

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL072225\
 Data File : VL042734.D
 Acq On : 22 Jul 2025 17:07
 Operator : SY/MD
 Sample : Q2617-01 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jul 23 03:03:19 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Jul 23 02:51:39 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.793	49	109688	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.965	114	320851	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	280986	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	237082	10.440	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.400%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.496	85	973	0.057	ppbv	94
3) Chlorodifluoromethane	1.453	51	953	0.049	ppbv #	91
9) Propene	1.486	41	2238	0.326	ppbv #	18
10) Heptane	4.988	43	1418	0.074	ppbv #	31
11) Trichlorofluoromethane	1.884	101	634	0.036	ppbv #	47
13) Ethanol	1.441	45	206140	178.342	ppbv #	1
15) Acetone	1.839	43	49794	2.711	ppbv	100
16) 1,3-Butadiene	1.606	39	661	0.084	ppbv #	16
17) tert-Butyl alcohol	2.052	59	1123	0.064	ppbv #	73
19) Isopropyl Alcohol	1.441	45	206140	21.178	ppbv #	37
20) Methylene Chloride	2.068	84	2227	0.386	ppbv #	73
22) trans-1,2-Dichloroethene	2.350	96	785	0.117	ppbv #	64
23) Vinyl Acetate	2.460	43	1342	0.064	ppbv #	35
25) Ethyl Acetate	2.832	43	8364	0.247	ppbv #	87
26) Hexane	2.836	57	9402	0.632	ppbv #	47
27) Carbon Disulfide	2.156	76	1597	0.101	ppbv #	1
32) 1,1,1-Trichloroethane	3.376	97	7615	0.295	ppbv	93
34) 2-Butanone	2.567	43	8820	0.399	ppbv	98
39) 1,2-Dichloropropane	3.962	63	83074	7.485	ppbv #	21
41) Tetrahydrofuran	3.059	42	383	0.034	ppbv #	36
51) 2-Hexanone	7.441	43	842	0.036	ppbv #	1
53) Toluene	6.940	91	13751	0.409	ppbv	98
58) Ethyl Benzene	9.361	91	2530	0.054	ppbv #	64
59) m/p-Xylene	9.535	91	9274	0.247	ppbv #	86
60) o-Xylene	9.966	91	5507	0.145	ppbv	98
64) n-propylbenzene	10.989	120	459	0.032	ppbv #	34
71) 2-Chlorotoluene	10.992	91	2288	0.054	ppbv	85
72) 4-Ethyltoluene	11.131	105	1960	0.043	ppbv #	60
73) 1,3,5-Trimethylbenzene	11.202	105	2303	0.062	ppbv #	77
74) 1,2,4-Trimethylbenzene	11.539	105	4662	0.114	ppbv #	63
79) Naphthalene	13.520	128	2598	0.085	ppbv #	69
80) Naphthalene,2-methyl-	14.465	142	1385	0.137	ppbv #	91

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

Instrument :

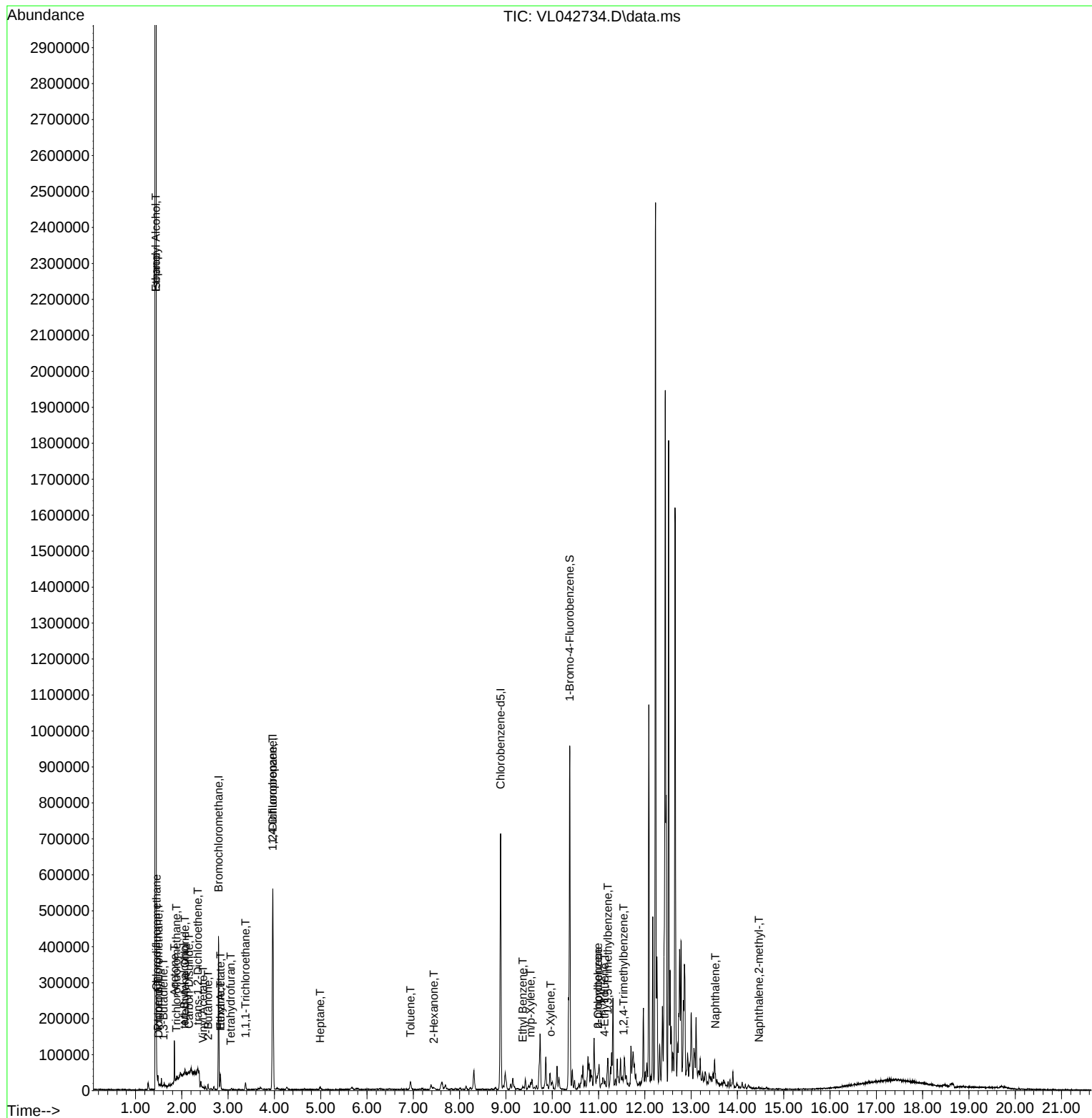
ClientSampleId :

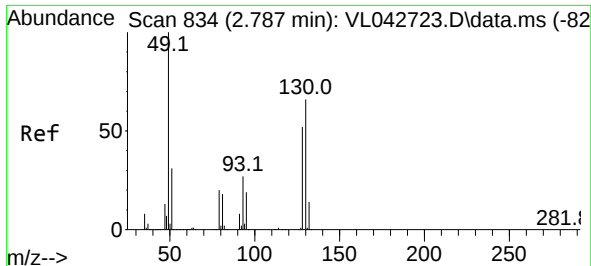
Quant Time: Jul 23 03:03:19 2025

Quant Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA LFri Aug 26 06:05:16 2022

QLast Update : Wed Jul 23 02:51:39 2025

Response via : Initial Calibration

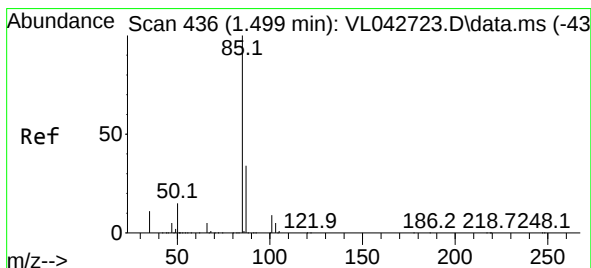
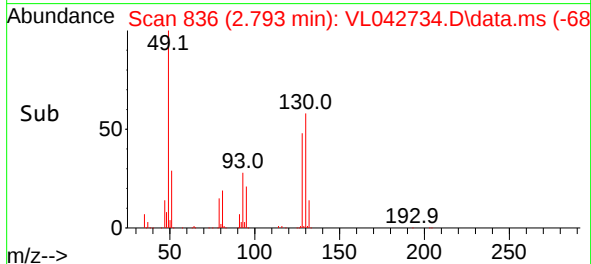
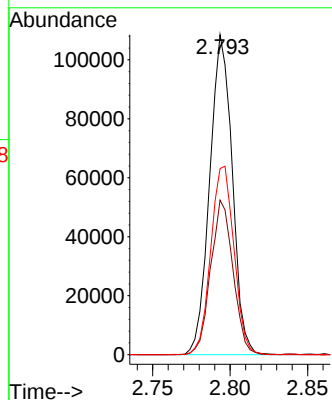
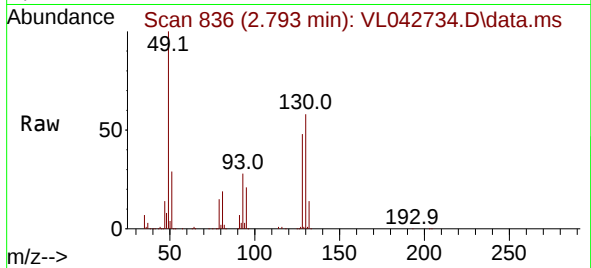




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.793 min Scan# 81
Delta R.T. 0.006 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

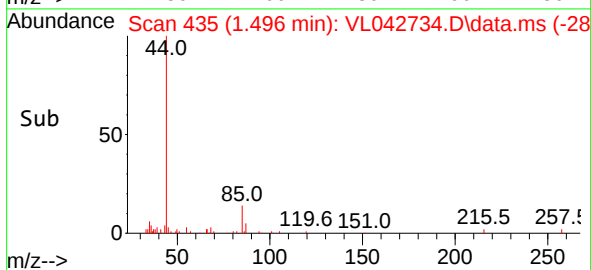
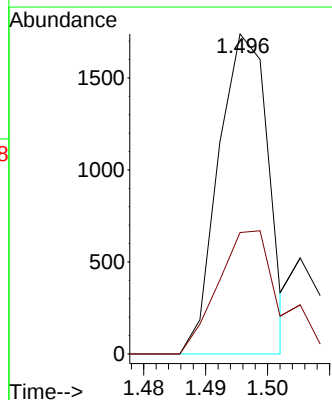
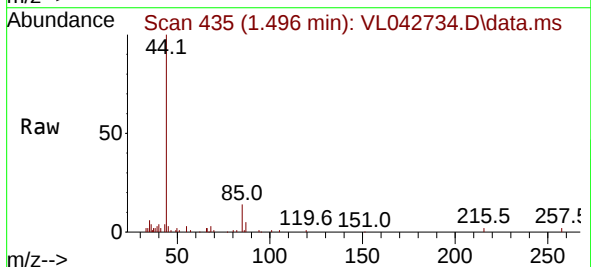
Instrument :
MSVOA_L
ClientSampleId :

