

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL051123\
 Data File : VL040407.D
 Acq On : 11 May 2023 19:23
 Operator : SY/MD
 Sample : 02748-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

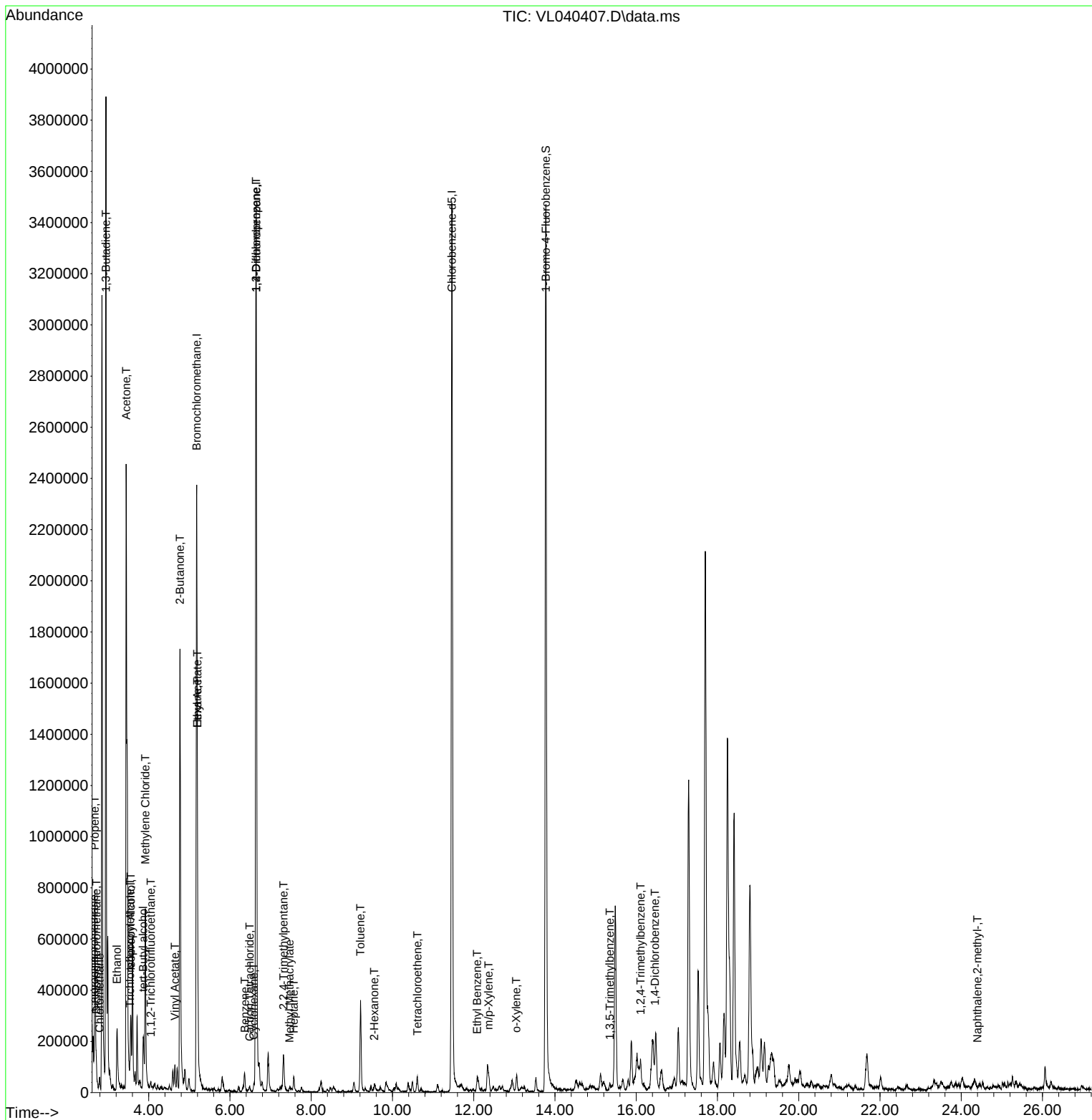
Instrument :
 MSVOA_L
 ClientSampleId :

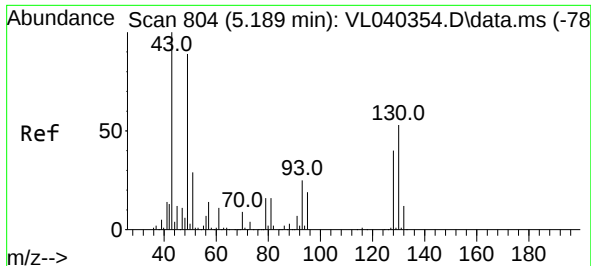
Quant Time: May 12 05:56:26 2023
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041323AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Apr 13 14:37:02 2023
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.179	49	1019743	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	6.645	114	2533663	10.000	ppbv	0.00
55) Chlorobenzene-d5	11.462	117	2167195	10.000	ppbv	-0.01
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.774	95	1701266	9.493	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	94.900%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.713	85	49157	0.267	ppbv	89
3) Chlorodifluoromethane	2.655	51	156254	1.173	ppbv #	82
4) Chloromethane	2.793	50	35078	0.417	ppbv	96
9) Propene	2.674	41	285221	5.418	ppbv	94
10) Heptane	7.568	43	9484	0.079	ppbv #	25
11) Trichlorofluoromethane	3.542	101	42954	0.231	ppbv	93
12) 1,1,2-Trichlorotrifluo...	4.050	101	6453	0.050	ppbv #	66
13) Ethanol	3.221	45	287320	65.379	ppbv	99
15) Acetone	3.446	43	2503689	17.335	ppbv #	62
16) 1,3-Butadiene	2.948	39	1000159	16.733	ppbv #	12
17) tert-Butyl alcohol	3.867	59	175622	1.324	ppbv	96
19) Isopropyl Alcohol	3.559	45	241631	3.666	ppbv #	90
20) Methylene Chloride	3.919	84	228592	3.964	ppbv	97
23) Vinyl Acetate	4.645	43	40207	1.093	ppbv #	44
25) Ethyl Acetate	5.198	43	175300	0.721	ppbv #	85
26) Hexane	5.198	57	208017	2.030	ppbv #	43
30) Cyclohexane	6.584	84	2538	0.032	ppbv #	1
34) 2-Butanone	4.771	43	1979730	14.491	ppbv	100
35) Carbon Tetrachloride	6.484	117	5959	0.033	ppbv #	83
36) Benzene	6.369	78	15815	0.077	ppbv	95
39) 1,2-Dichloropropane	6.642	63	646263	7.945	ppbv #	24
43) Methyl Methacrylate	7.465	69	2532	0.033	ppbv #	1
44) 2,2,4-Trimethylpentane	7.317	57	59130	0.171	ppbv #	29
51) 2-Hexanone	9.555	43	8660	0.057	ppbv #	30
52) Tetrachloroethene	10.619	164	3814	0.059	ppbv	84
53) Toluene	9.214	91	220409	1.006	ppbv	99
58) Ethyl Benzene	12.082	91	16708	0.063	ppbv	96
59) m/p-Xylene	12.368	91	11327	0.046	ppbv #	32
60) o-Xylene	13.047	91	15003	0.064	ppbv #	32
73) 1,3,5-Trimethylbenzene	15.352	105	11798	0.049	ppbv	95
74) 1,2,4-Trimethylbenzene	16.105	105	43644	0.159	ppbv #	61
76) 1,4-Dichlorobenzene	16.465	146	4522	0.030	ppbv #	23
80) Naphthalene,2-methyl-	24.400	142	2937	0.053	ppbv #	30

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

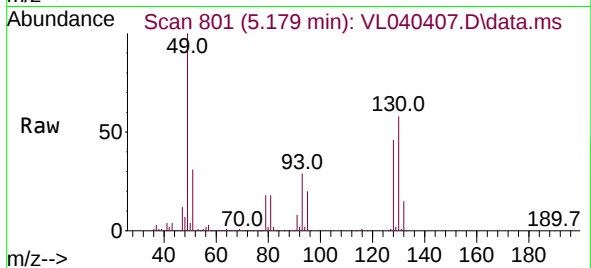
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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Thu Apr 13 14:37:02 2023
Response via : Initial Calibration



