Tgt Ion: 41 Resp: 746
Ion Ratio Lower Upper
41 100
42 85.1 4.1 6.1#





#10

Heptane

Concen: 0.042 ppbv

RT: 4.988 min Scan# 11

Delta R.T. 0.029 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

Instrument :

MSVOA_L

ClientSampleId :

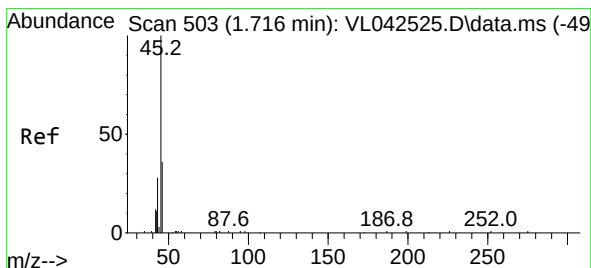
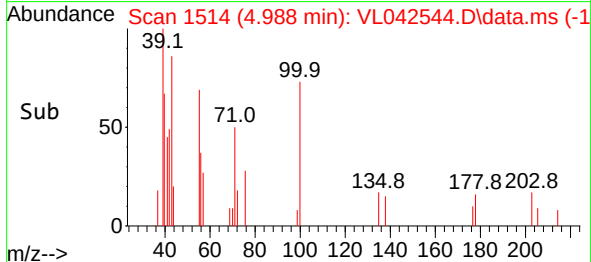
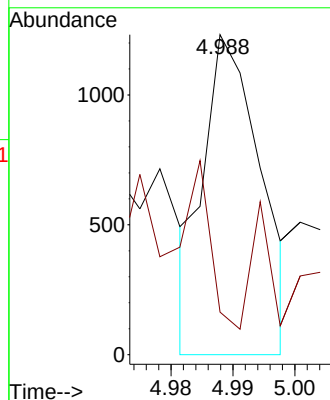
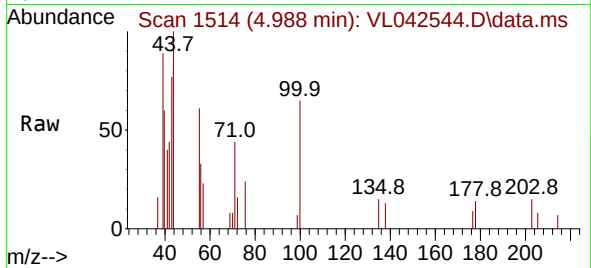
SV1DL

Tgt Ion: 43 Resp: 786

Ion Ratio Lower Upper

43 100

57 125.7 42.1 63.1#



#13

Ethanol

Concen: 162.468 ppbv

RT: 1.434 min Scan# 416

Delta R.T. -0.282 min

Lab File: VL042544.D

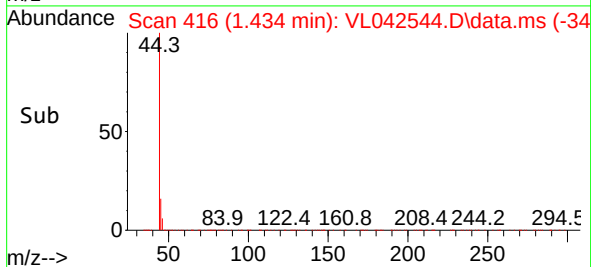
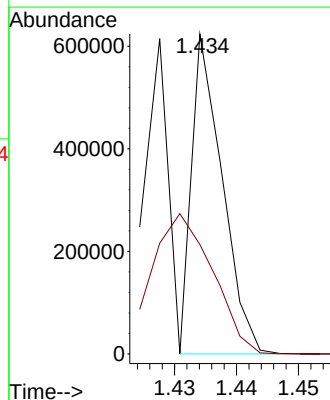
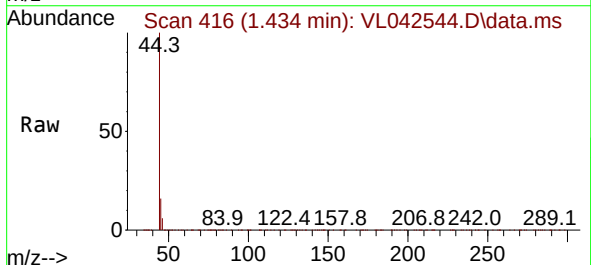
Acq: 14 May 2025 15:54

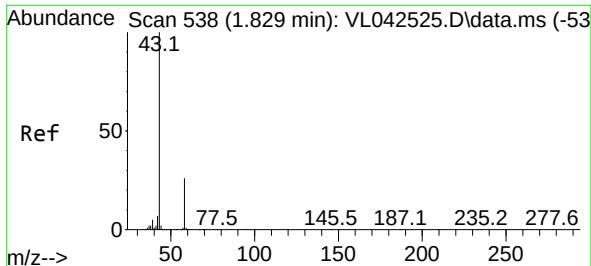
Tgt Ion: 45 Resp: 215879

Ion Ratio Lower Upper

45 100

46 87.1 14.8 59.4#

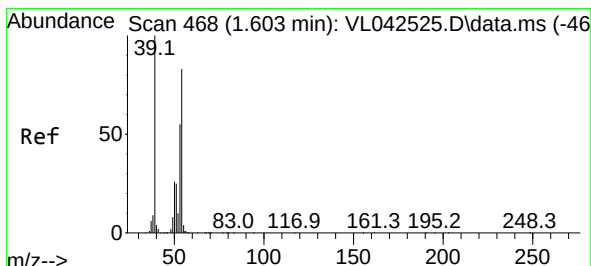
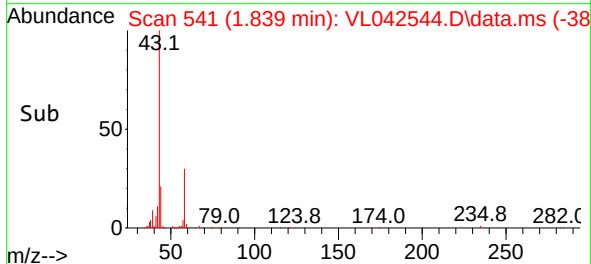
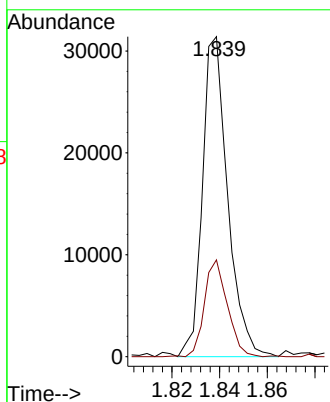
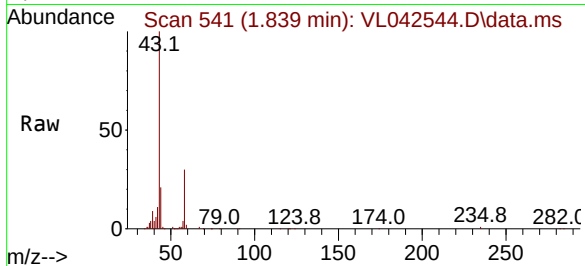




#15
Acetone
Concen: 1.043 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.010 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