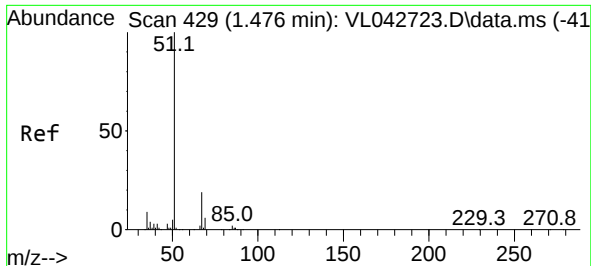
Tgt Ion: 49 Resp: 109688
Ion Ratio Lower Upper
49 100
128 47.9 24.5 73.5
130 60.9 31.7 95.1



#2
Dichlorodifluoromethane
Concen: 0.057 ppbv
RT: 1.496 min Scan# 435
Delta R.T. -0.003 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 85 Resp: 973
Ion Ratio Lower Upper
85 100
87 38.0 27.5 41.3

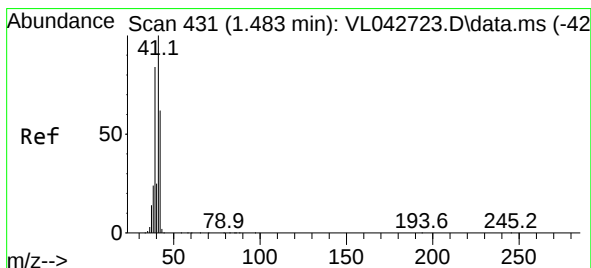
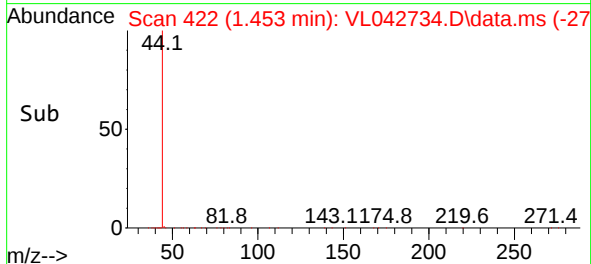
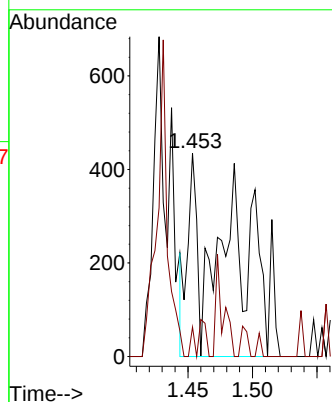
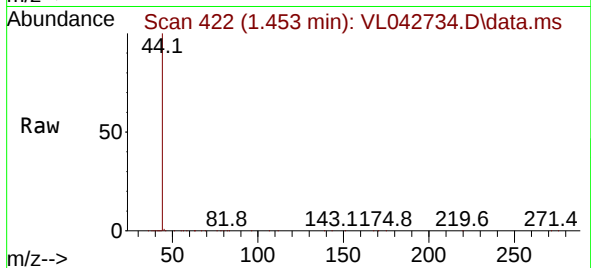




#3
Chlorodifluoromethane
Concen: 0.049 ppbv
RT: 1.453 min Scan# 41
Delta R.T. -0.023 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

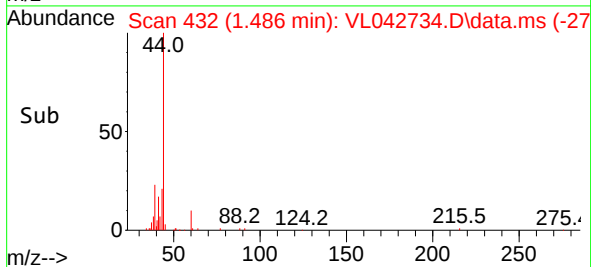
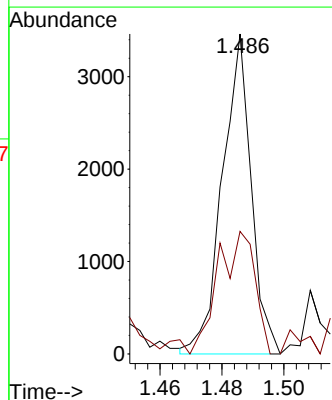
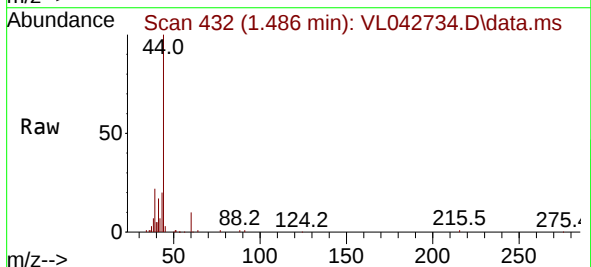
Instrument :
MSVOA_L
ClientSampleId :

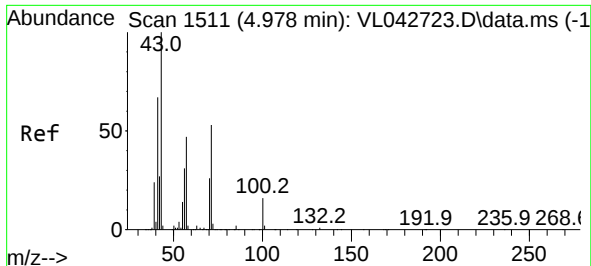
Tgt Ion: 51 Resp: 953
Ion Ratio Lower Upper
51 100
67 15.6 16.0 24.0#



#9
Propene
Concen: 0.326 ppbv
RT: 1.486 min Scan# 432
Delta R.T. 0.003 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 41 Resp: 2238
Ion Ratio Lower Upper
41 100
42 0.0 52.0 78.0#

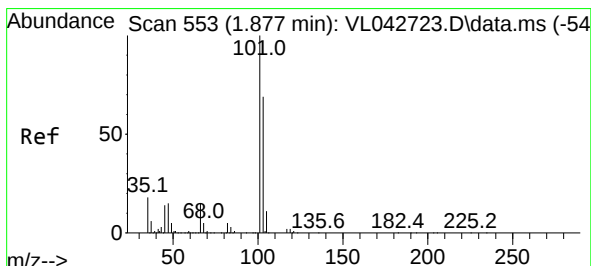
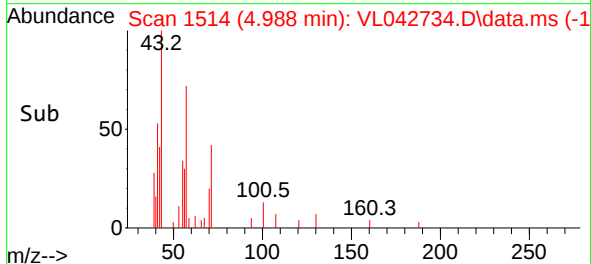
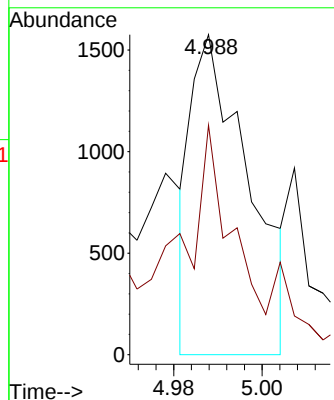
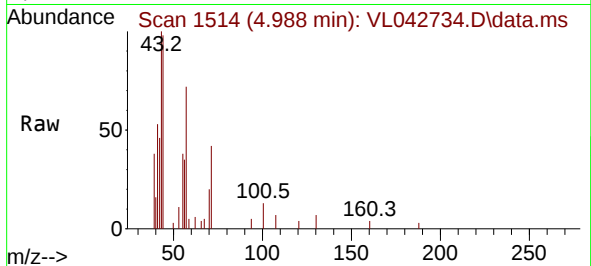




#10
 Heptane
 Concen: 0.074 ppbv
 RT: 4.988 min Scan# 11
 Delta R.T. 0.010 min
 Lab File: VL042734.D
 Acq: 22 Jul 2025 17:07

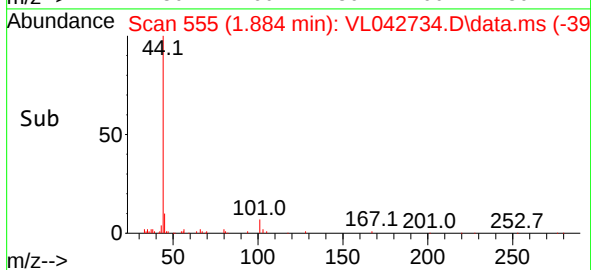
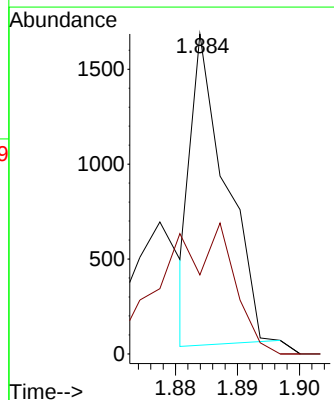
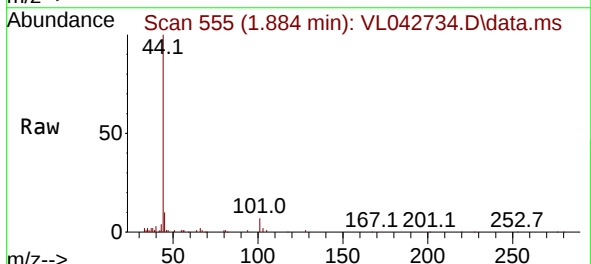
Instrument :
 MSVOA_L
 ClientSampleId :

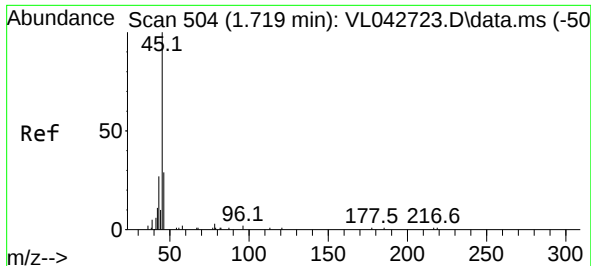
Tgt Ion: 43 Resp: 1418
 Ion Ratio Lower Upper
 43 100
 57 96.2 39.1 58.7#



#11
 Trichlorofluoromethane
 Concen: 0.036 ppbv
 RT: 1.884 min Scan# 555
 Delta R.T. 0.006 min
 Lab File: VL042734.D
 Acq: 22 Jul 2025 17:07

Tgt Ion:101 Resp: 634
 Ion Ratio Lower Upper
 101 100
 103 25.8 55.2 82.8#

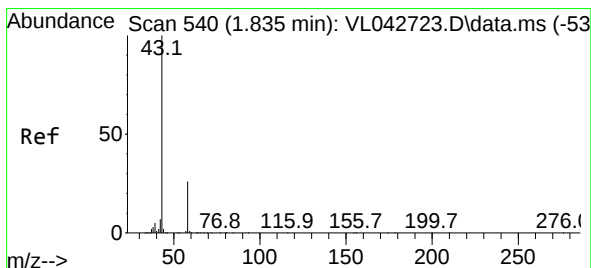
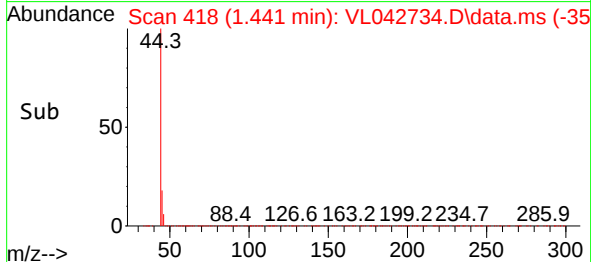
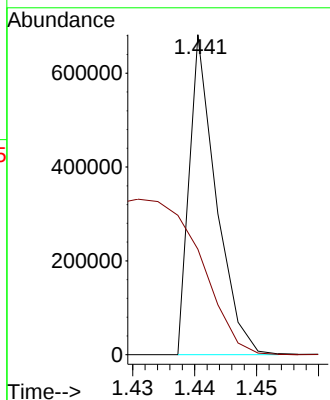
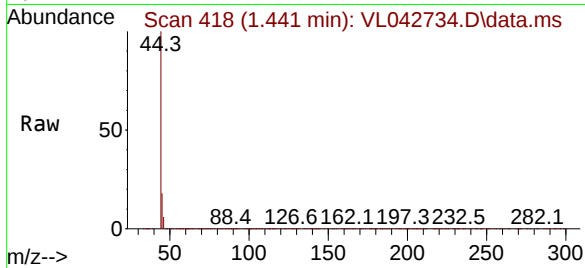