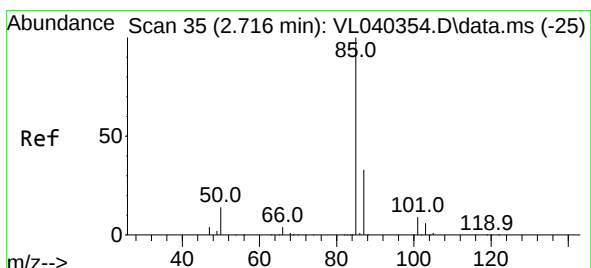
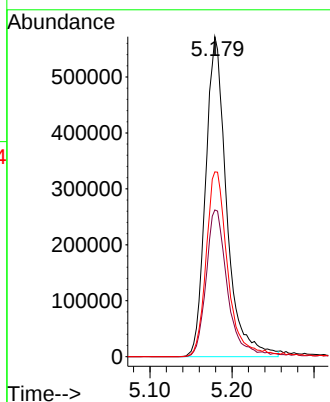
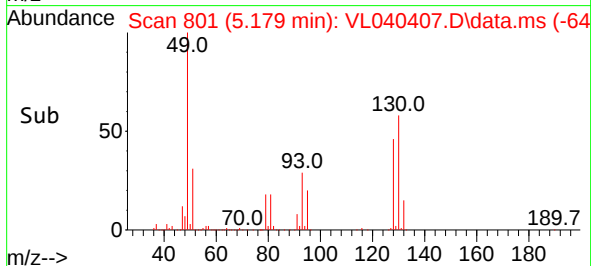


#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.179 min Scan# 80
 Delta R.T. -0.010 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23

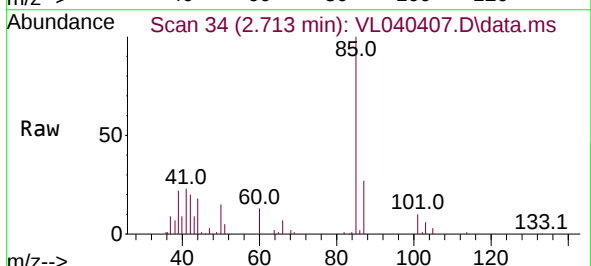
Instrument :
 MSVOA_L
 ClientSampleId :



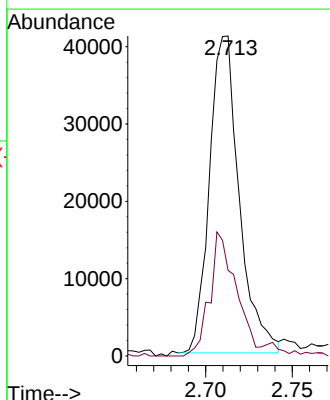
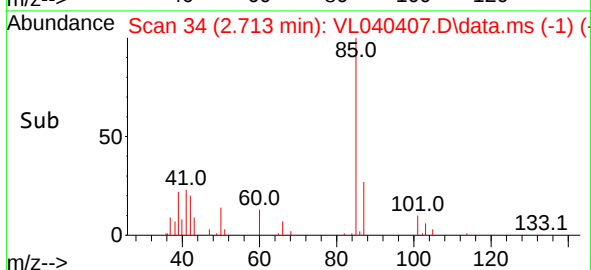
Tgt Ion: 49 Resp: 1019743
 Ion Ratio Lower Upper
 49 100
 128 47.3 23.7 71.1
 130 60.7 29.9 89.8

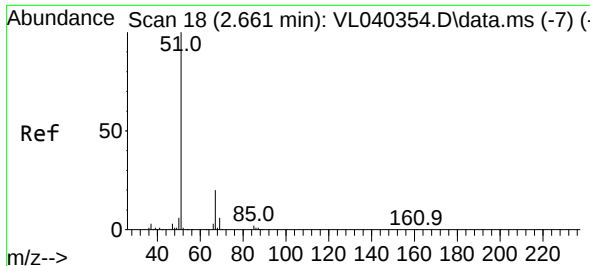


#2
 Dichlorodifluoromethane
 Concen: 0.267 ppbv
 RT: 2.713 min Scan# 34
 Delta R.T. -0.003 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23



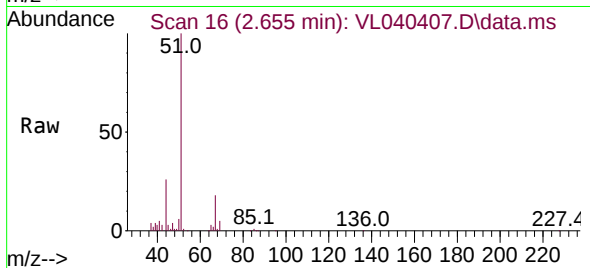
Tgt Ion: 85 Resp: 49157
 Ion Ratio Lower Upper
 85 100
 87 26.9 26.6 40.0



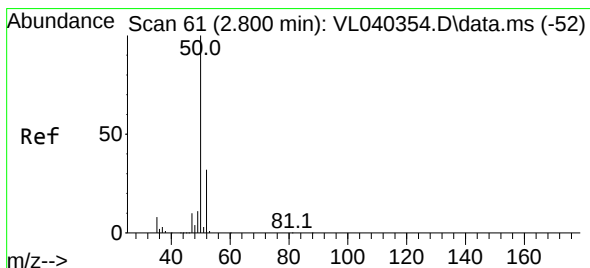
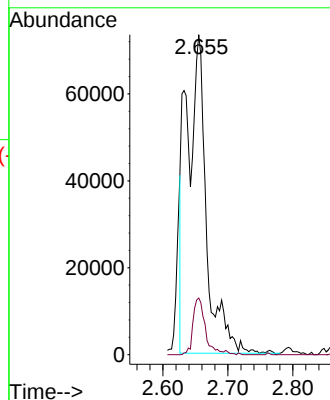
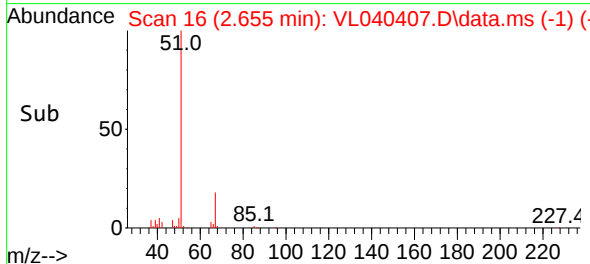


#3
Chlorodifluoromethane
Concen: 1.173 ppbv
RT: 2.655 min Scan# 11
Delta R.T. -0.006 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Instrument :
MSVOA_L
ClientSampleId :

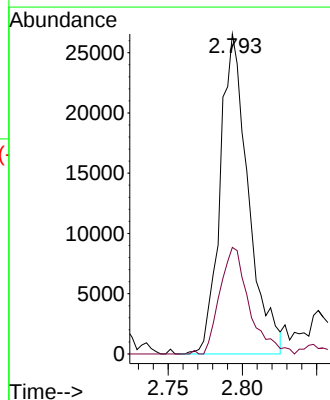
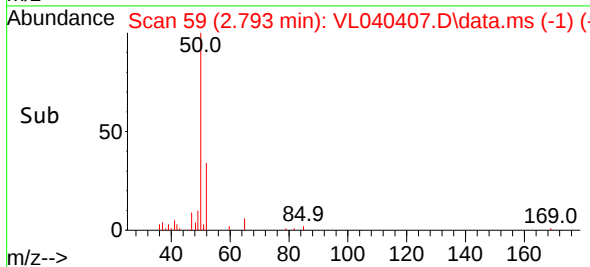
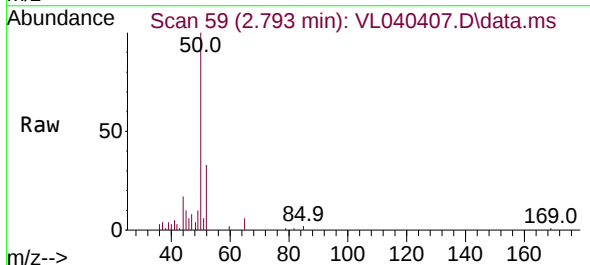


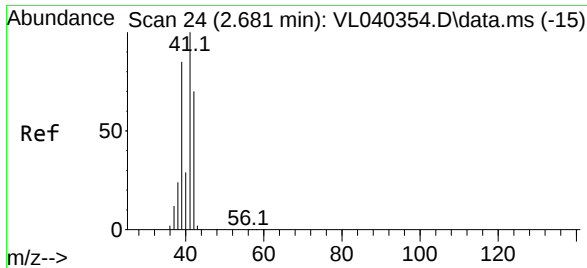
Tgt Ion: 51 Resp: 156254
Ion Ratio Lower Upper
51 100
67 11.2 15.5 23.3#



#4
Chloromethane
Concen: 0.417 ppbv
RT: 2.793 min Scan# 59
Delta R.T. -0.007 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Tgt Ion: 50 Resp: 35078
Ion Ratio Lower Upper
50 100
52 33.9 25.3 37.9





#9

Propene

Concen: 5.418 ppbv

RT: 2.674 min Scan# 21

Delta R.T. -0.007 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

Instrument :