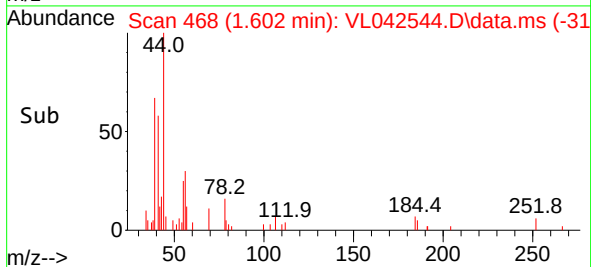
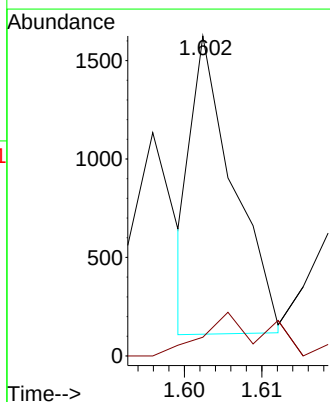
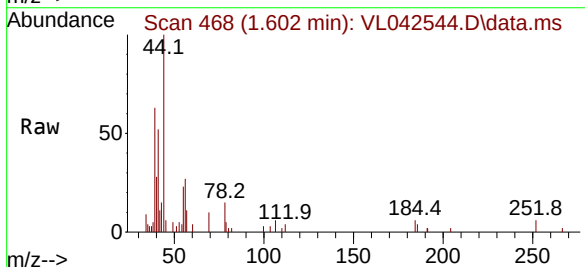
Instrument :
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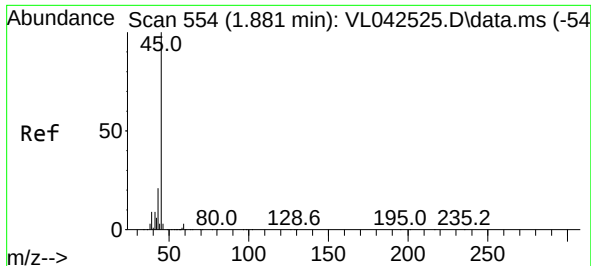
Tgt Ion: 43 Resp: 23132
Ion Ratio Lower Upper
43 100
58 27.8 21.3 31.9



#16
1,3-Butadiene
Concen: 0.057 ppbv
RT: 1.602 min Scan# 468
Delta R.T. -0.000 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

Tgt Ion: 39 Resp: 562
Ion Ratio Lower Upper
39 100
54 27.8 57.8 86.6#





#19

Isopropyl Alcohol

Concen: 18.067 ppbv

RT: 1.434 min Scan# 416

Delta R.T. -0.447 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

Instrument :

MSVOA_L

ClientSampleId :

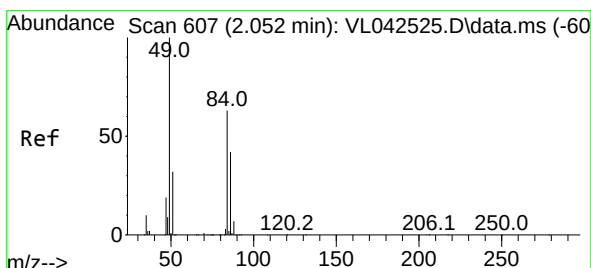
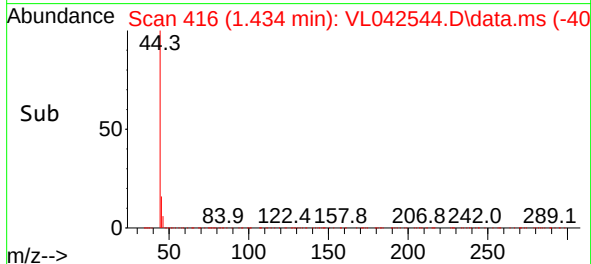
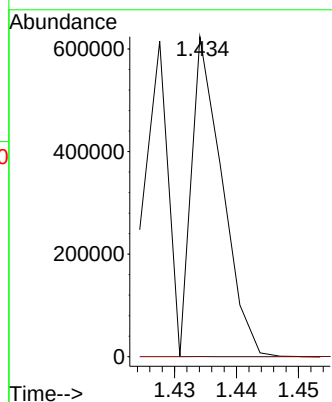
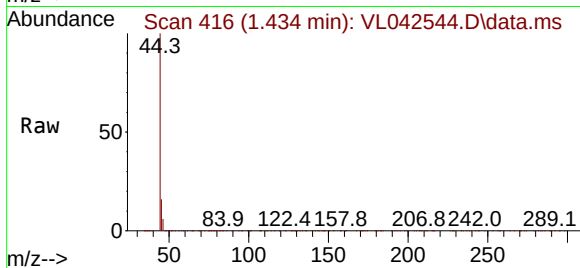
SV1DL

Tgt Ion: 45 Resp: 215879

Ion Ratio Lower Upper

45 100

58 0.2 1.5 2.3#



#20

Methylene Chloride

Concen: 0.351 ppbv

RT: 2.065 min Scan# 611

Delta R.T. 0.013 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

Tgt Ion: 84 Resp: 2692

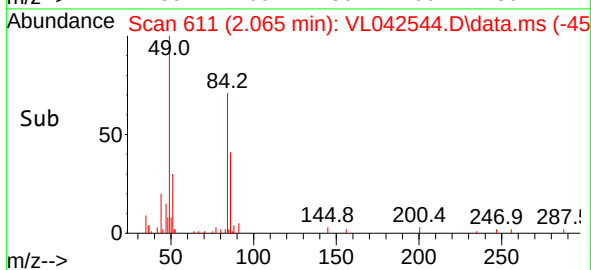
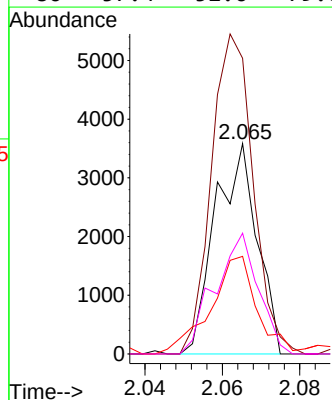
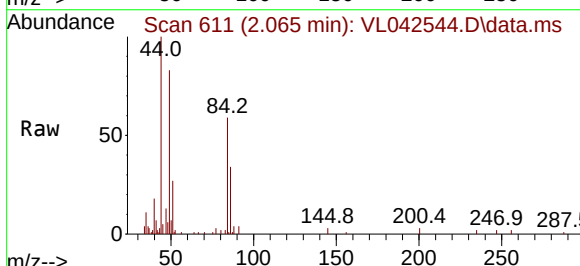
Ion Ratio Lower Upper