#13
 Ethanol
 Concen: 178.342 ppbv
 RT: 1.441 min Scan# 41
 Delta R.T. -0.278 min
 Lab File: VL042734.D
 Acq: 22 Jul 2025 17:07

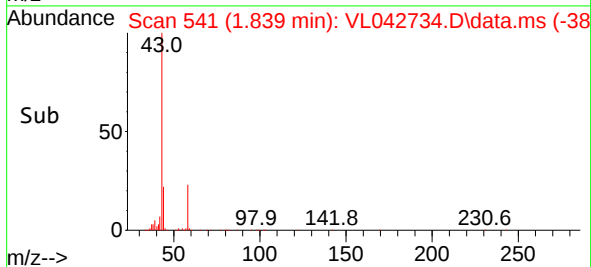
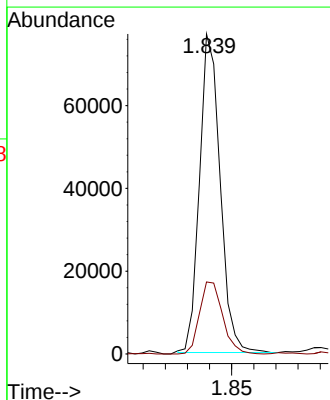
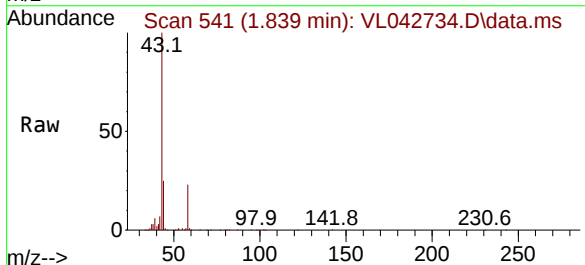
Instrument :
 MSVOA_L
 ClientSampleId :

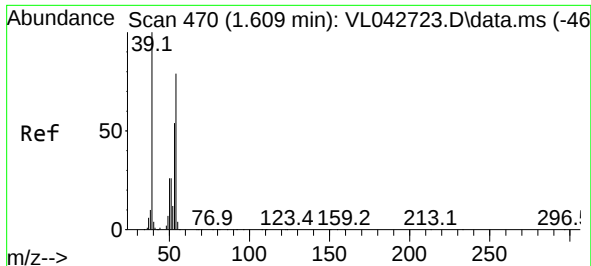
Tgt Ion: 45 Resp: 206140
 Ion Ratio Lower Upper
 45 100
 46 213.2 16.3 65.1#



#15
 Acetone
 Concen: 2.711 ppbv
 RT: 1.839 min Scan# 541
 Delta R.T. 0.003 min
 Lab File: VL042734.D
 Acq: 22 Jul 2025 17:07

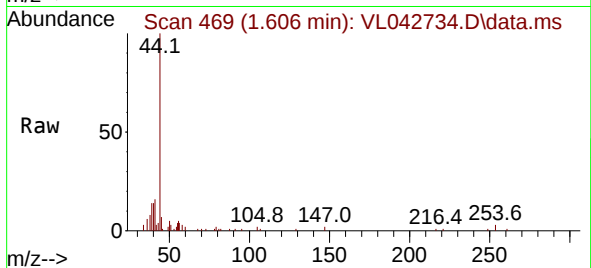
Tgt Ion: 43 Resp: 49794
 Ion Ratio Lower Upper
 43 100
 58 25.8 20.5 30.7



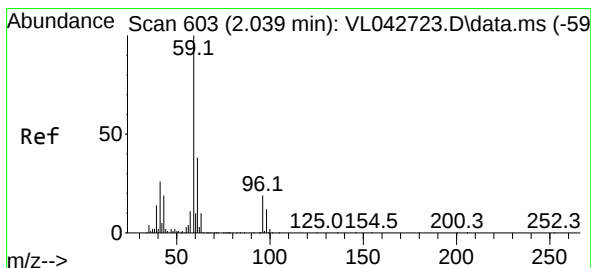
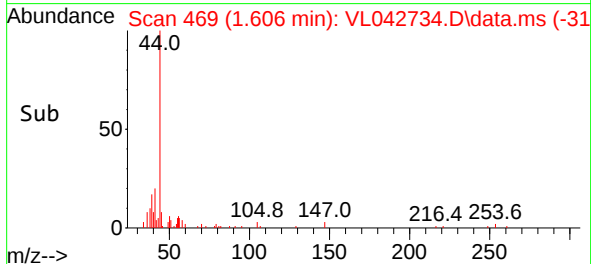
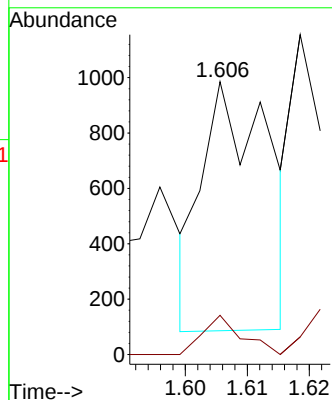


#16
1,3-Butadiene
Concen: 0.084 ppbv
RT: 1.606 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Instrument :
MSVOA_L
ClientSampleId :

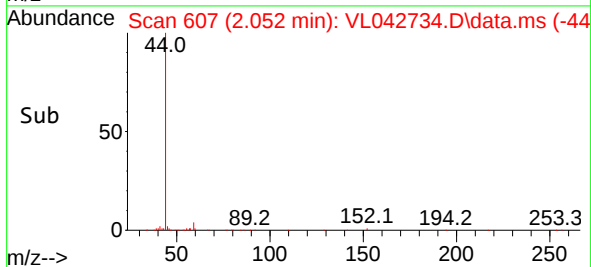
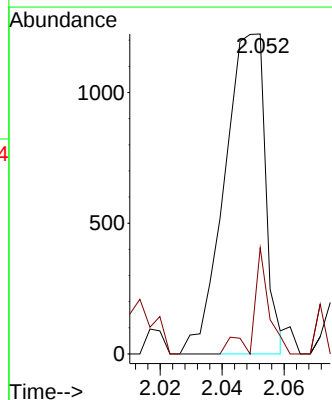
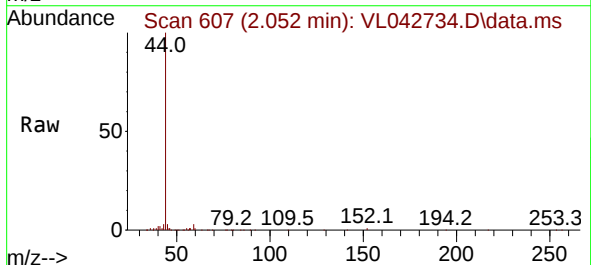


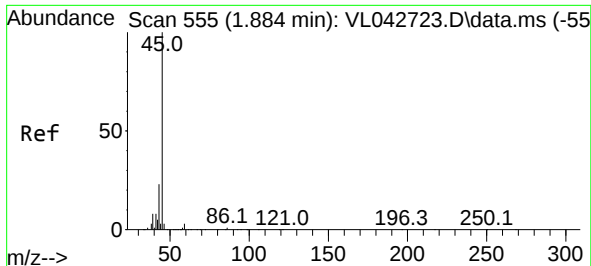
Tgt Ion: 39 Resp: 661
Ion Ratio Lower Upper
39 100
54 0.0 54.6 82.0#



#17
tert-Butyl alcohol
Concen: 0.064 ppbv
RT: 2.052 min Scan# 607
Delta R.T. 0.013 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 59 Resp: 1123
Ion Ratio Lower Upper
59 100
57 21.8 9.1 13.7#





#19

Isopropyl Alcohol

Concen: 21.178 ppbv

RT: 1.441 min Scan# 418

Delta R.T. -0.443 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Instrument :

MSVOA_L

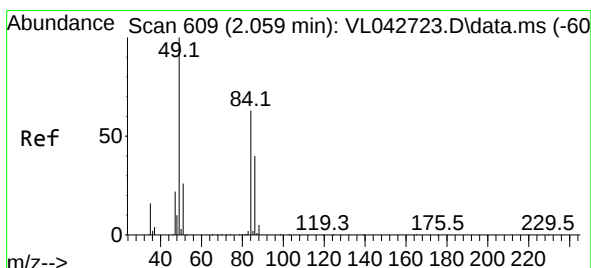
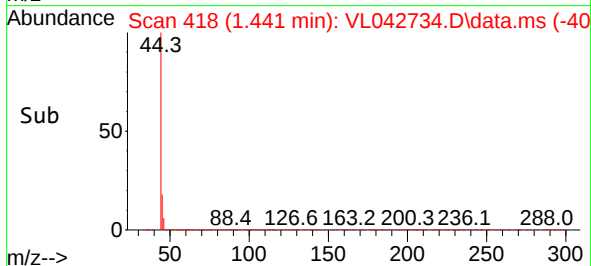
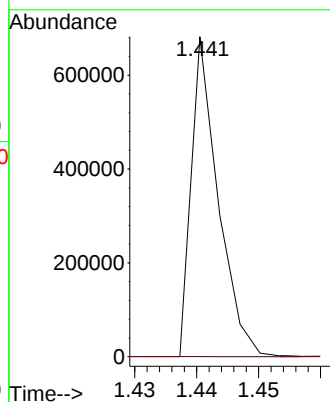
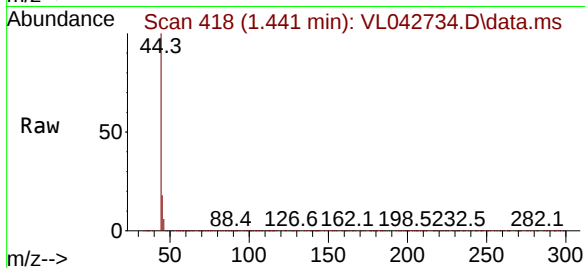
ClientSampleId :

Tgt Ion: 45 Resp: 206140

Ion Ratio Lower Upper

45 100

58 0.3 30.6 46.0#



#20

Methylene Chloride

Concen: 0.386 ppbv

RT: 2.068 min Scan# 612

Delta R.T. 0.010 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Tgt Ion: 84 Resp: 2227