MSVOA_L

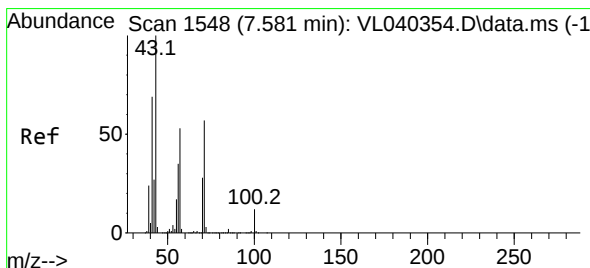
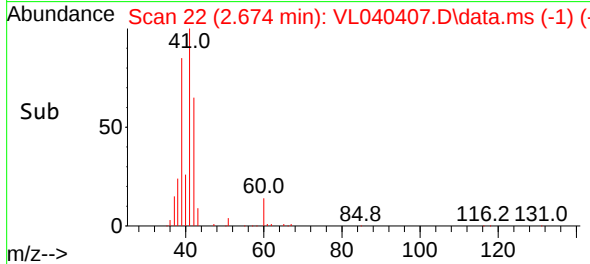
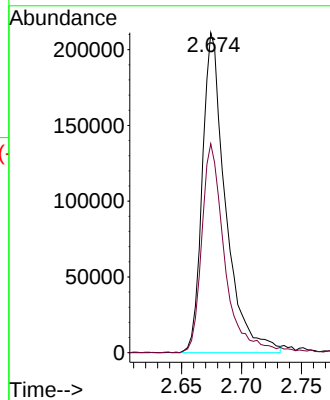
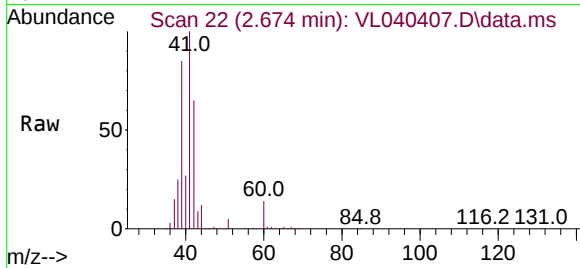
ClientSampleId :

Tgt Ion: 41 Resp: 285221

Ion Ratio Lower Upper

41 100

42 65.3 56.5 84.7



#10

Heptane

Concen: 0.079 ppbv

RT: 7.568 min Scan# 1544

Delta R.T. -0.013 min

Lab File: VL040407.D

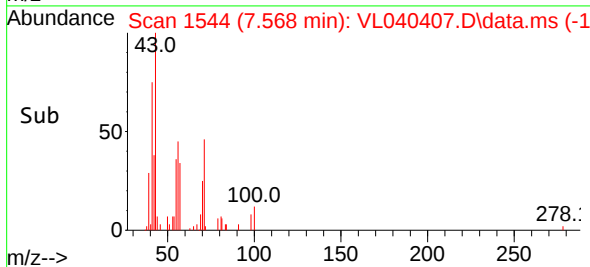
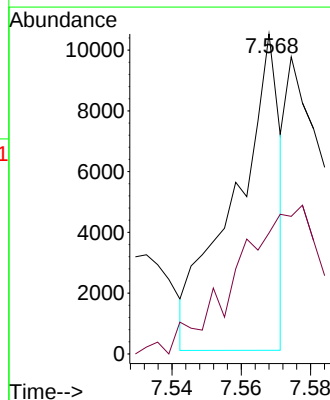
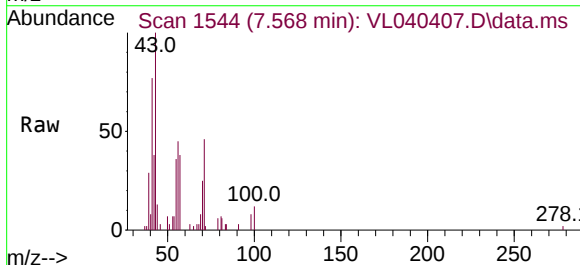
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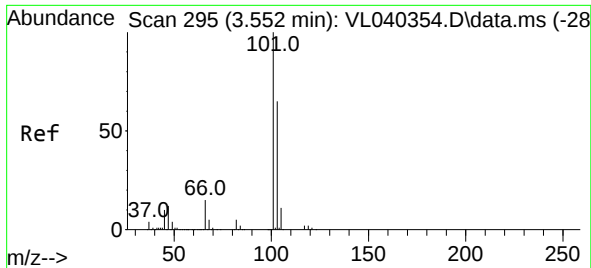
Tgt Ion: 43 Resp: 9484

Ion Ratio Lower Upper

43 100

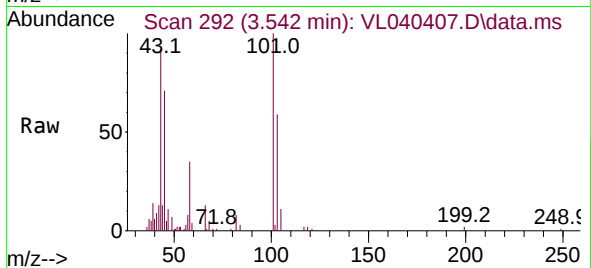
57 0.0 42.2 63.4#



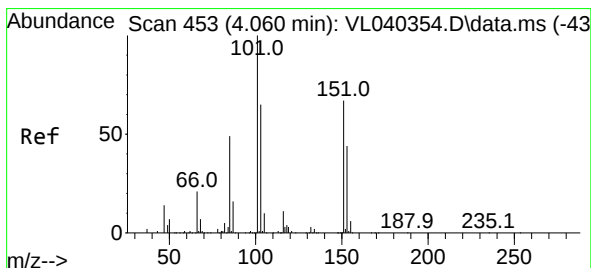
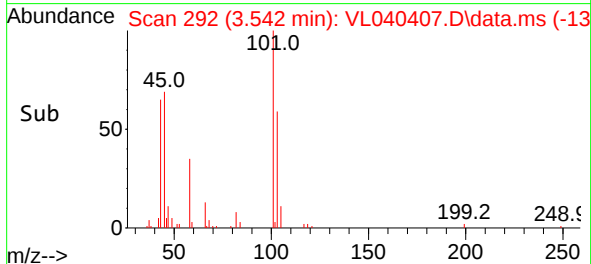
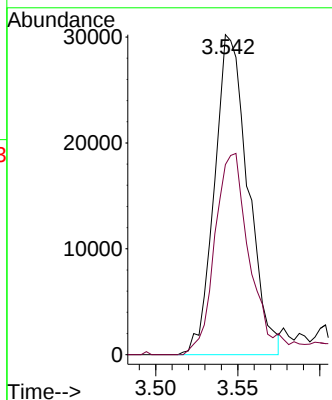


#11
 Trichlorofluoromethane
 Concen: 0.231 ppbv
 RT: 3.542 min Scan# 295
 Delta R.T. -0.010 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23

Instrument :
 MSVOA_L
 ClientSampleId :

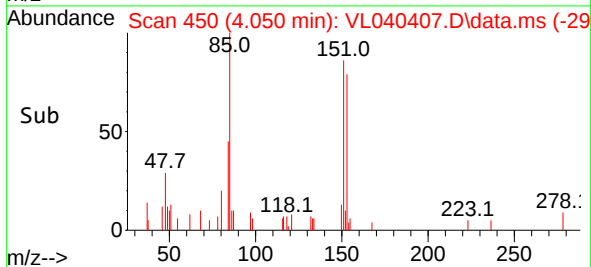
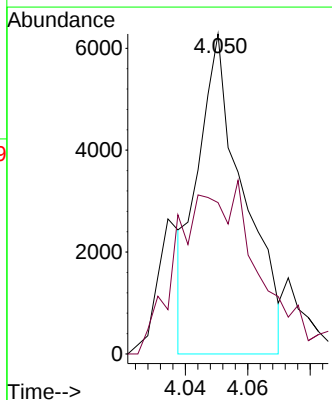
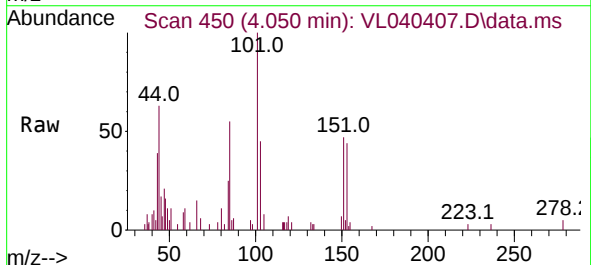


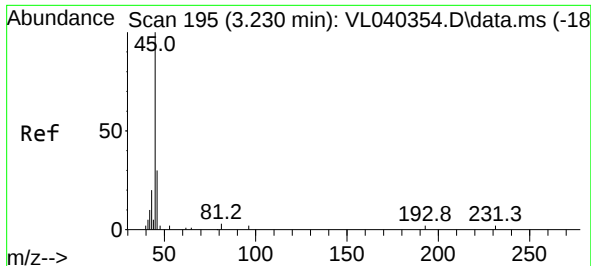
Tgt Ion:101 Resp: 42954
 Ion Ratio Lower Upper
 101 100
 103 59.4 52.2 78.4