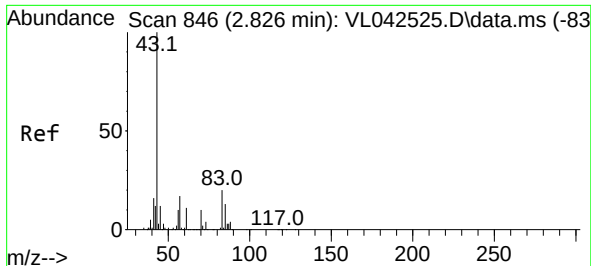
84 100

49 140.5 128.2 192.4

51 39.1 41.7 62.5#

86 57.4 52.6 79.0

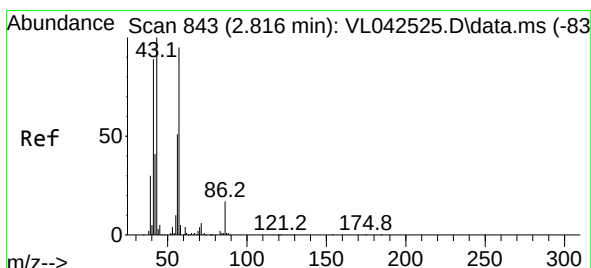
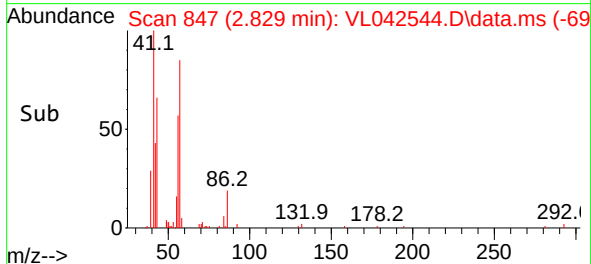
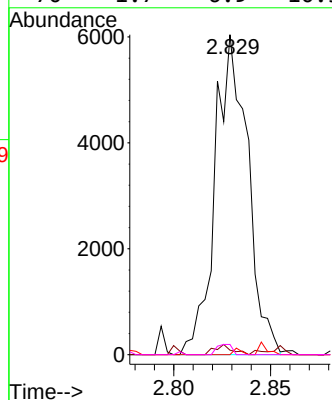
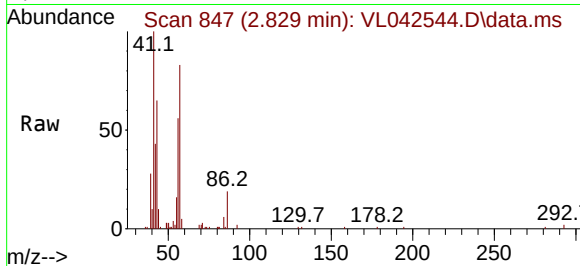




#25
Ethyl Acetate
Concen: 0.184 ppbv
RT: 2.829 min Scan# 846
Delta R.T. 0.003 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

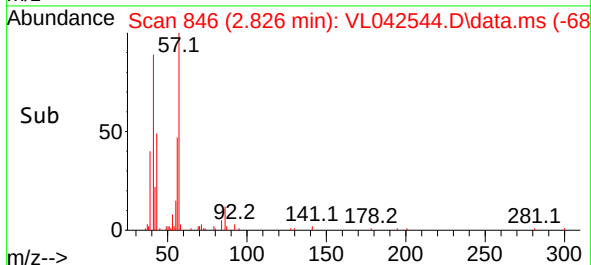
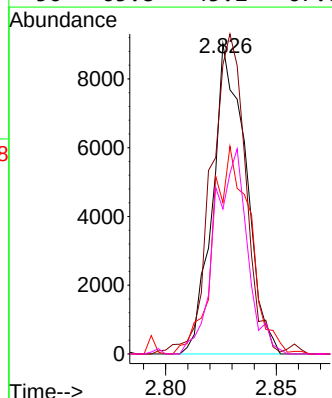
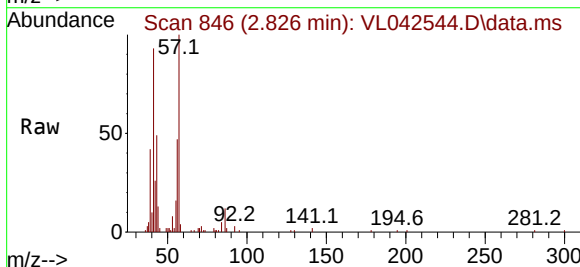
Instrument :
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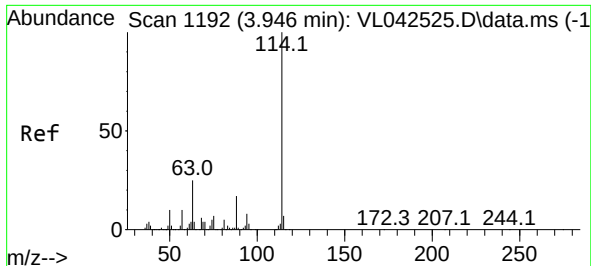
Tgt Ion: 43	Resp: 7093
Ion Ratio	Lower Upper
43 100	
45 3.7	7.9 11.9#
61 1.5	7.1 10.7#
70 1.7	6.9 10.3#



#26
Hexane
Concen: 0.593 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.010 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

Tgt Ion: 57	Resp: 9406
Ion Ratio	Lower Upper
57 100	
41 108.4	76.1 114.1
43 77.1	188.9 283.3#
56 65.8	45.2 67.8





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. 0.016 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

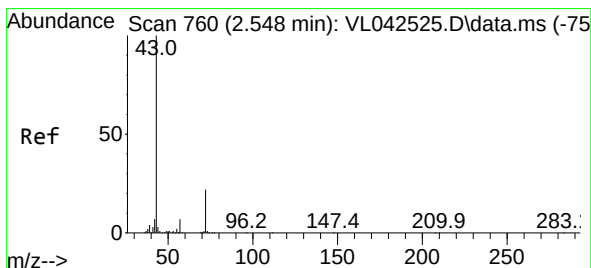
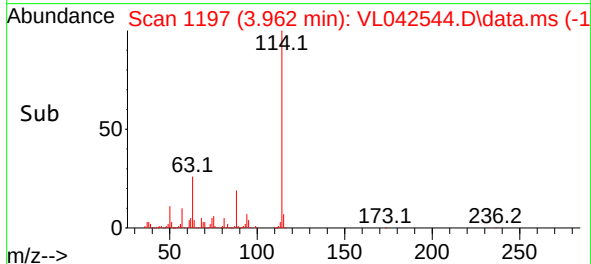
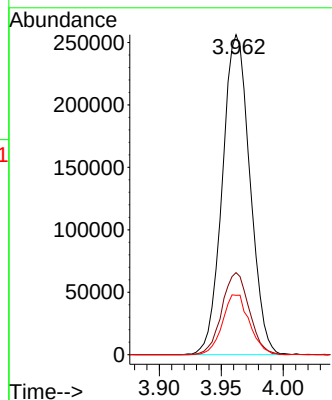
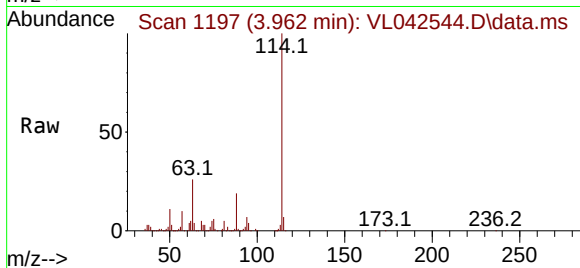
Tgt Ion:114 Resp: 397066