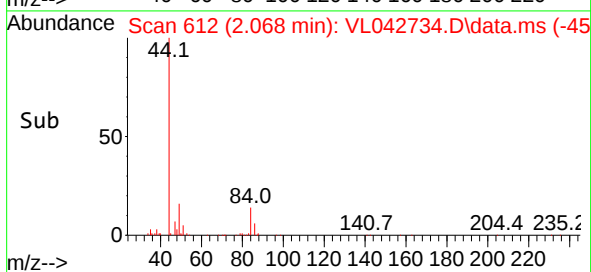
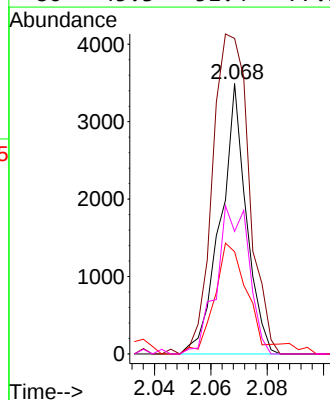
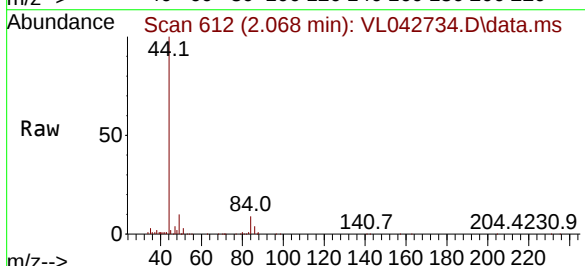
Ion Ratio Lower Upper

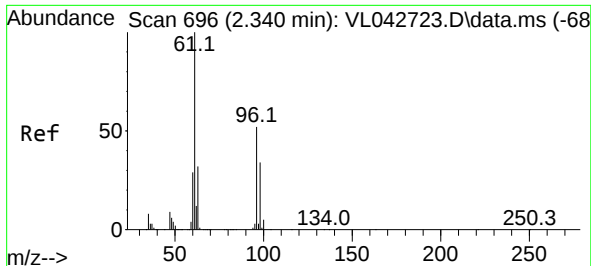
84 100

49 116.7 128.2 192.4#

51 37.8 34.5 51.7

86 45.3 51.4 77.2#

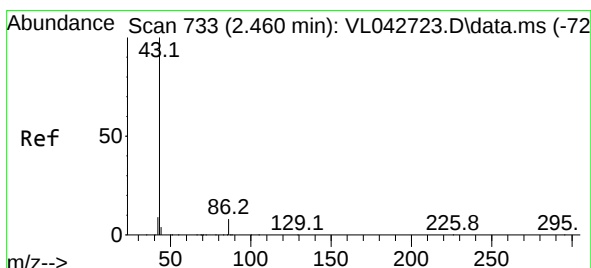
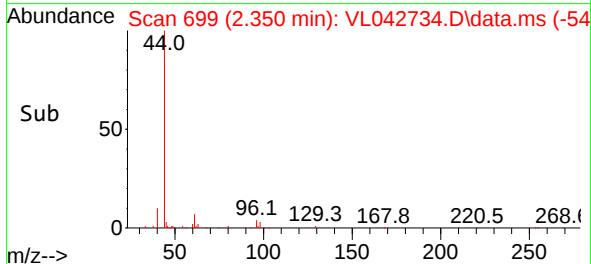
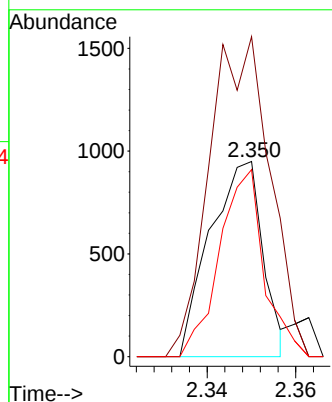
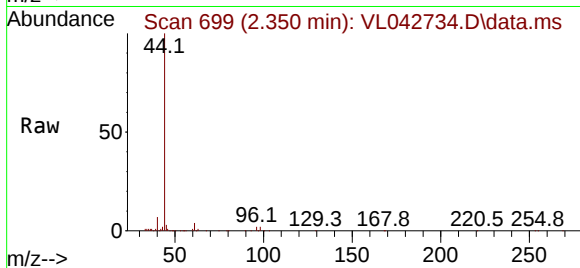




#22
trans-1,2-Dichloroethene
Concen: 0.117 ppbv
RT: 2.350 min Scan# 696
Delta R.T. 0.010 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

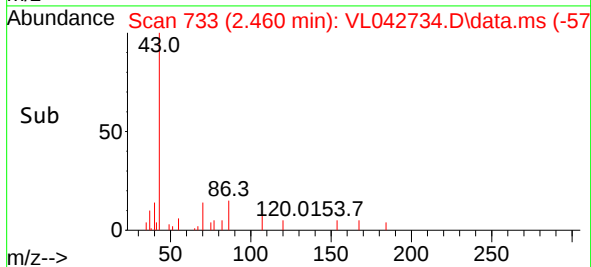
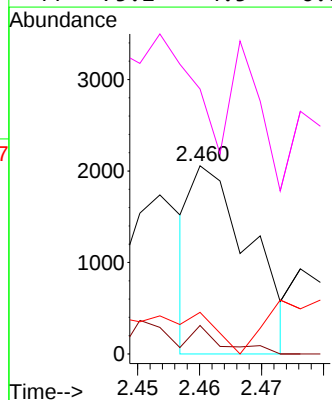
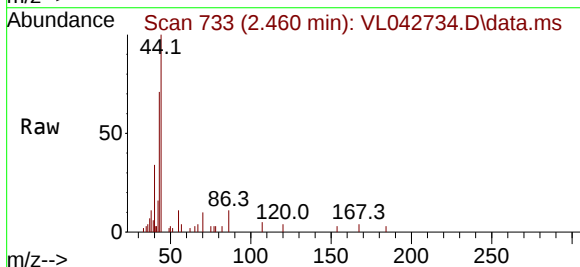
Instrument :
MSVOA_L
ClientSampleId :

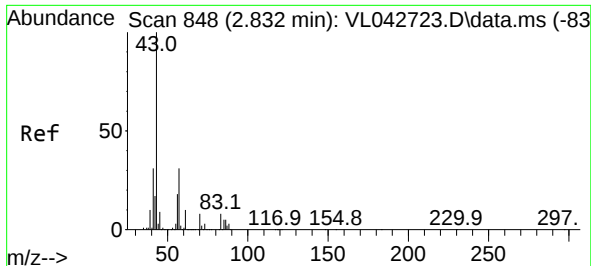
Tgt Ion: 96 Resp: 785
Ion Ratio Lower Upper
96 100
61 140.3 154.6 232.0#
98 95.8 53.1 79.7#



#23
Vinyl Acetate
Concen: 0.064 ppbv
RT: 2.460 min Scan# 733
Delta R.T. 0.000 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

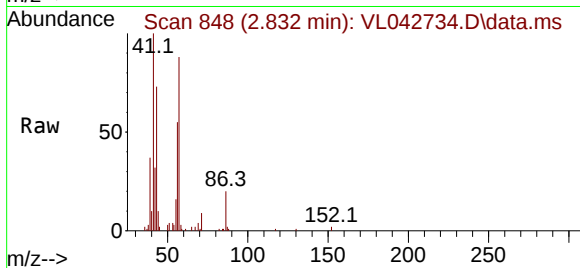
Tgt Ion: 43 Resp: 1342
Ion Ratio Lower Upper
43 100
86 21.0 5.7 8.5#
42 9.0 7.9 11.9
44 75.2 4.5 6.7#



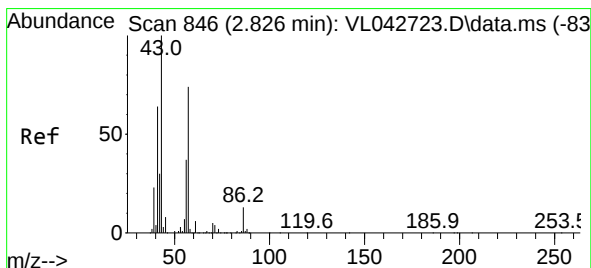
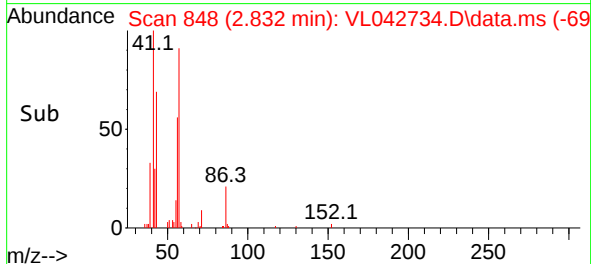
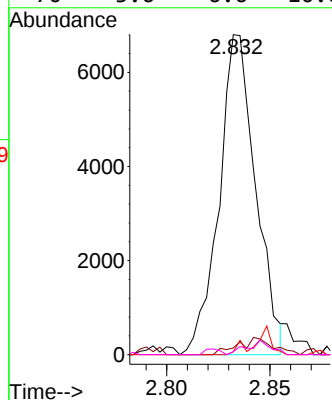


#25
Ethyl Acetate
Concen: 0.247 ppbv
RT: 2.832 min Scan# 848
Delta R.T. 0.000 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Instrument :
MSVOA_L
ClientSampleId :

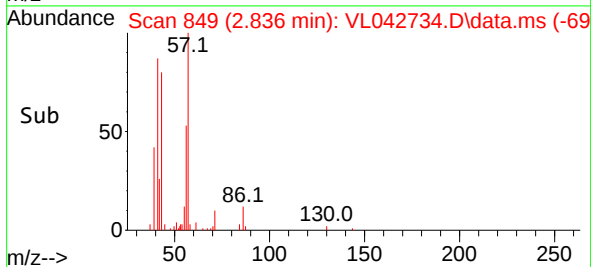
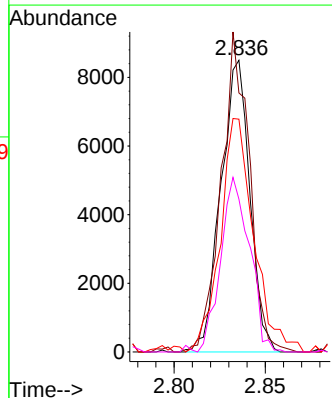
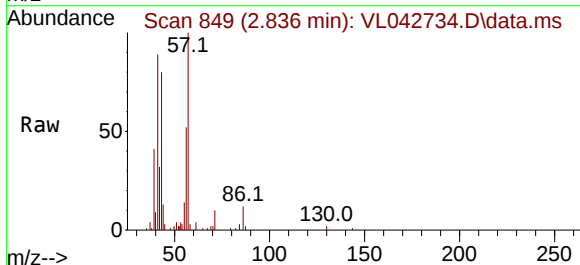


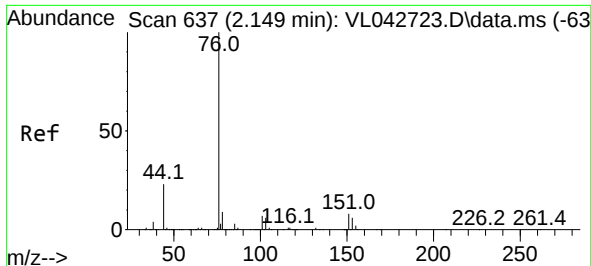
Tgt Ion: 43	Resp: 8364
Ion Ratio	Lower Upper
43 100	
45 5.1	7.8 11.6#
61 4.3	7.0 10.6#
70 3.6	6.6 10.0#



#26
Hexane
Concen: 0.632 ppbv
RT: 2.836 min Scan# 849
Delta R.T. 0.010 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 57	Resp: 9402
Ion Ratio	Lower Upper
57 100	
41 106.9	77.3 115.9
43 94.2	182.3 273.5#
56 60.3	42.5 63.7