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.050 ppbv
 RT: 4.050 min Scan# 450
 Delta R.T. -0.010 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23

Tgt Ion:101 Resp: 6453
 Ion Ratio Lower Upper
 101 100
 151 96.2 54.7 82.1#

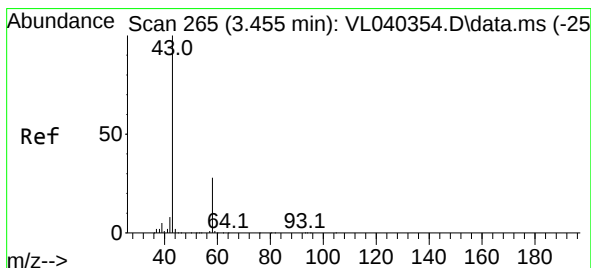
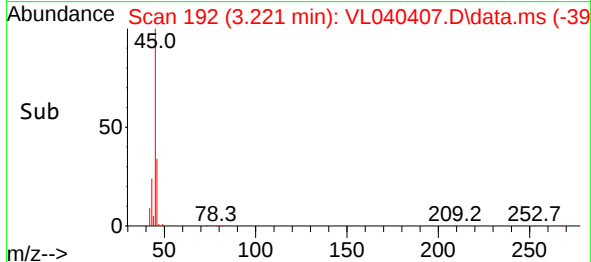
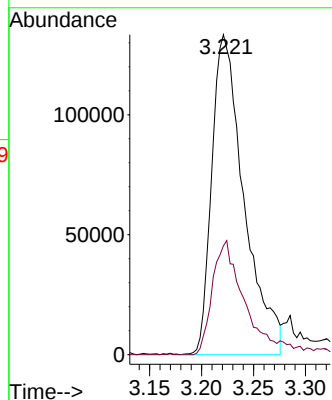
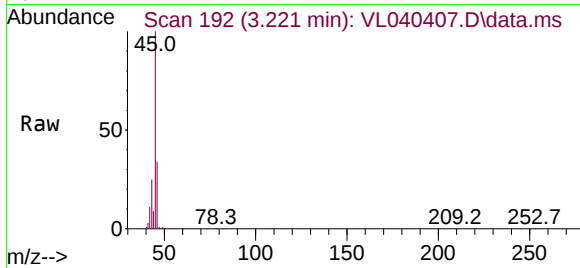




#13
 Ethanol
 Concen: 65.379 ppbv
 RT: 3.221 min Scan# 19
 Delta R.T. -0.009 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23

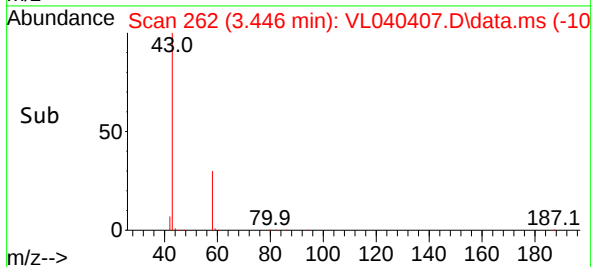
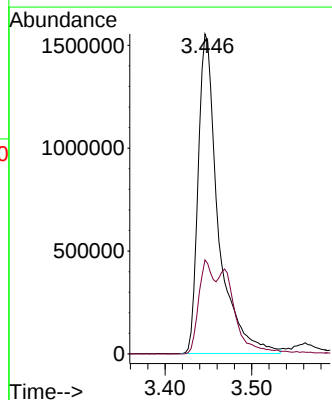
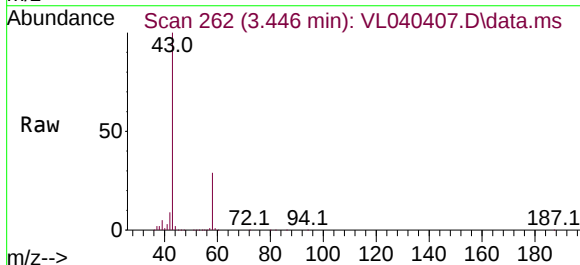
Instrument :
 MSVOA_L
 ClientSampleId :

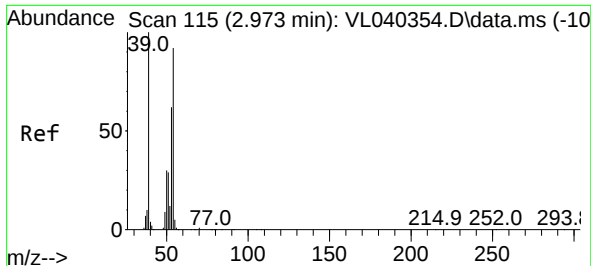
Tgt Ion: 45 Resp: 287320
 Ion Ratio Lower Upper
 45 100
 46 37.8 15.3 61.3



#15
 Acetone
 Concen: 17.335 ppbv
 RT: 3.446 min Scan# 262
 Delta R.T. -0.009 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23

Tgt Ion: 43 Resp: 2503689
 Ion Ratio Lower Upper
 43 100
 58 47.7 22.2 33.2#





#16

1,3-Butadiene

Concen: 16.733 ppbv

RT: 2.948 min Scan# 107

Delta R.T. -0.025 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

Instrument :

MSVOA_L

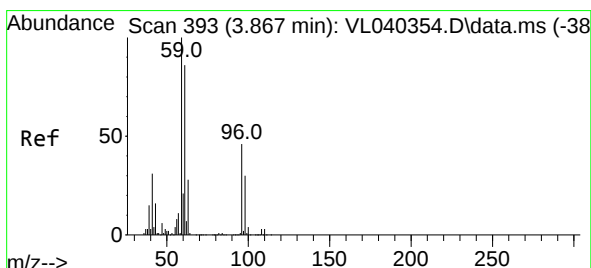
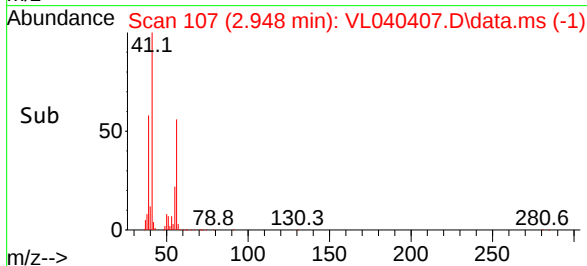
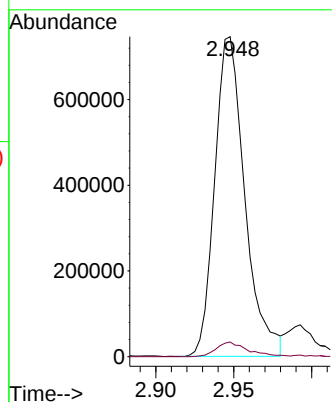
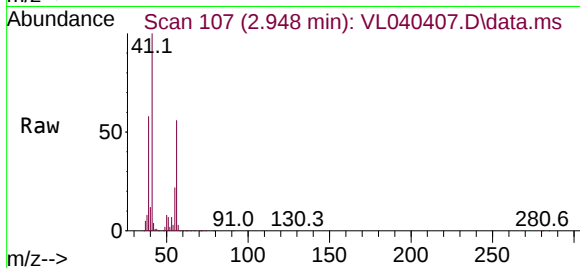
ClientSampleId :

Tgt Ion: 39 Resp: 1000159

Ion Ratio Lower Upper

39 100

54 5.2 68.8 103.2#



#17

tert-Butyl alcohol

Concen: 1.324 ppbv

RT: 3.867 min Scan# 393

Delta R.T. 0.000 min

Lab File: VL040407.D

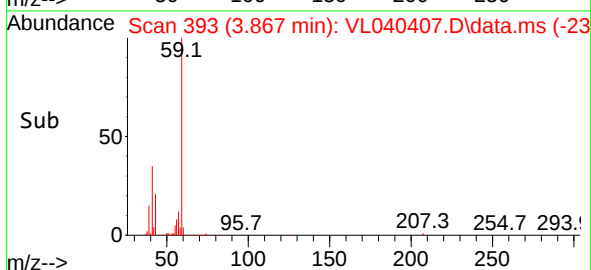
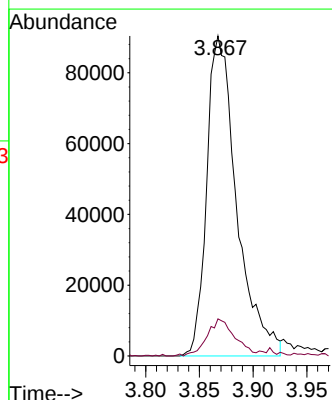
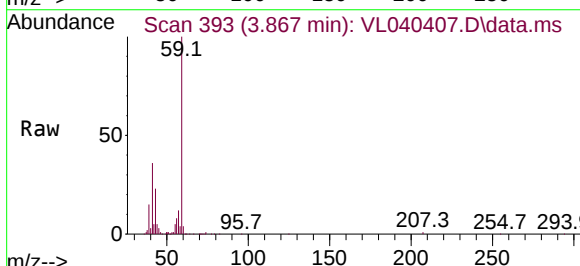
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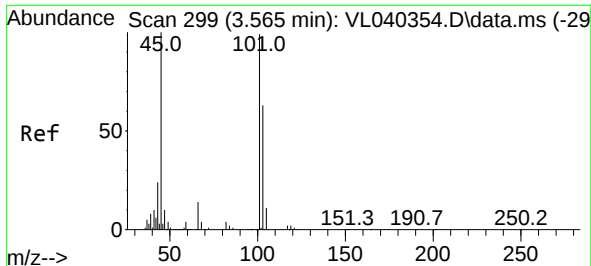
Tgt Ion: 59 Resp: 175622