Ion Ratio Lower Upper

114 100

63 25.5 20.4 30.6

88 18.4 14.5 21.7



#34

2-Butanone

Concen: 0.350 ppbv

RT: 2.560 min Scan# 764

Delta R.T. 0.013 min

Lab File: VL042544.D

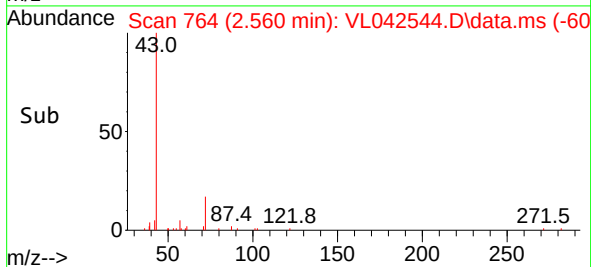
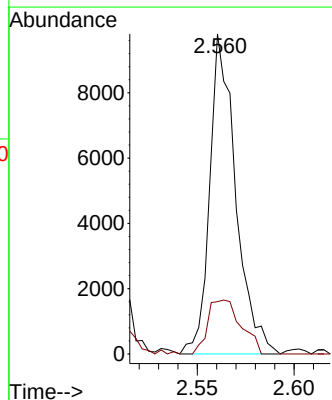
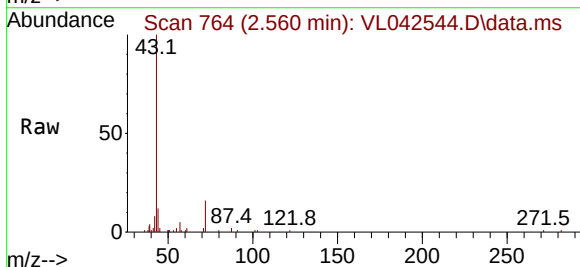
Acq: 14 May 2025 15:54

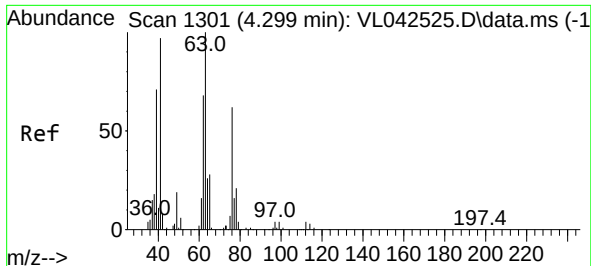
Tgt Ion: 43 Resp: 9156

Ion Ratio Lower Upper

43 100

72 21.6 18.7 28.1





#39

1,2-Dichloropropane

Concen: 7.698 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. -0.337 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

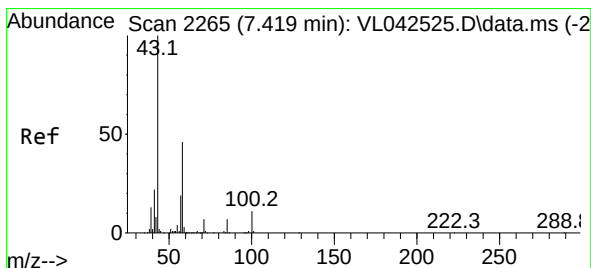
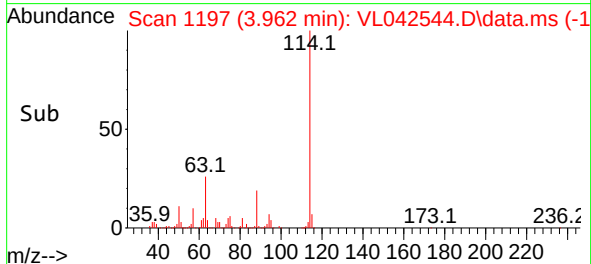
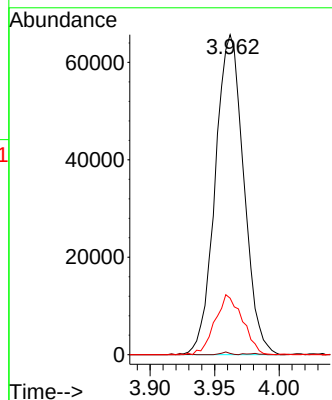
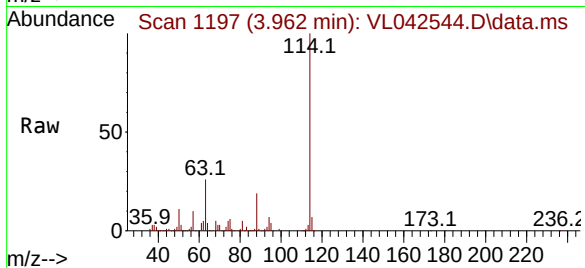
Tgt Ion: 63 Resp: 100892

Ion Ratio Lower Upper

63 100

41 0.4 77.5 116.3#

62 17.7 54.6 82.0#



#51

2-Hexanone

Concen: 0.223 ppbv

RT: 7.445 min Scan# 2273

Delta R.T. 0.026 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

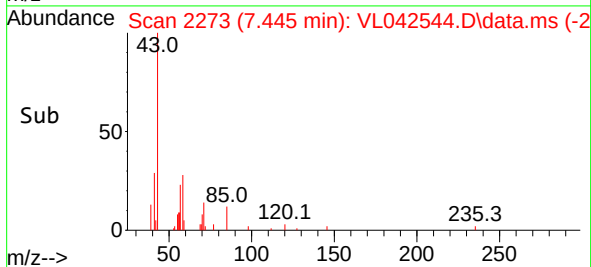
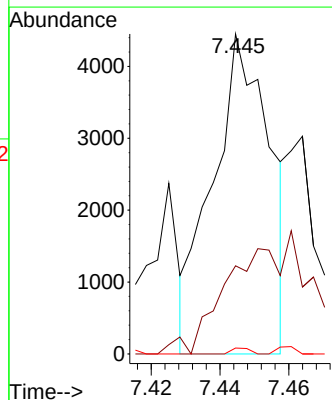
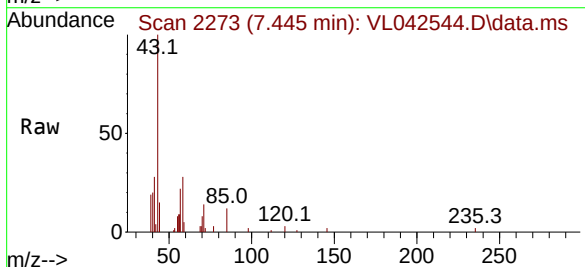
Tgt Ion: 43 Resp: 5105