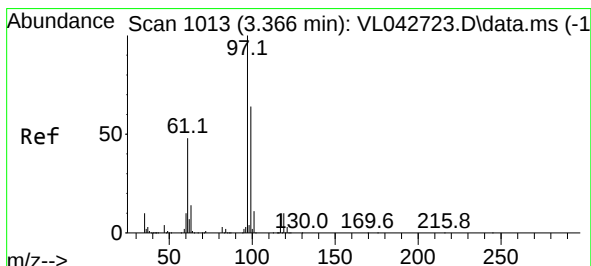
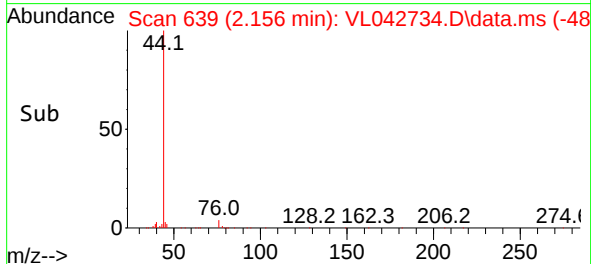
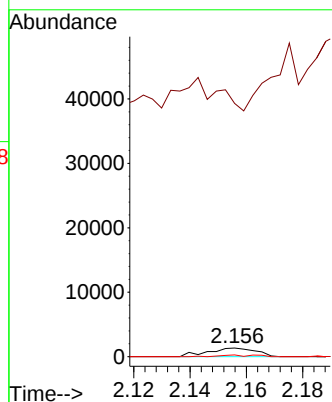
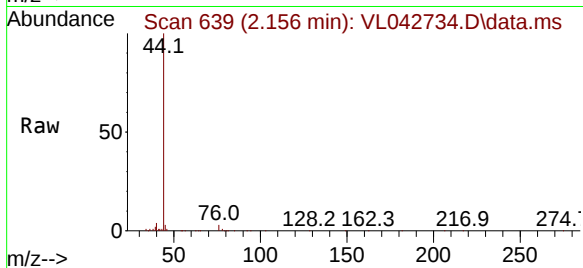




#27
Carbon Disulfide
Concen: 0.101 ppbv
RT: 2.156 min Scan# 61
Delta R.T. 0.006 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

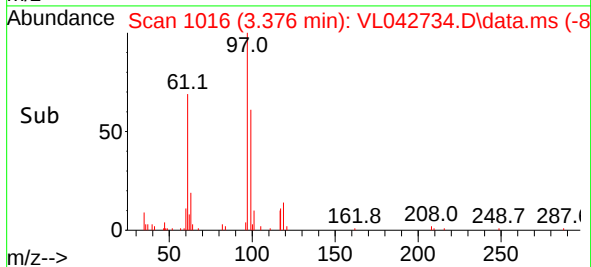
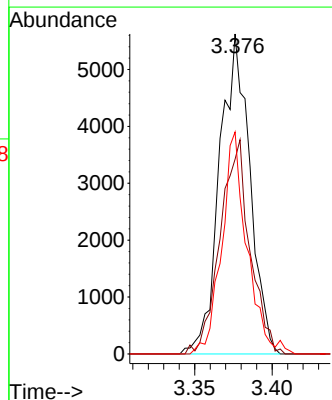
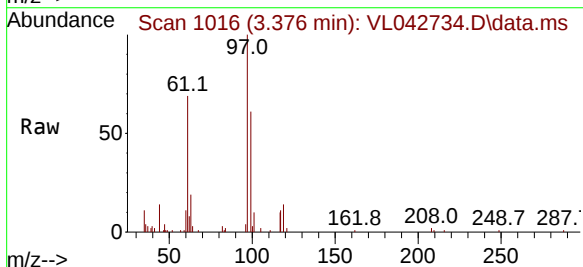
Instrument :
MSVOA_L
ClientSampleId :

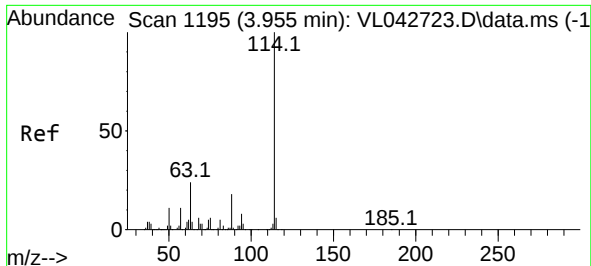
Tgt Ion: 76 Resp: 1597
Ion Ratio Lower Upper
76 100
44 4122.1 18.8 28.2#
78 14.3 9.5 14.3#



#32
1,1,1-Trichloroethane
Concen: 0.295 ppbv
RT: 3.376 min Scan# 1016
Delta R.T. 0.010 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 97 Resp: 7615
Ion Ratio Lower Upper
97 100
99 66.3 51.4 77.0
61 58.2 39.6 59.4





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.965 min Scan# 1198

Delta R.T. 0.010 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Instrument :

MSVOA_L

ClientSampleId :

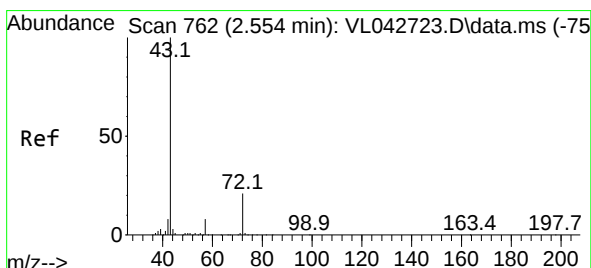
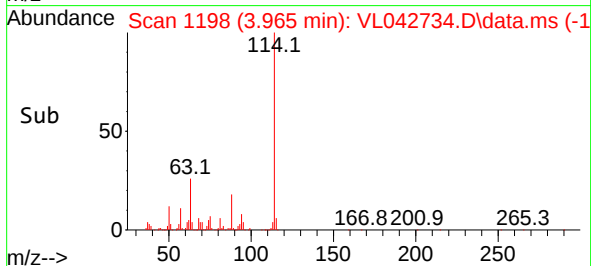
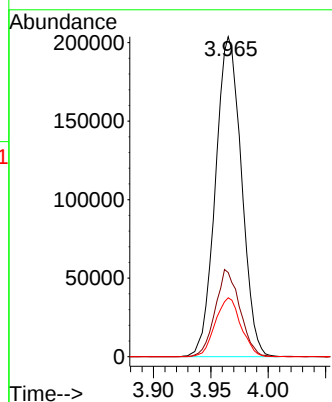
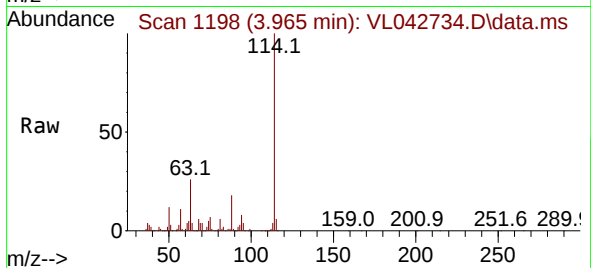
Tgt Ion:114 Resp: 320851

Ion Ratio Lower Upper

114 100

63 25.9 20.4 30.6

88 18.2 14.5 21.7



#34

2-Butanone

Concen: 0.399 ppbv

RT: 2.567 min Scan# 766

Delta R.T. 0.013 min

Lab File: VL042734.D

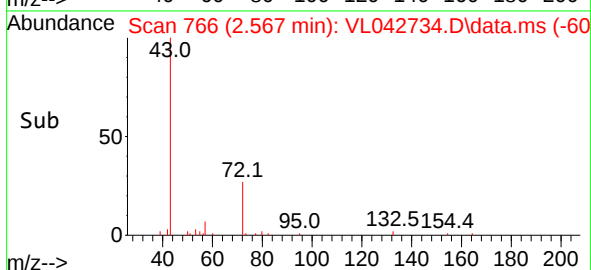
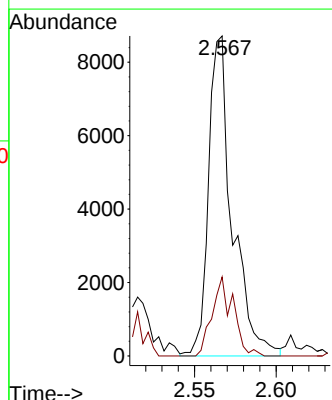
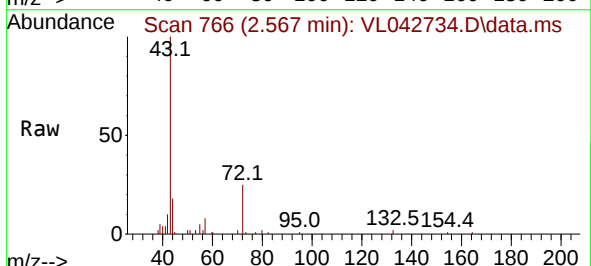
Acq: 22 Jul 2025 17:07

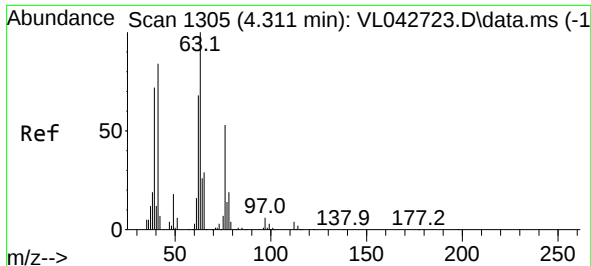
Tgt Ion: 43 Resp: 8820

Ion Ratio Lower Upper

43 100

72 22.1 17.0 25.6





#39

1,2-Dichloropropane

Concen: 7.485 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. -0.350 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Instrument :

MSVOA_L

ClientSampleId :

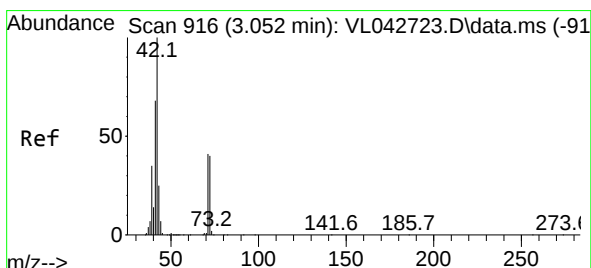
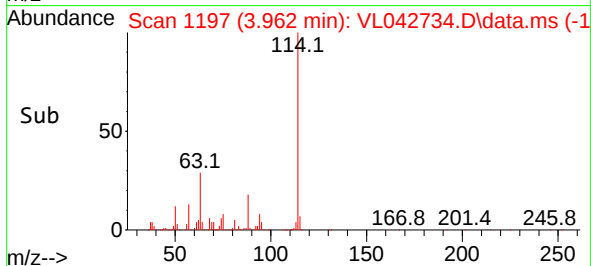
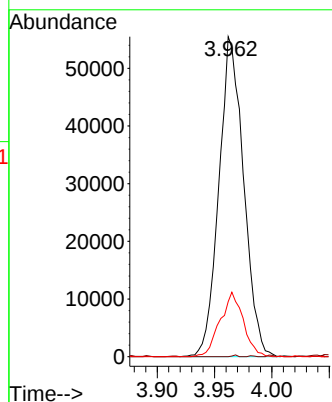
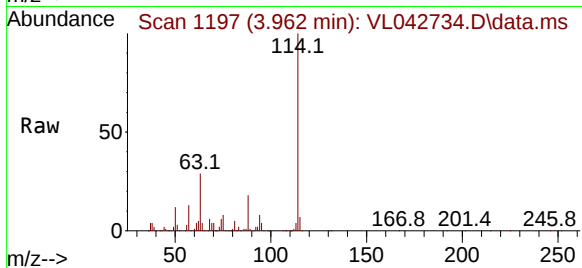
Tgt Ion: 63 Resp: 83074