Ion Ratio Lower Upper

59 100

57 12.3 8.5 12.7

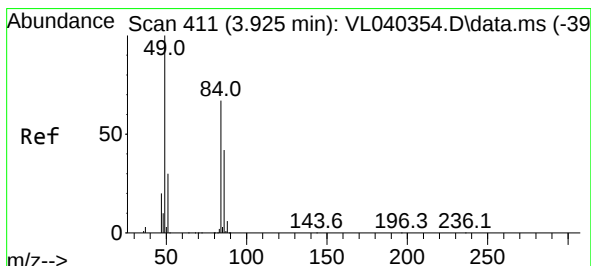
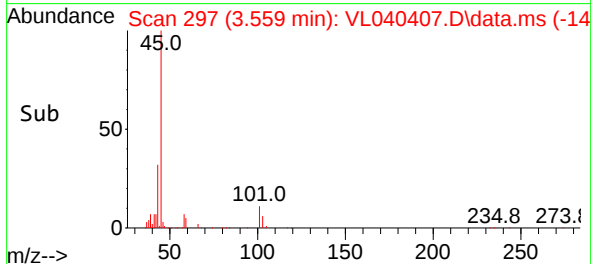
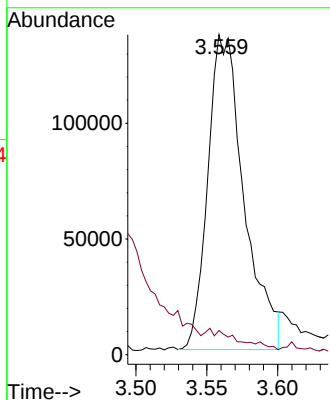
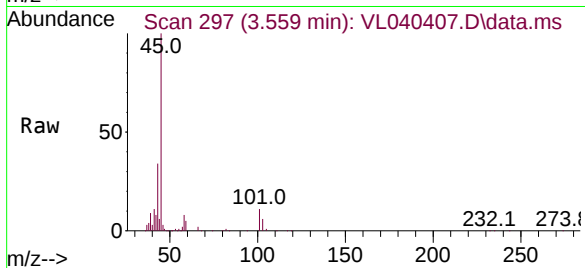




#19
Isopropyl Alcohol
Concen: 3.666 ppbv
RT: 3.559 min Scan# 241
Delta R.T. -0.006 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

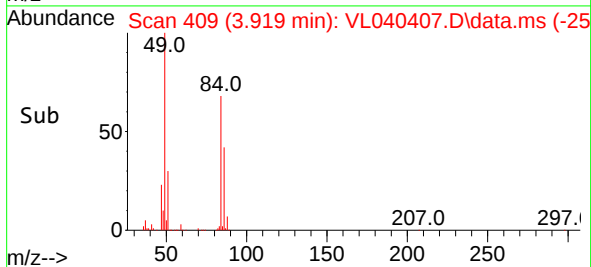
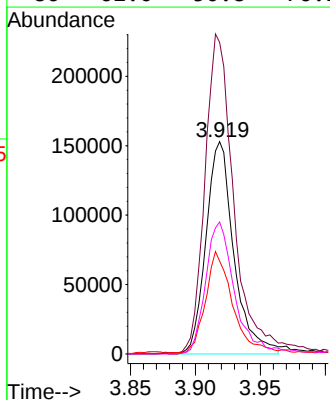
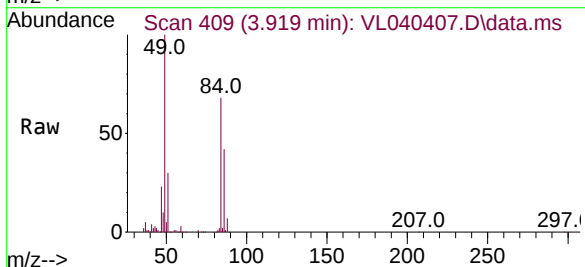
Instrument :
MSVOA_L
ClientSampleId :

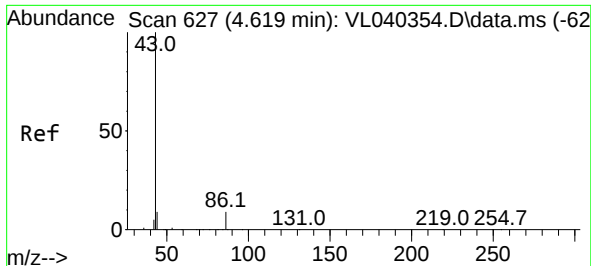
Tgt Ion: 45 Resp: 241631
Ion Ratio Lower Upper
45 100
58 0.0 2.6 4.0#



#20
Methylene Chloride
Concen: 3.964 ppbv
RT: 3.919 min Scan# 409
Delta R.T. -0.006 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Tgt Ion: 84 Resp: 228592
Ion Ratio Lower Upper
84 100
49 146.1 120.1 180.1
51 43.1 36.3 54.5
86 62.0 50.8 76.2

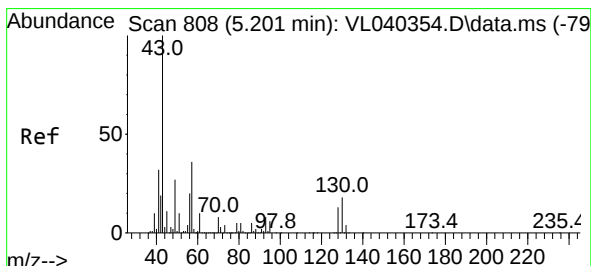
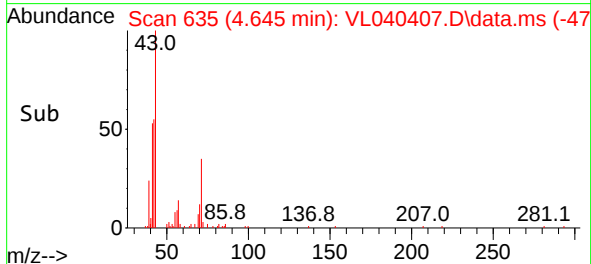
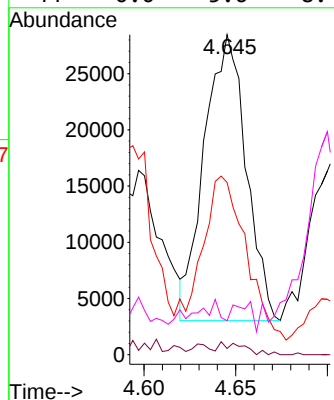
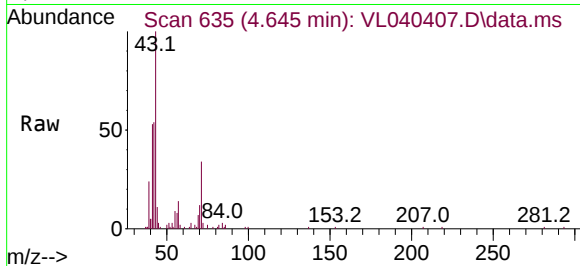




#23
 Vinyl Acetate
 Concen: 1.093 ppbv
 RT: 4.645 min Scan# 61
 Delta R.T. 0.026 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23

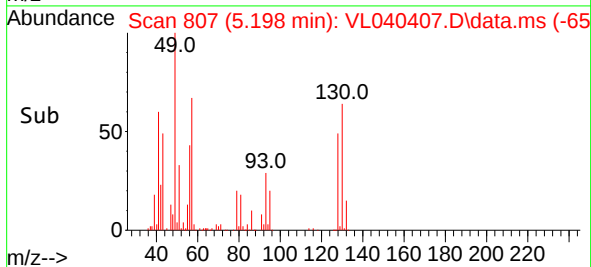
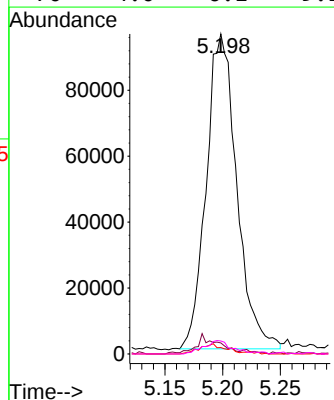
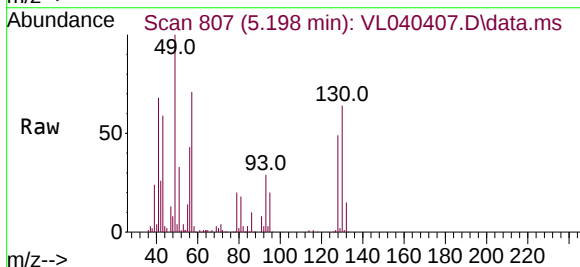
Instrument :
 MSVOA_L
 ClientSampleId :