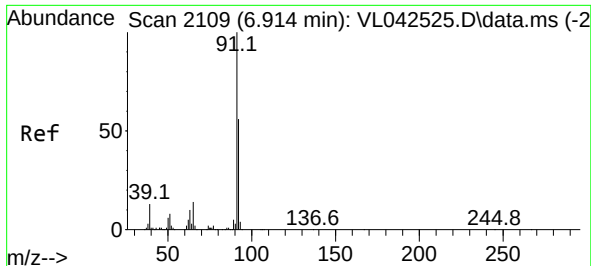
Ion Ratio Lower Upper

43 100

58 0.0 37.5 56.3#

98 0.0 0.9 1.3#

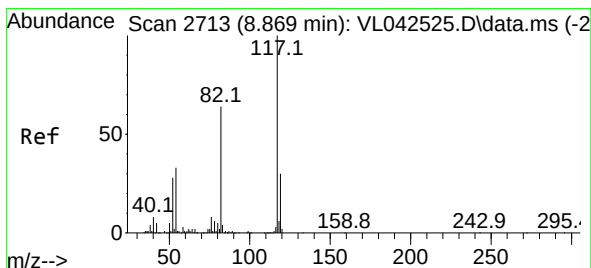
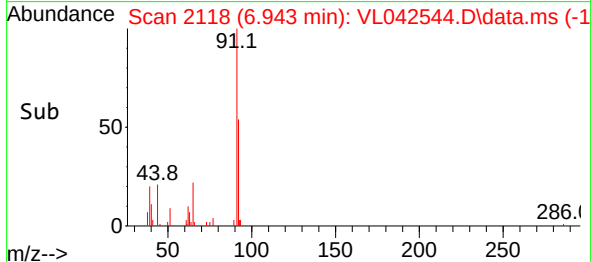
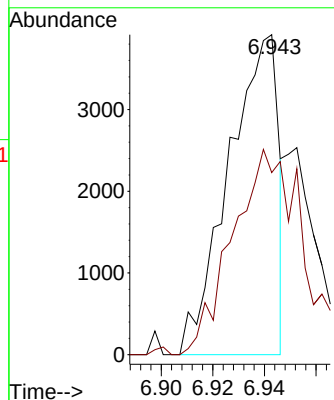
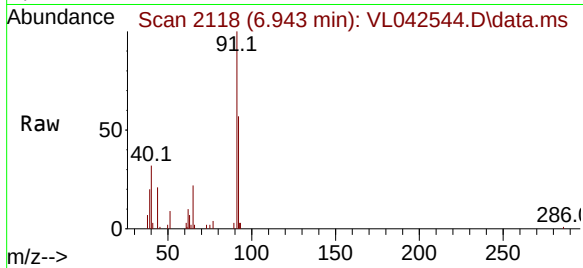




#53
Toluene
Concen: 0.152 ppbv
RT: 6.943 min Scan# 2109
Delta R.T. 0.029 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

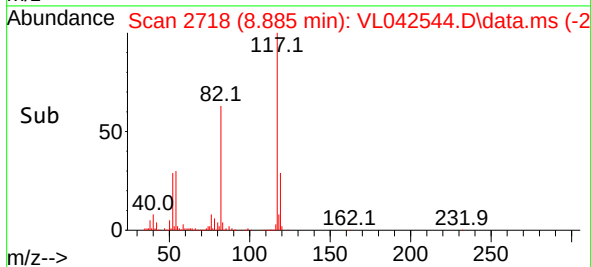
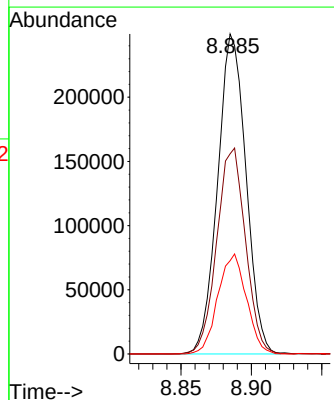
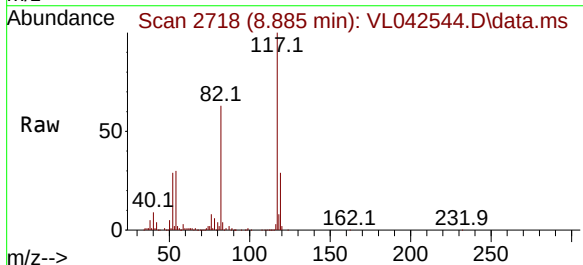
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

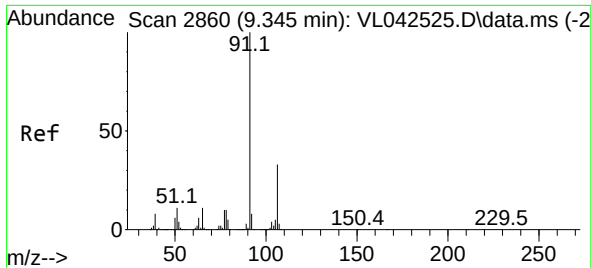
Tgt Ion: 91 Resp: 5241
Ion Ratio Lower Upper
91 100
92 87.9 47.8 71.6#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 2718
Delta R.T. 0.016 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

Tgt Ion: 117 Resp: 349633
Ion Ratio Lower Upper
117 100
82 65.2 55.0 82.4
119 31.5 25.8 38.6

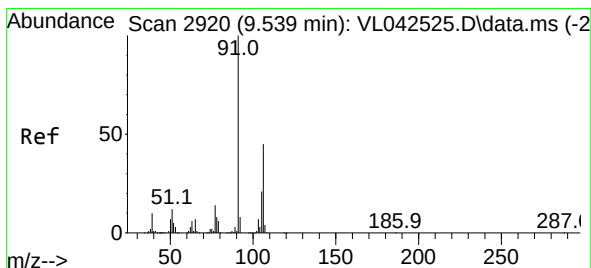
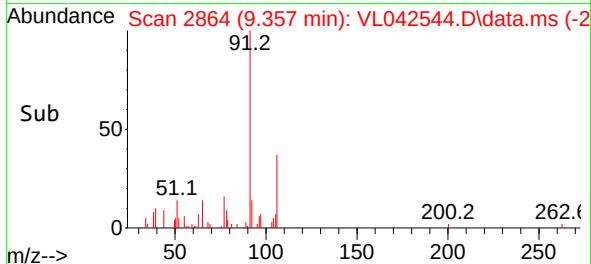
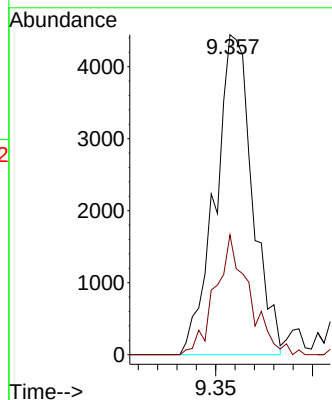
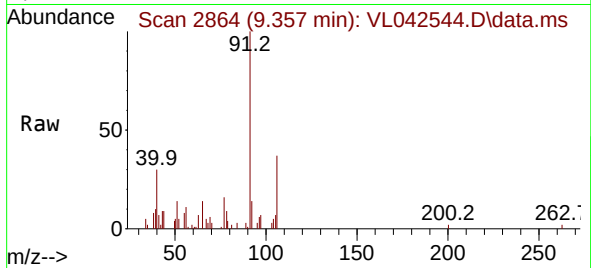




#58
Ethyl Benzene
Concen: 0.124 ppbv
RT: 9.357 min Scan# 2188
Delta R.T. 0.013 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

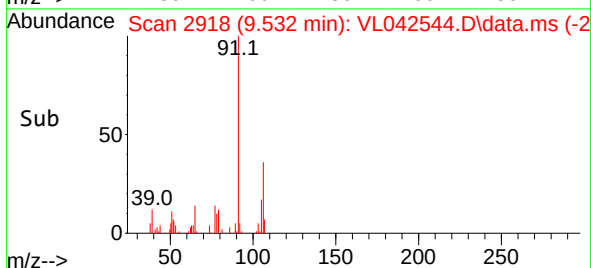
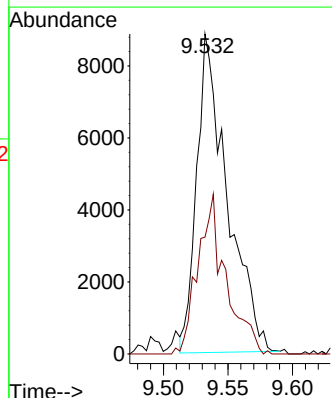
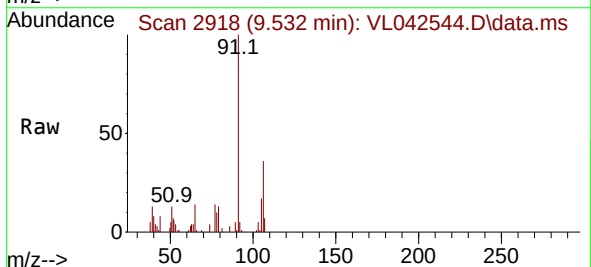
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