Ion Ratio Lower Upper

63 100

41 0.0 67.7 101.5#

62 17.2 54.1 81.1#



#41

Tetrahydrofuran

Concen: 0.034 ppbv

RT: 3.059 min Scan# 918

Delta R.T. 0.006 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

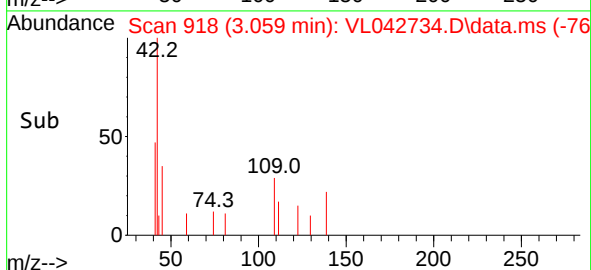
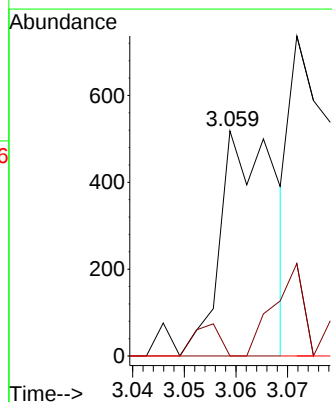
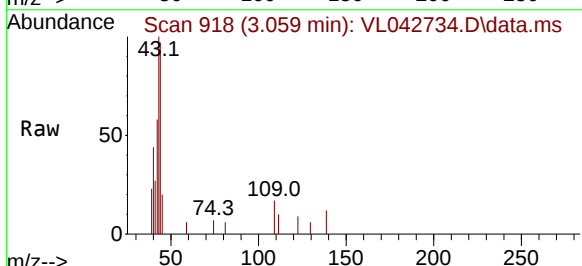
Tgt Ion: 42 Resp: 383

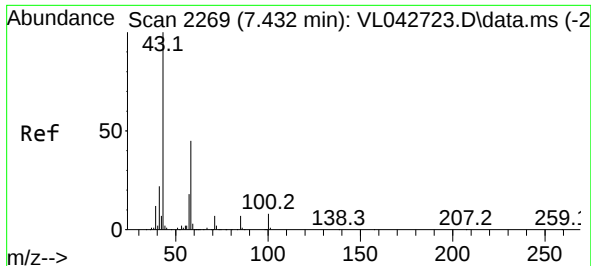
Ion Ratio Lower Upper

42 100

72 0.0 32.2 48.2#

71 0.0 29.8 44.6#

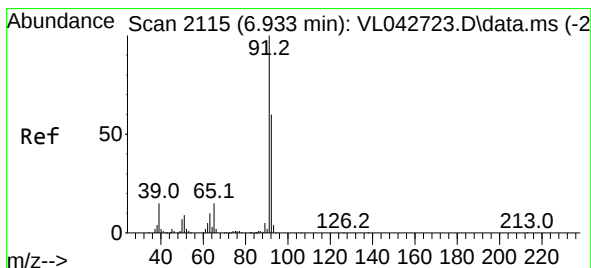
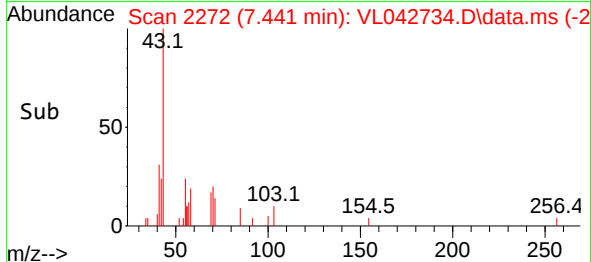
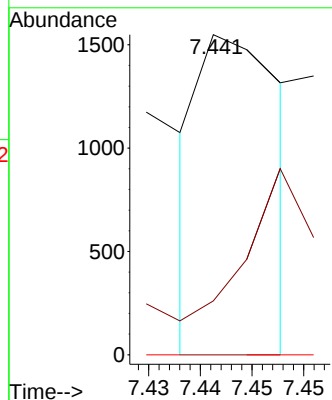
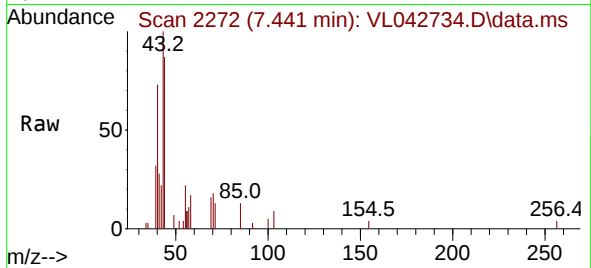




#51
2-Hexanone
Concen: 0.036 ppbv
RT: 7.441 min Scan# 2117
Delta R.T. 0.010 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

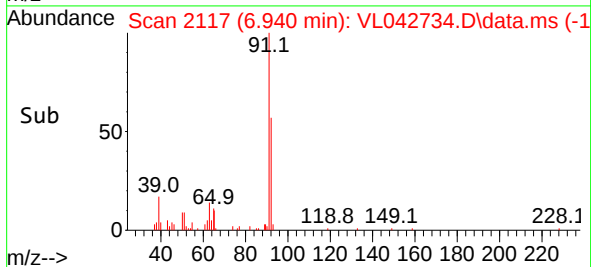
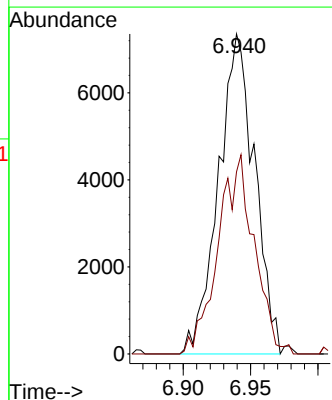
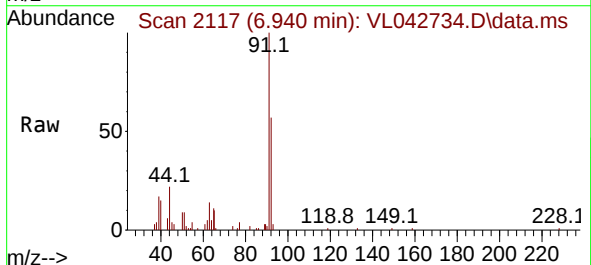
Instrument :
MSVOA_L
ClientSampleId :

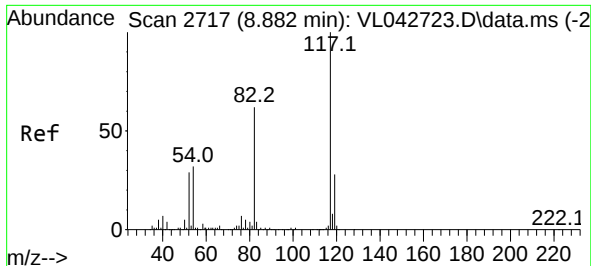
Tgt Ion: 43 Resp: 842
Ion Ratio Lower Upper
43 100
58 152.0 37.9 56.9#
98 0.0 0.2 0.2#



#53
Toluene
Concen: 0.409 ppbv
RT: 6.940 min Scan# 2117
Delta R.T. 0.006 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 91 Resp: 13751
Ion Ratio Lower Upper
91 100
92 62.1 48.2 72.4

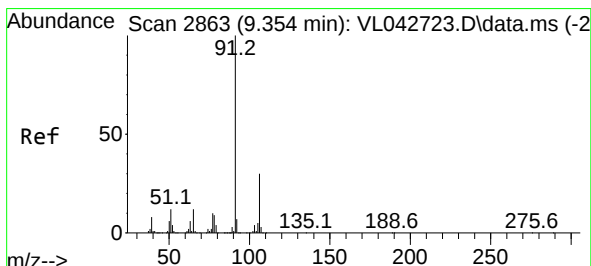
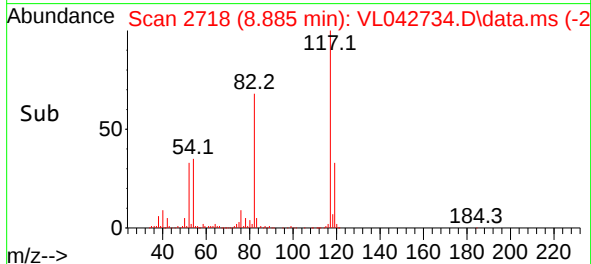
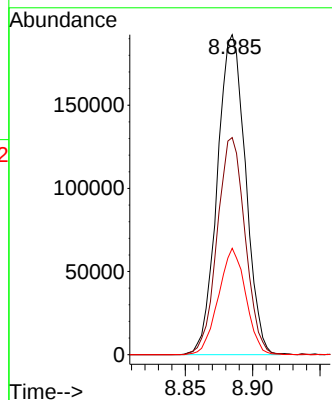
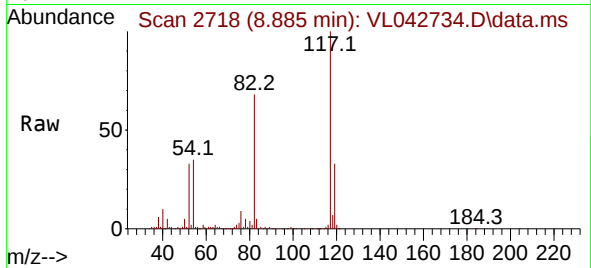




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 21
Delta R.T. 0.003 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

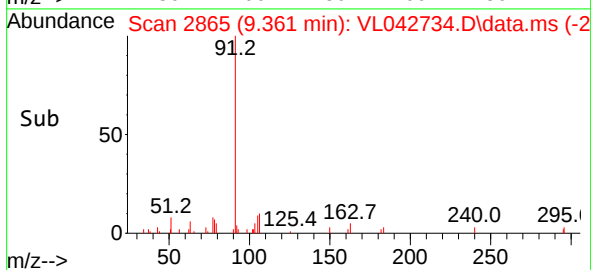
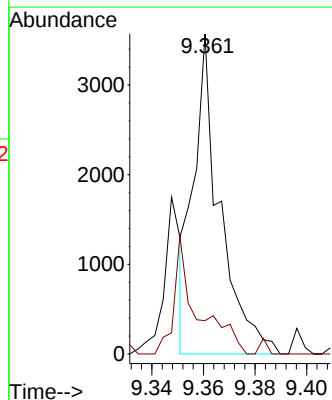
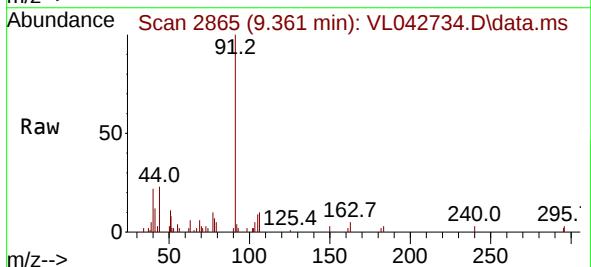
Instrument :
MSVOA_L
ClientSampleId :