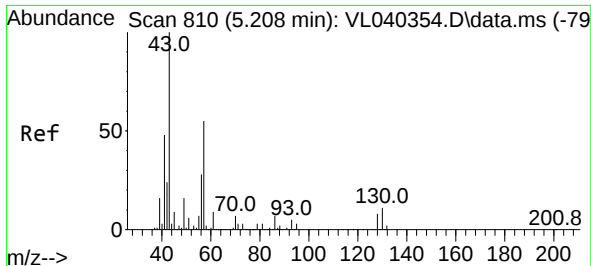
Tgt Ion: 43	Resp: 40207
Ion Ratio	Lower Upper
43 100	
86 2.2	6.0 9.0#
42 52.1	6.4 9.6#
44 0.0	5.6 8.4#



#25
 Ethyl Acetate
 Concen: 0.721 ppbv
 RT: 5.198 min Scan# 807
 Delta R.T. -0.003 min
 Lab File: VL040407.D
 Acq: 11 May 2023 19:23

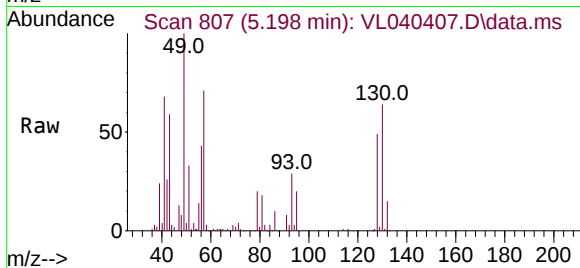
Tgt Ion: 43	Resp: 175300
Ion Ratio	Lower Upper
43 100	
45 5.4	8.5 12.7#
61 2.9	8.5 12.7#
70 4.0	6.1 9.1#



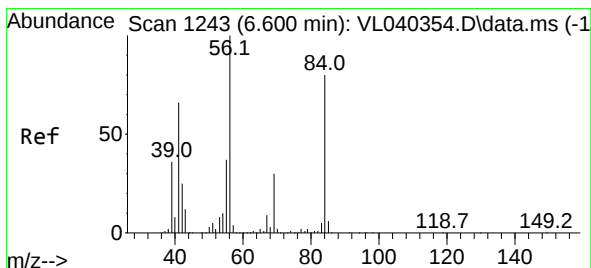
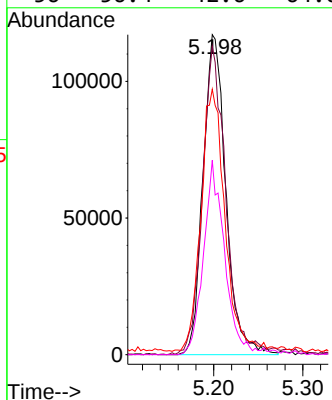
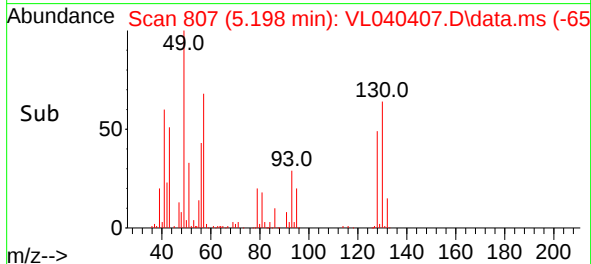


#26
Hexane
Concen: 2.030 ppbv
RT: 5.198 min Scan# 810
Delta R.T. -0.010 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Instrument :
MSVOA_L
ClientSampleId :

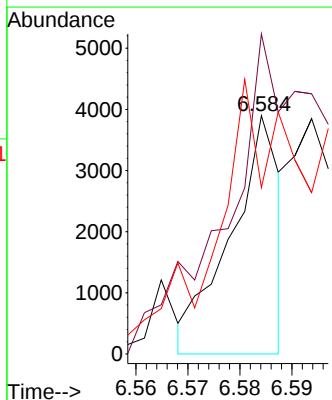
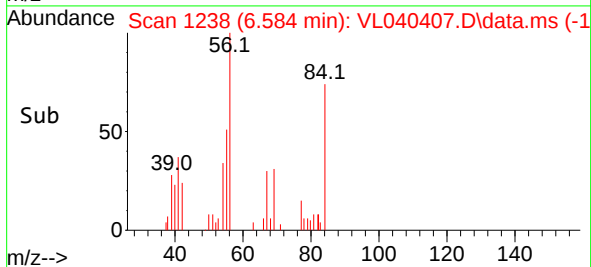
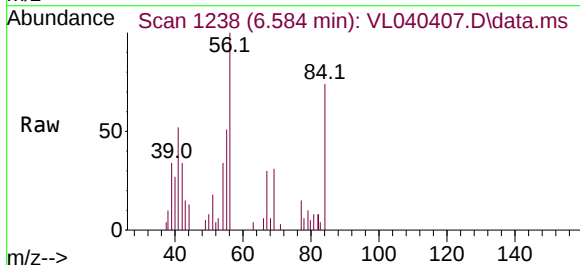


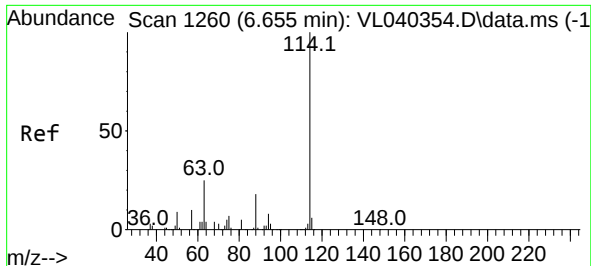
Tgt Ion: 57 Resp: 208017
Ion Ratio Lower Upper
57 100
41 101.1 74.8 112.2
43 92.3 192.7 289.1#
56 56.4 42.6 64.0



#30
Cyclohexane
Concen: 0.032 ppbv
RT: 6.584 min Scan# 1238
Delta R.T. -0.016 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Tgt Ion: 84 Resp: 2538
Ion Ratio Lower Upper
84 100
56 0.0 107.0 160.6#
41 298.3 66.7 100.1#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.645 min Scan# 11

Delta R.T. -0.010 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

Instrument :

MSVOA_L

ClientSampleId :

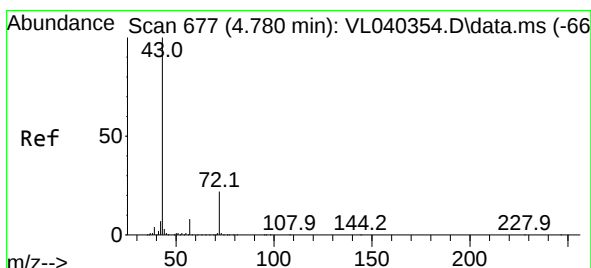
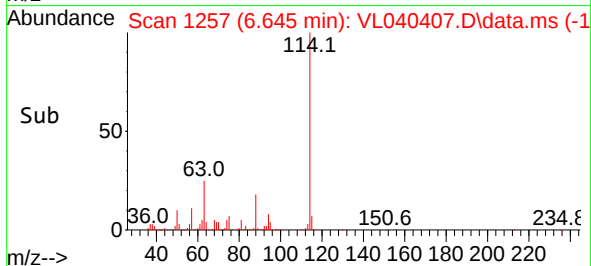
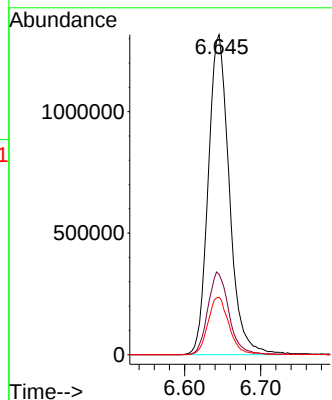
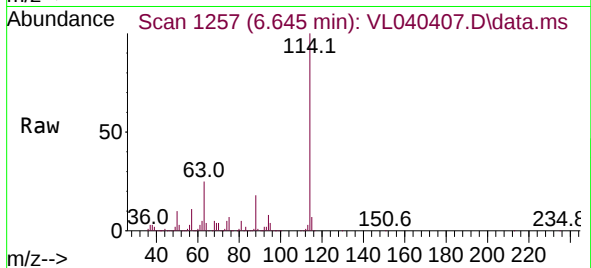
Tgt Ion:114 Resp: 2533663