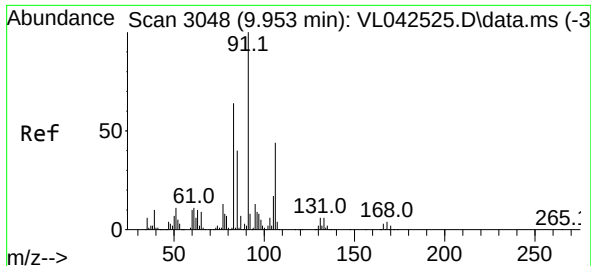
Tgt Ion: 91 Resp: 5927
Ion Ratio Lower Upper
91 100
106 37.5 26.0 39.0



#59
m/p-Xylene
Concen: 0.344 ppbv
RT: 9.532 min Scan# 2918
Delta R.T. -0.007 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

Tgt Ion: 91 Resp: 14563
Ion Ratio Lower Upper
91 100
106 45.9 0.0 0.0#





#60

o-Xylene

Concen: 0.245 ppbv

RT: 9.969 min Scan# 3048

Delta R.T. 0.016 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

Instrument :

MSVOA_L

ClientSampleId :

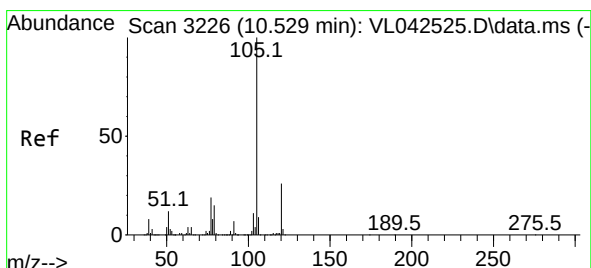
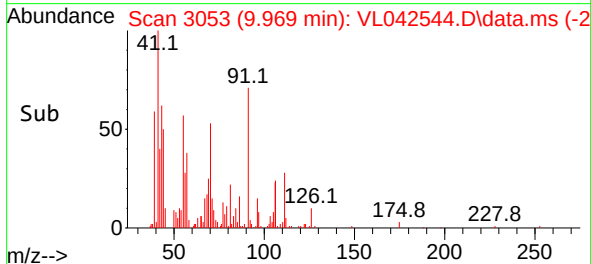
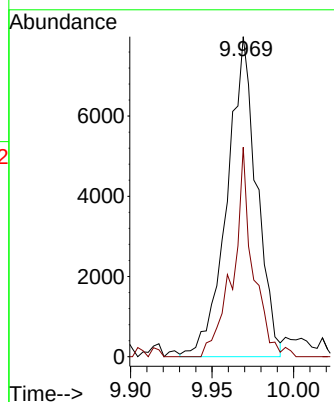
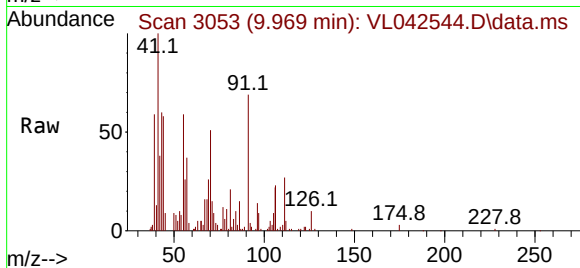
SV1DL

Tgt Ion: 91 Resp: 10124

Ion Ratio Lower Upper

91 100

106 44.2 21.6 64.6



#62

Isopropylbenzene

Concen: 0.074 ppbv

RT: 10.539 min Scan# 3229

Delta R.T. 0.010 min

Lab File: VL042544.D

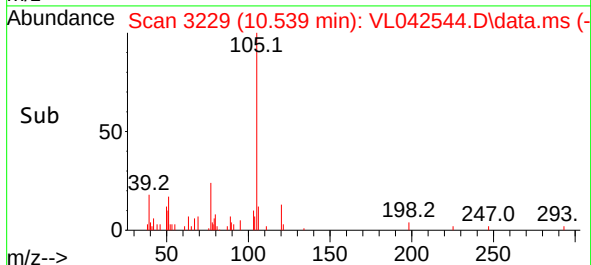
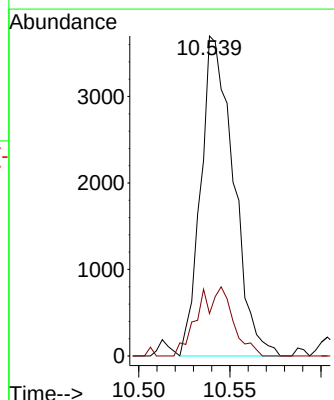
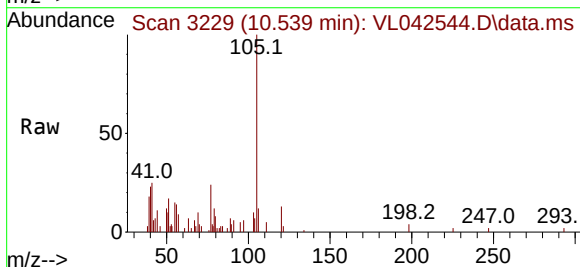
Acq: 14 May 2025 15:54

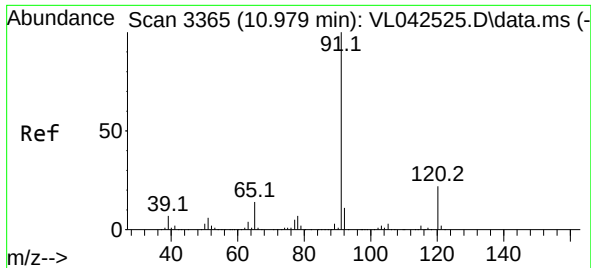
Tgt Ion: 105 Resp: 4621

Ion Ratio Lower Upper

105 100

120 23.0 20.1 30.1

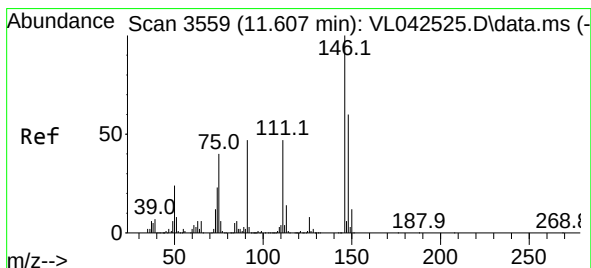
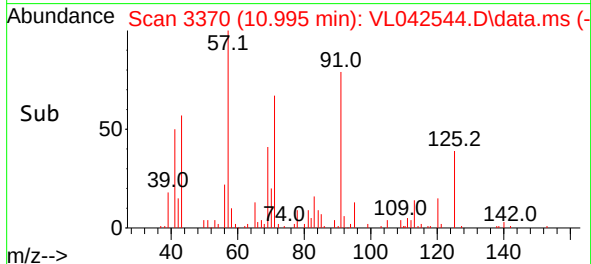
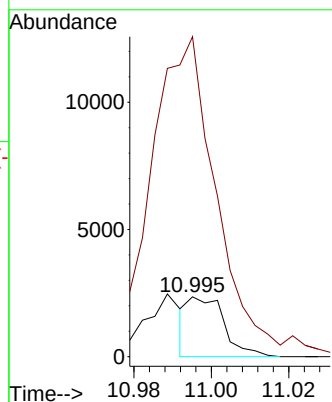
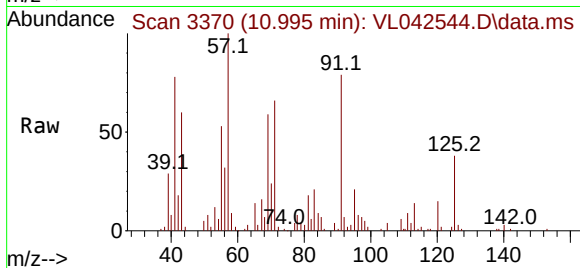