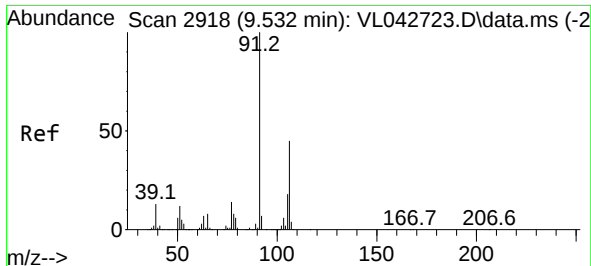
Tgt Ion:117 Resp: 280986
Ion Ratio Lower Upper
117 100
82 67.0 54.6 81.8
119 32.2 25.3 37.9



#58
Ethyl Benzene
Concen: 0.054 ppbv
RT: 9.361 min Scan# 2865
Delta R.T. 0.007 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 91 Resp: 2530
Ion Ratio Lower Upper
91 100
106 10.4 23.7 35.5#





#59

m/p-Xylene

Concen: 0.247 ppbv

RT: 9.535 min Scan# 2918

Delta R.T. 0.003 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Instrument :

MSVOA_L

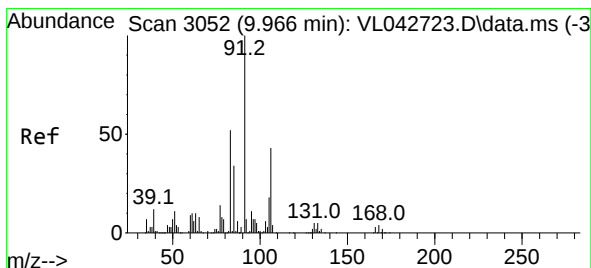
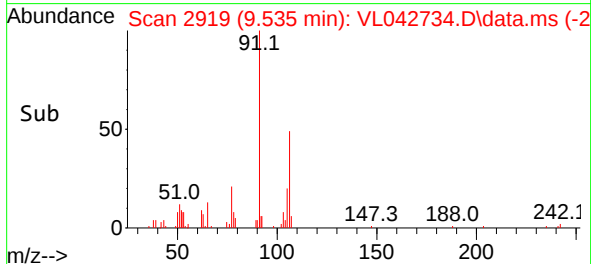
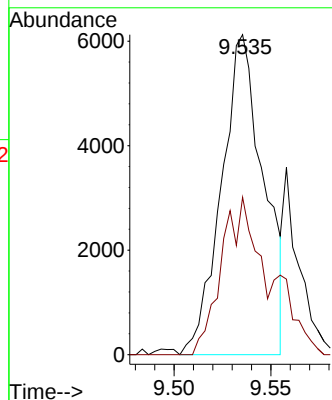
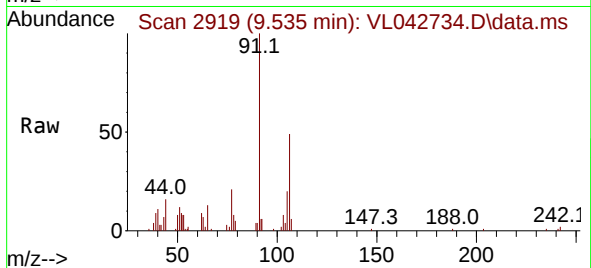
ClientSampleId :

Tgt Ion: 91 Resp: 9274

Ion Ratio Lower Upper

91 100

106 56.0 37.3 55.9#



#60

o-Xylene

Concen: 0.145 ppbv

RT: 9.966 min Scan# 3052

Delta R.T. 0.000 min

Lab File: VL042734.D

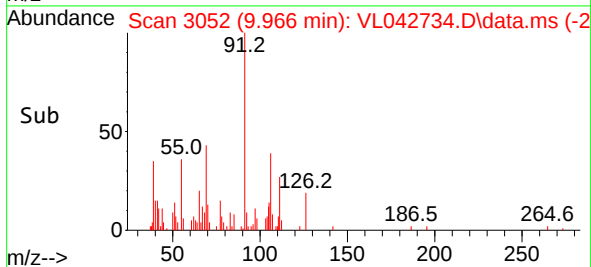
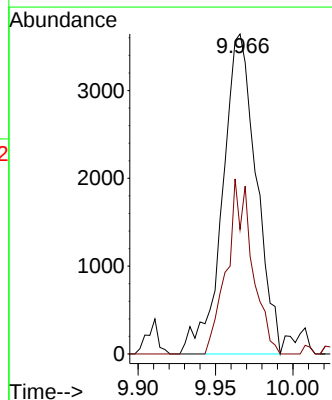
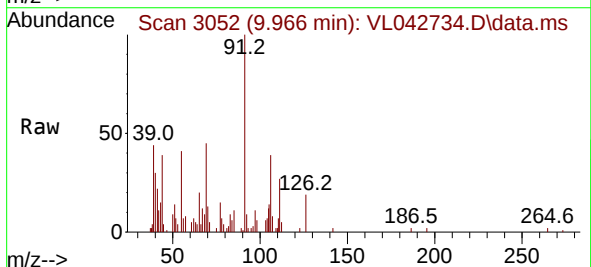
Acq: 22 Jul 2025 17:07

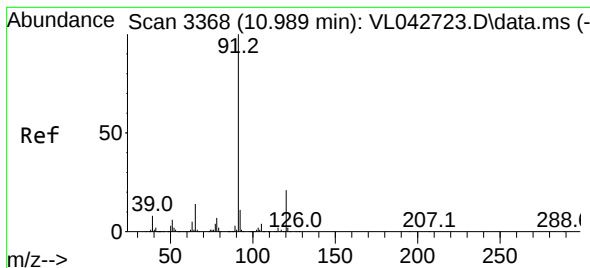
Tgt Ion: 91 Resp: 5507

Ion Ratio Lower Upper

91 100

106 41.4 21.4 64.3

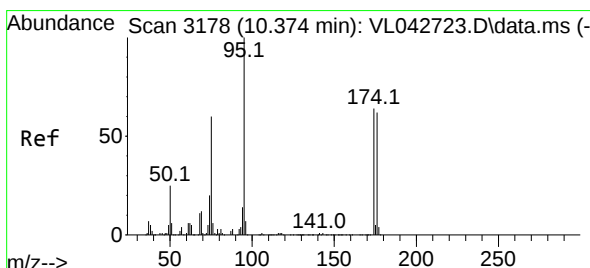
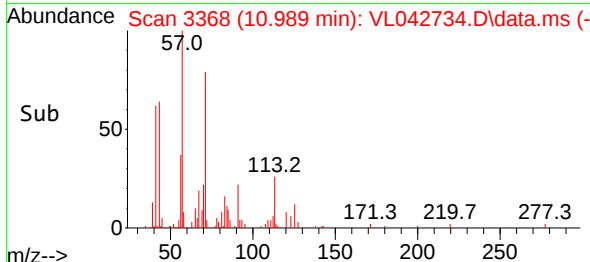
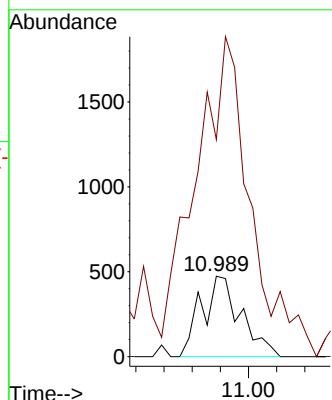
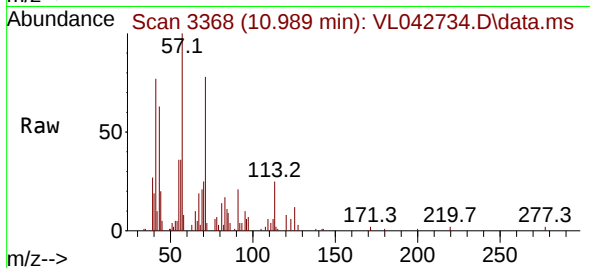




#64
n-propylbenzene
Concen: 0.032 ppbv
RT: 10.989 min Scan# 3179
Delta R.T. 0.000 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

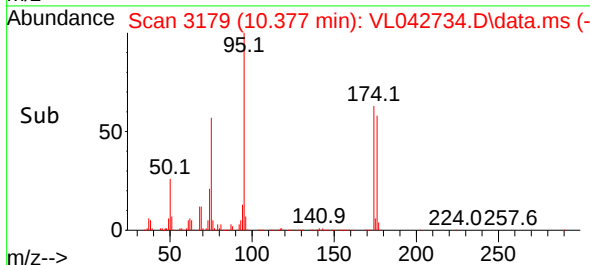
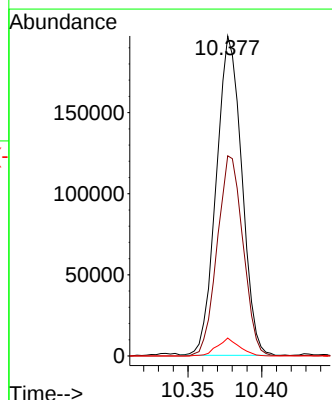
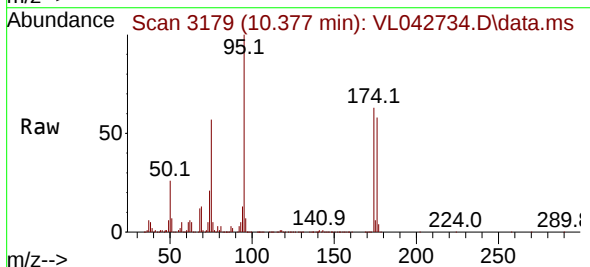
Instrument :
MSVOA_L
ClientSampleId :

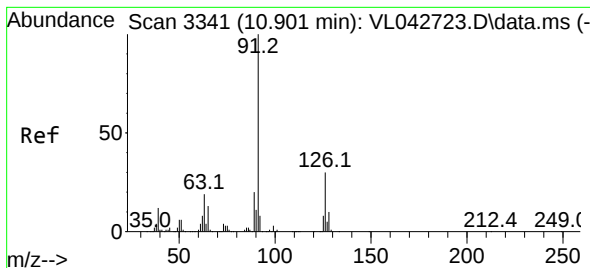
Tgt Ion:120 Resp: 459
Ion Ratio Lower Upper
120 100
91 646.8 377.4 566.0#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.440 ppbv
RT: 10.377 min Scan# 3179
Delta R.T. 0.003 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion: 95 Resp: 237082
Ion Ratio Lower Upper
95 100
174 63.3 51.4 77.2
175 4.9 4.2 6.4





#71

2-Chlorotoluene

Concen: 0.054 ppbv

RT: 10.992 min Scan# 31

Delta R.T. 0.091 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Instrument :