Ion Ratio Lower Upper

114 100

63 26.1 21.4 32.0

88 18.1 14.6 22.0



#34

2-Butanone

Concen: 14.491 ppbv

RT: 4.771 min Scan# 674

Delta R.T. -0.009 min

Lab File: VL040407.D

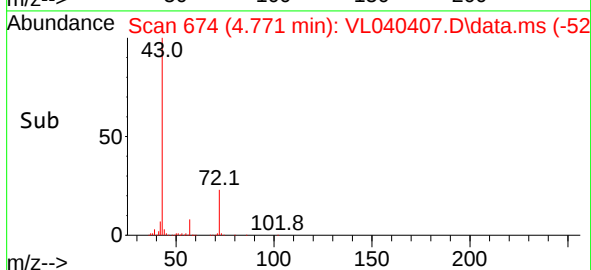
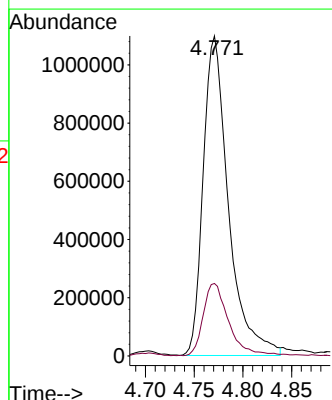
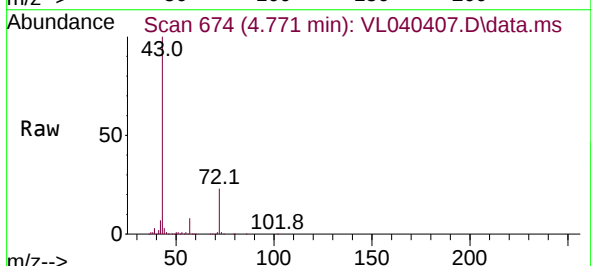
Acq: 11 May 2023 19:23

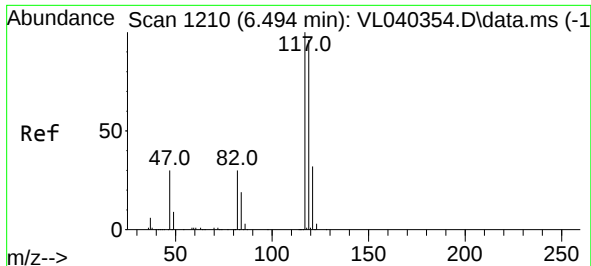
Tgt Ion: 43 Resp: 1979730

Ion Ratio Lower Upper

43 100

72 23.1 18.4 27.6

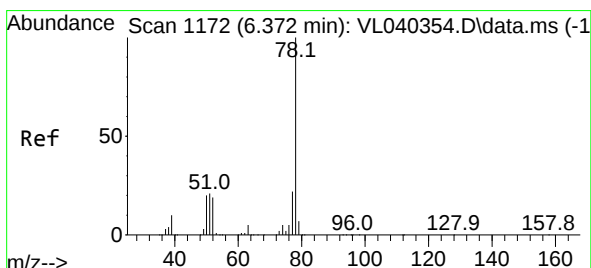
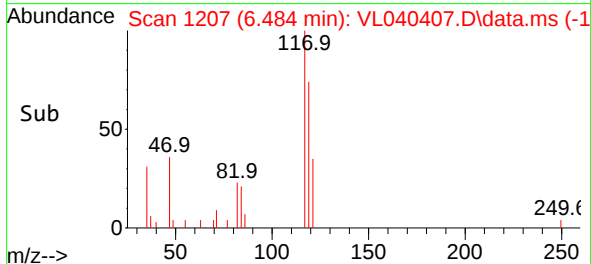
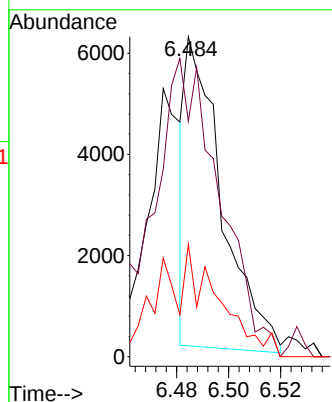
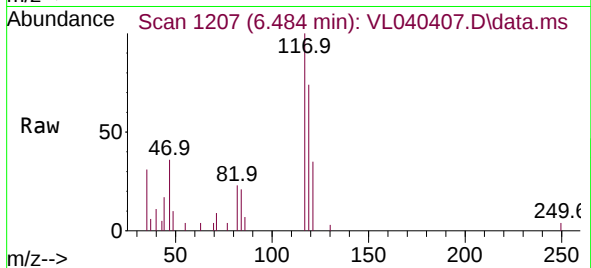




#35
Carbon Tetrachloride
Concen: 0.033 ppbv
RT: 6.484 min Scan# 1170
Delta R.T. -0.010 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

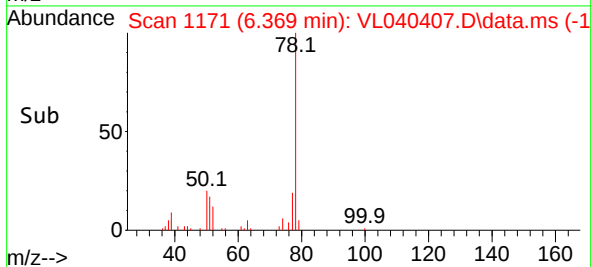
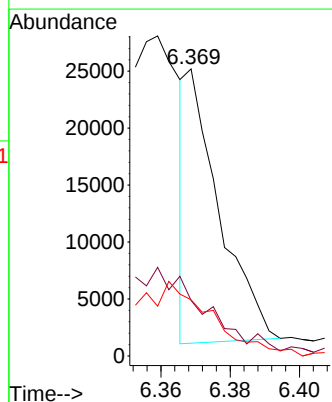
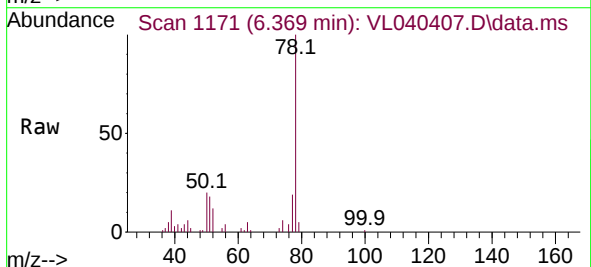
Instrument :
MSVOA_L
ClientSampleId :

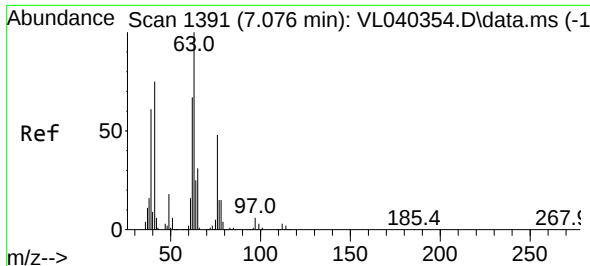
Tgt Ion:117 Resp: 5959
Ion Ratio Lower Upper
117 100
119 76.3 76.6 114.8#
121 36.4 25.3 37.9



#36
Benzene
Concen: 0.077 ppbv
RT: 6.369 min Scan# 1171
Delta R.T. -0.003 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Tgt Ion: 78 Resp: 15815
Ion Ratio Lower Upper
78 100
77 18.8 17.8 26.8
50 18.7 15.6 23.4





#39

1,2-Dichloropropane

Concen: 7.945 ppbv

RT: 6.642 min Scan# 11

Delta R.T. -0.434 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

Instrument :

MSVOA_L

ClientSampleId :

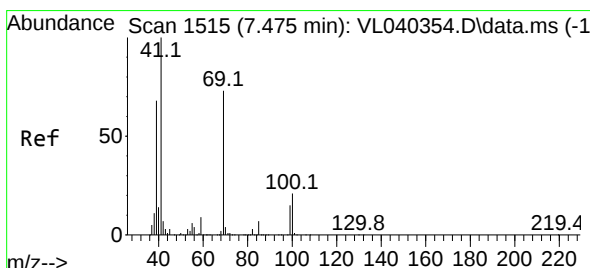
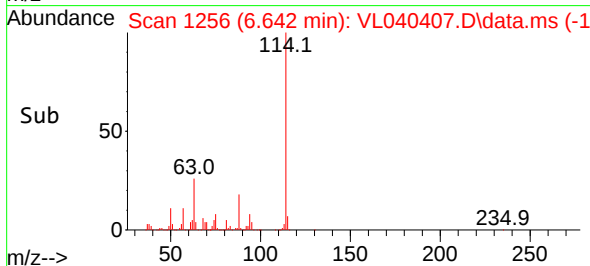
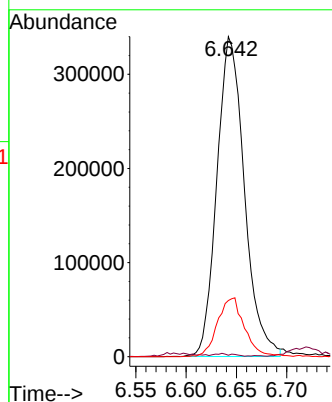
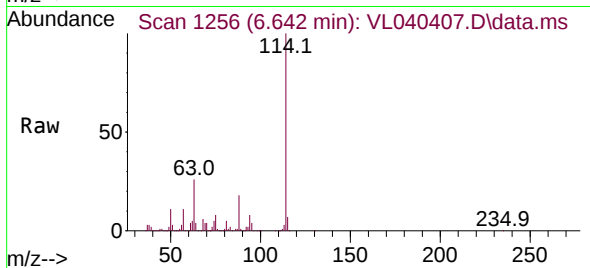
Tgt Ion: 63 Resp: 646263