#64
n-propylbenzene
Concen: 0.097 ppbv
RT: 10.995 min Scan# 31
Delta R.T. 0.016 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

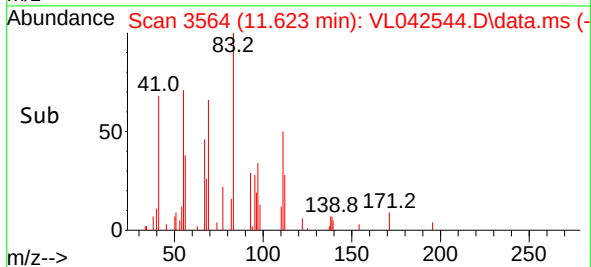
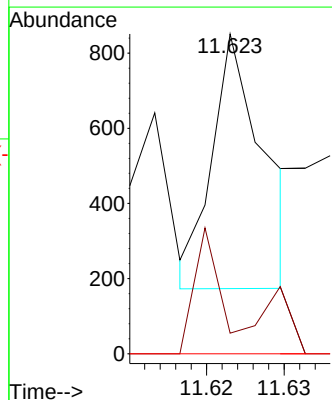
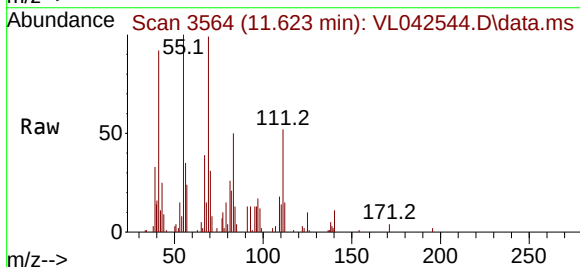
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

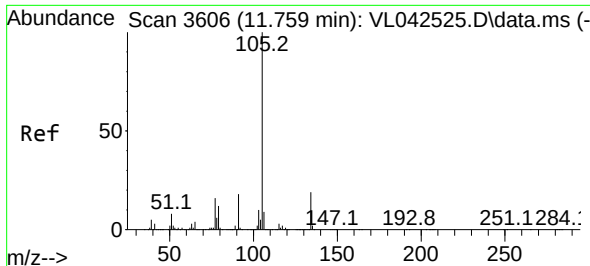
Tgt Ion:120 Resp: 1532
Ion Ratio Lower Upper
120 100
91 1043.5 377.7 566.5#



#66
Benzyl Chloride
Concen: 0.041 ppbv
RT: 11.623 min Scan# 3564
Delta R.T. 0.016 min
Lab File: VL042544.D
Acq: 14 May 2025 15:54

Tgt Ion: 91 Resp: 312
Ion Ratio Lower Upper
91 100
126 53.2 13.7 20.5#
128 0.0 4.2 6.2#

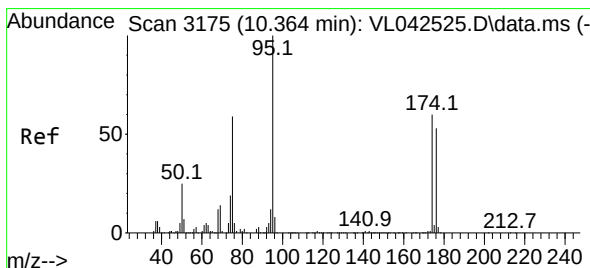
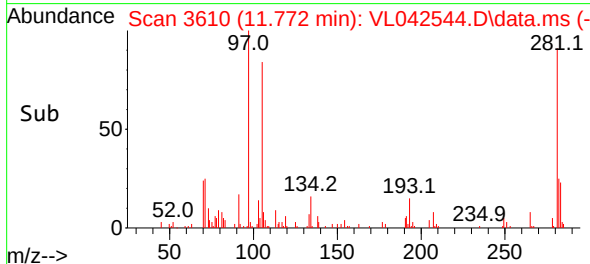
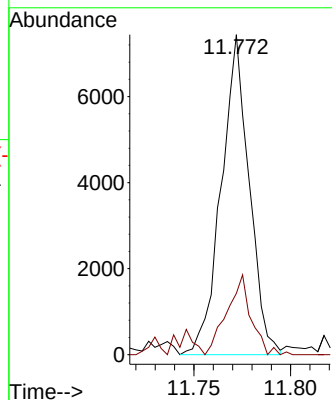
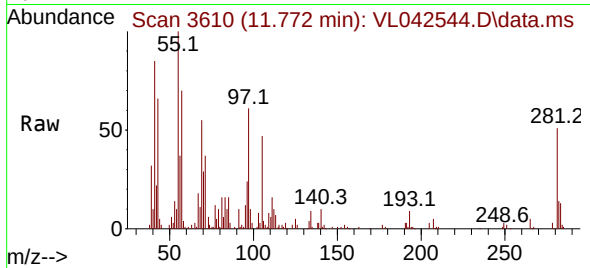




#67
 sec-Butylbenzene
 Concen: 0.091 ppbv
 RT: 11.772 min Scan# 3180
 Delta R.T. 0.013 min
 Lab File: VL042544.D
 Acq: 14 May 2025 15:54

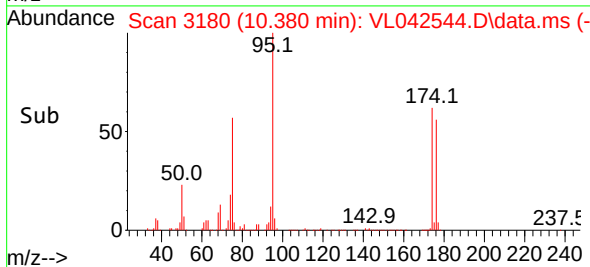
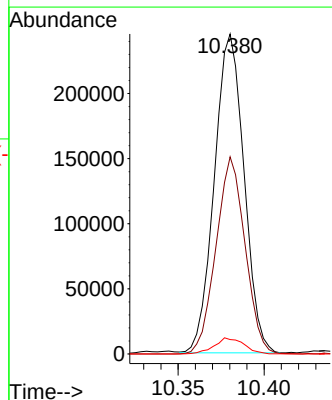
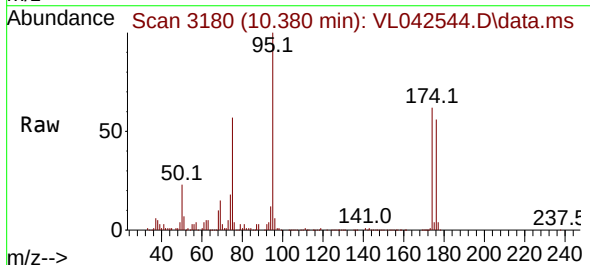
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