MSVOA_L

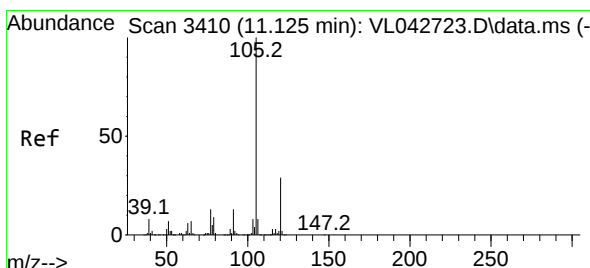
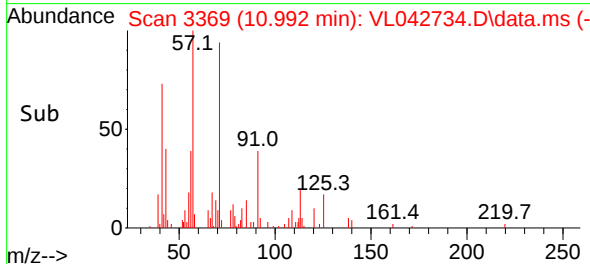
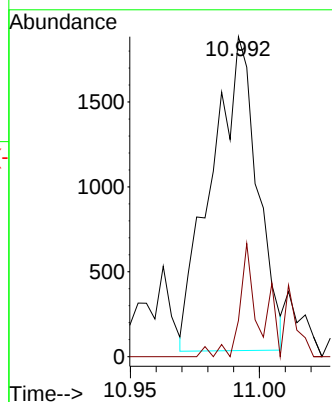
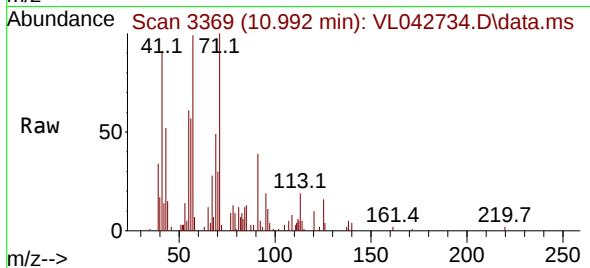
ClientSampleId :

Tgt Ion: 91 Resp: 2288

Ion Ratio Lower Upper

91 100

126 20.9 11.6 46.4



#72

4-Ethyltoluene

Concen: 0.043 ppbv

RT: 11.131 min Scan# 3412

Delta R.T. 0.007 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Tgt Ion: 105 Resp: 1960

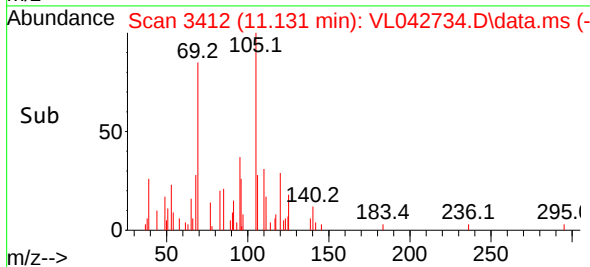
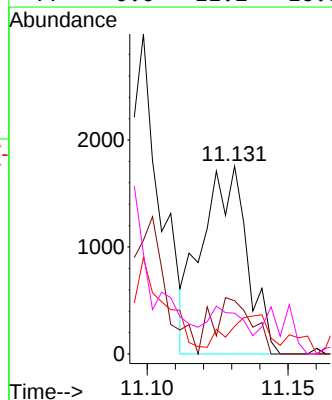
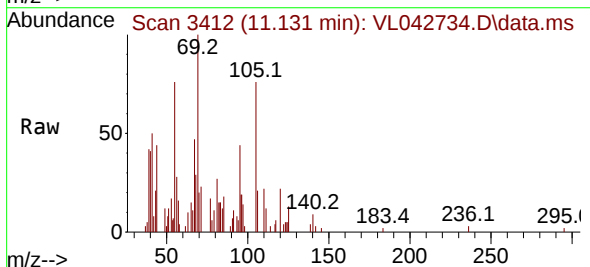
Ion Ratio Lower Upper

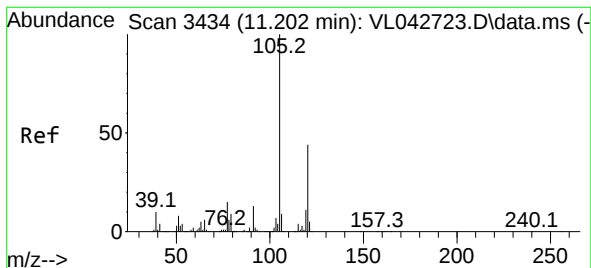
105 100

120 0.0 23.4 35.0#

91 18.6 10.6 15.8#

77 0.0 11.2 16.8#





#73

1,3,5-Trimethylbenzene

Concen: 0.062 ppbv

RT: 11.202 min Scan# 3434

Delta R.T. 0.000 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Instrument :

MSVOA_L

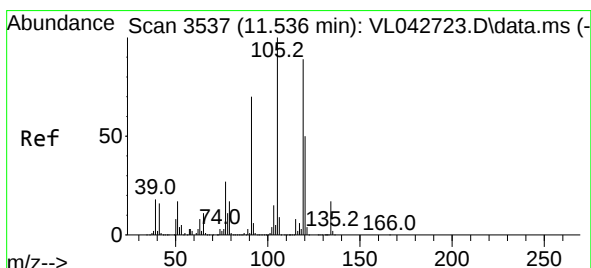
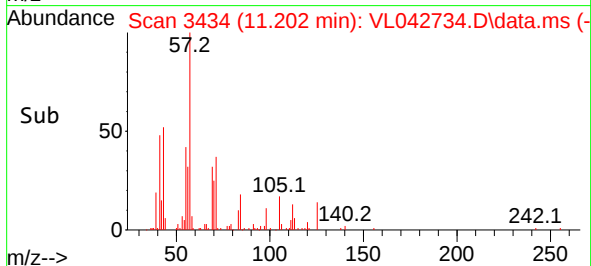
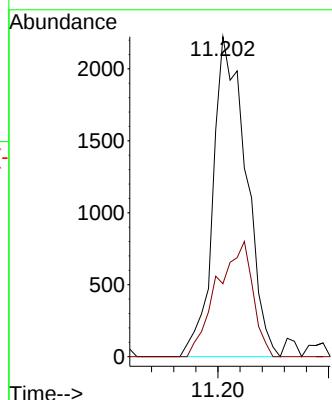
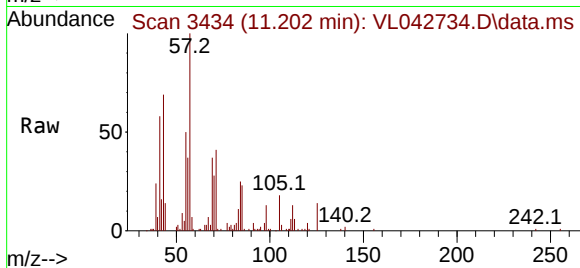
ClientSampleId :

Tgt Ion:105 Resp: 2303

Ion Ratio Lower Upper

105 100

120 29.2 35.2 52.8#



#74

1,2,4-Trimethylbenzene

Concen: 0.114 ppbv

RT: 11.539 min Scan# 3538

Delta R.T. 0.003 min

Lab File: VL042734.D

Acq: 22 Jul 2025 17:07

Tgt Ion:105 Resp: 4662

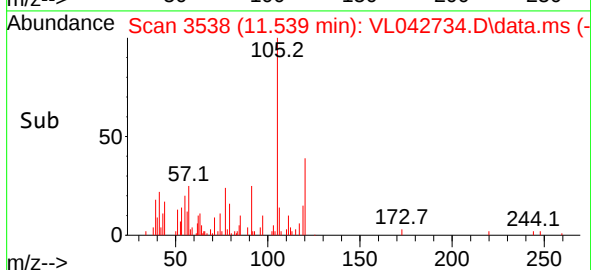
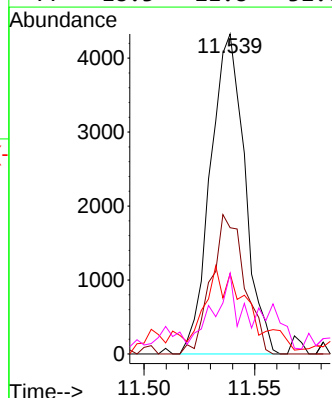
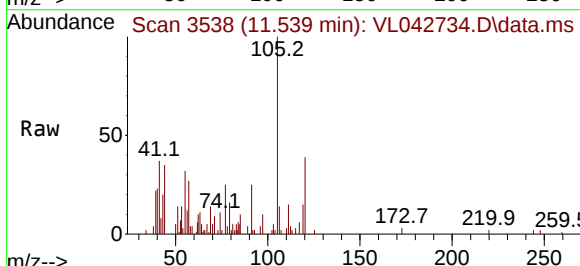
Ion Ratio Lower Upper

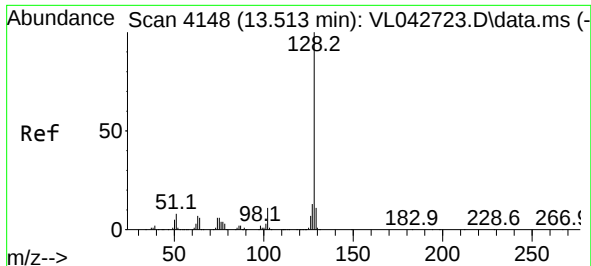
105 100

120 39.5 39.9 59.9#

91 21.1 56.5 84.7#

77 18.3 21.8 32.6#

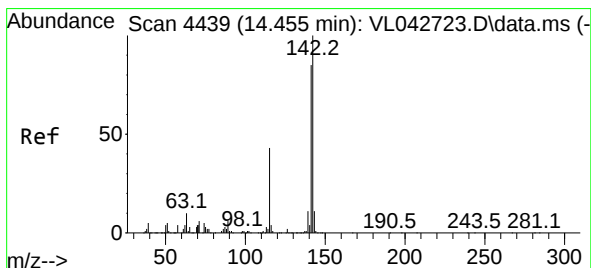
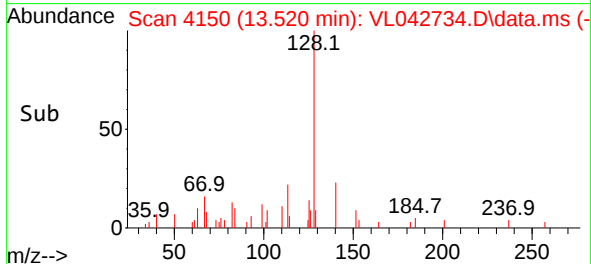
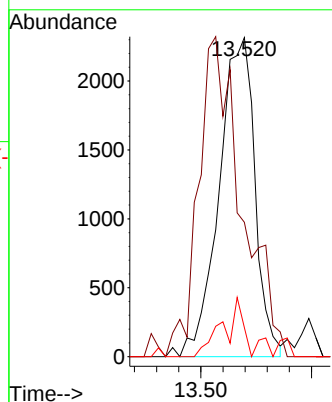
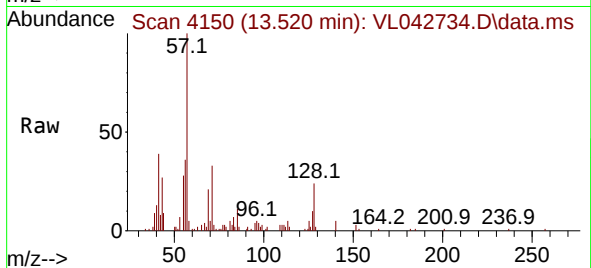




#79
Naphthalene
Concen: 0.085 ppbv
RT: 13.520 min Scan# 4148
Delta R.T. 0.007 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Instrument :
MSVOA_L
ClientSampleId :

Tgt Ion:128 Resp: 2598
Ion Ratio Lower Upper
128 100
127 34.3 10.3 15.5#
129 9.1 8.6 13.0



#80
Naphthalene,2-methyl-
Concen: 0.137 ppbv
RT: 14.465 min Scan# 4442
Delta R.T. 0.010 min
Lab File: VL042734.D
Acq: 22 Jul 2025 17:07

Tgt Ion:142 Resp: 1385
Ion Ratio Lower Upper
142 100
141 77.7 65.6 98.4
115 29.6 31.7 47.5#