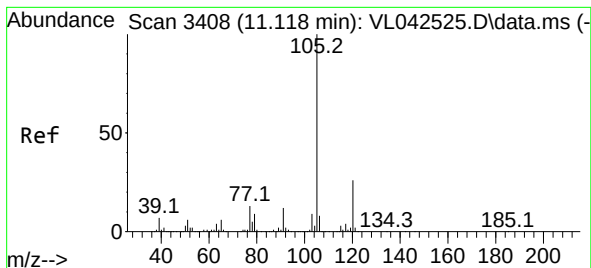
Tgt Ion:105 Resp: 7476
 Ion Ratio Lower Upper
 105 100
 134 28.5 14.9 22.3#



#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.656 ppbv
 RT: 10.380 min Scan# 3180
 Delta R.T. 0.016 min
 Lab File: VL042544.D
 Acq: 14 May 2025 15:54

Tgt Ion: 95 Resp: 293760
 Ion Ratio Lower Upper
 95 100
 174 60.5 48.0 72.0
 175 5.0 3.5 5.3





#72

4-Ethyltoluene

Concen: 0.123 ppbv

RT: 11.128 min Scan# 3408

Delta R.T. 0.010 min

Lab File: VL042544.D

Acq: 14 May 2025 15:54

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

Tgt Ion:105 Resp: 6298

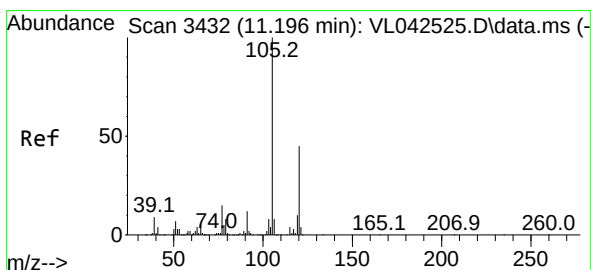
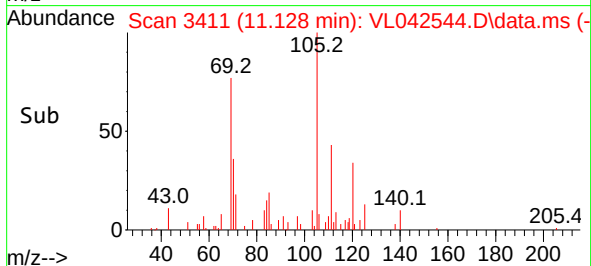
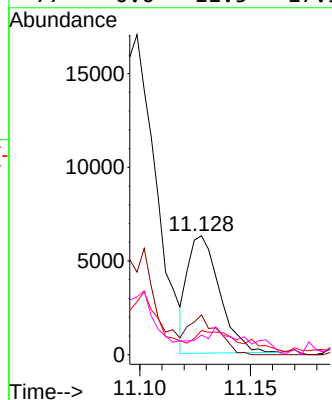
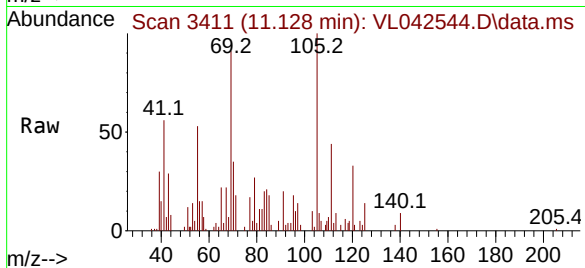
Ion Ratio Lower Upper

105 100

120 0.0 22.9 34.3#

91 22.9 10.9 16.3#

77 0.0 11.5 17.3#



#73

1,3,5-Trimethylbenzene

Concen: 0.216 ppbv

RT: 11.205 min Scan# 3435

Delta R.T. 0.010 min

Lab File: VL042544.D

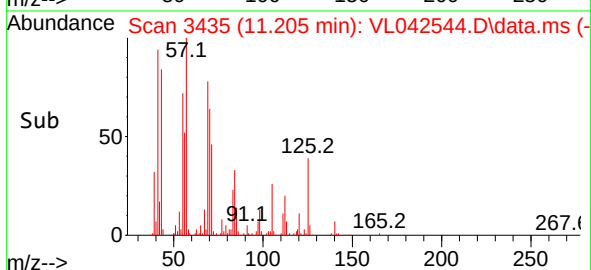
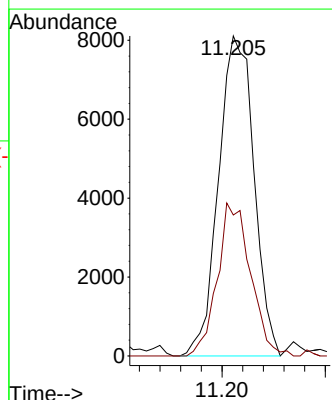
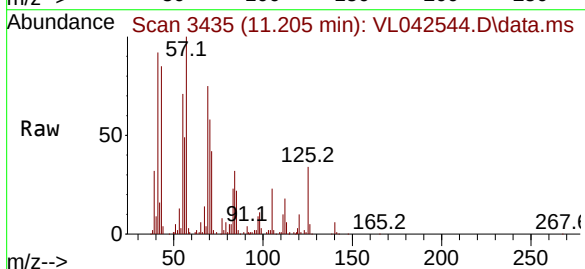
Acq: 14 May 2025 15:54

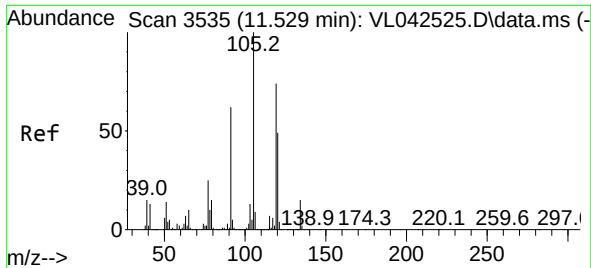
Tgt Ion:105 Resp: 9651

Ion Ratio Lower Upper

105 100

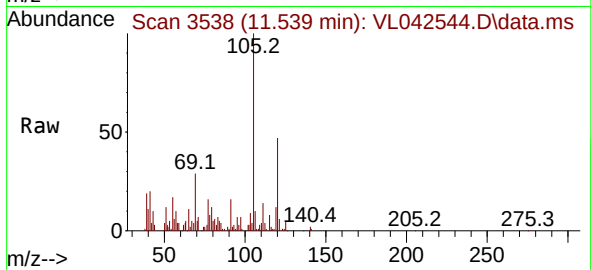
120 44.1 36.0 54.0





#74
 1,2,4-Trimethylbenzene
 Concen: 0.316 ppbv
 RT: 11.539 min Scan# 3538
 Delta R.T. 0.010 min
 Lab File: VL042544.D
 Acq: 14 May 2025 15:54

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL



Tgt Ion:	105	Resp:	17344
Ion	Ratio	Lower	Upper
105	100		
120	46.1	39.0	58.6
91	13.9	49.4	74.2#
77	9.6	19.8	29.6#