Ion Ratio Lower Upper

63 100

41 0.0 59.6 89.4#

62 17.6 53.9 80.9#



#43

Methyl Methacrylate

Concen: 0.033 ppbv

RT: 7.465 min Scan# 1512

Delta R.T. -0.010 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

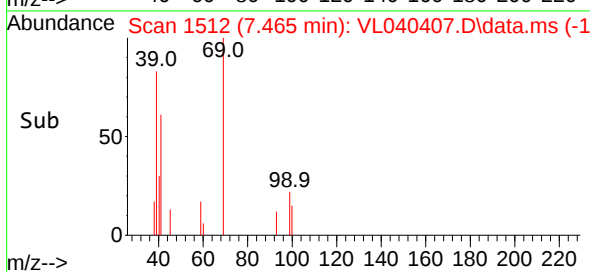
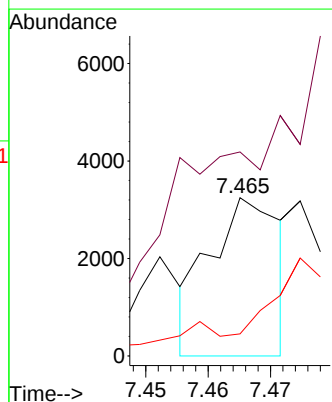
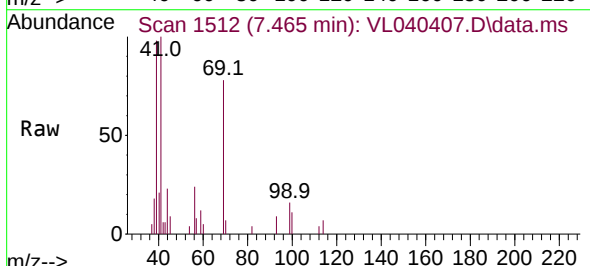
Tgt Ion: 69 Resp: 2532

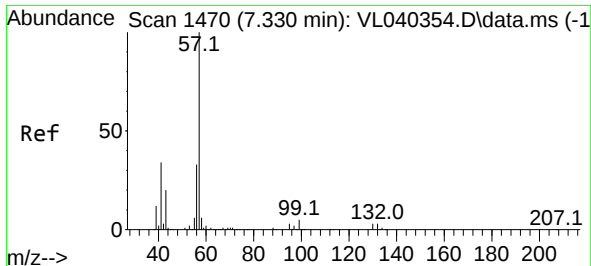
Ion Ratio Lower Upper

69 100

41 0.0 114.3 171.5#

100 0.0 24.5 36.7#

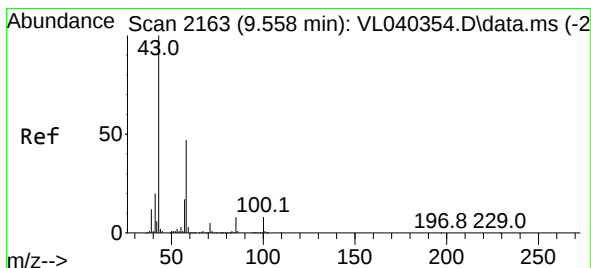
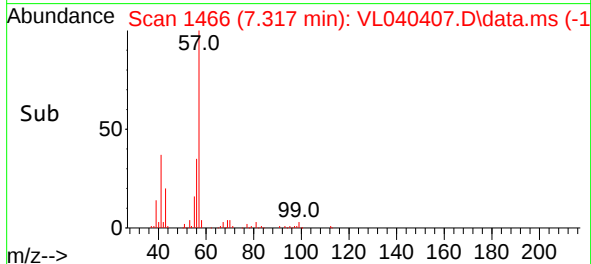
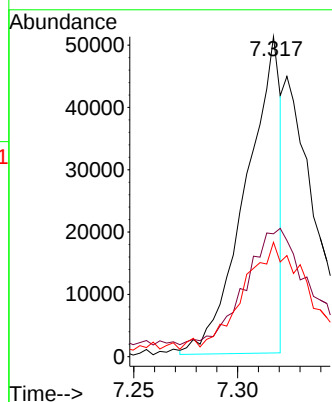
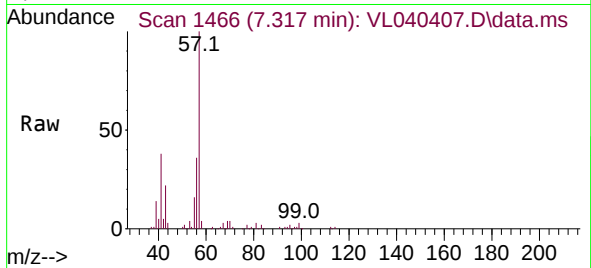




#44
2,2,4-Trimethylpentane
Concen: 0.171 ppbv
RT: 7.317 min Scan# 1470
Delta R.T. -0.013 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

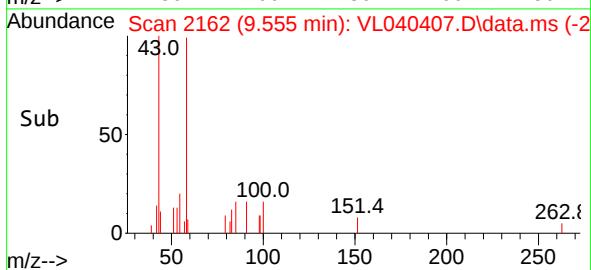
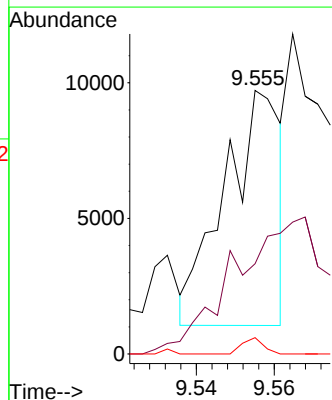
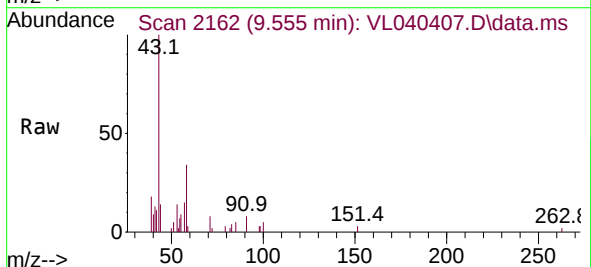
Instrument :
MSVOA_L
ClientSampleId :

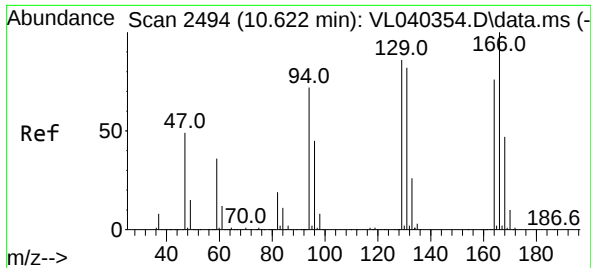
Tgt Ion: 57 Resp: 59130
Ion Ratio Lower Upper
57 100
41 0.0 26.9 40.3#
56 78.2 25.1 37.7#



#51
2-Hexanone
Concen: 0.057 ppbv
RT: 9.555 min Scan# 2162
Delta R.T. -0.003 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

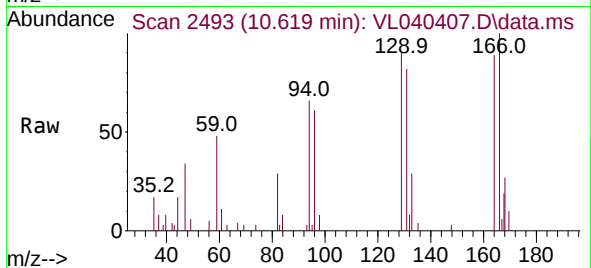
Tgt Ion: 43 Resp: 8660
Ion Ratio Lower Upper
43 100
58 0.0 38.3 57.5#
98 2.6 0.4 0.6#



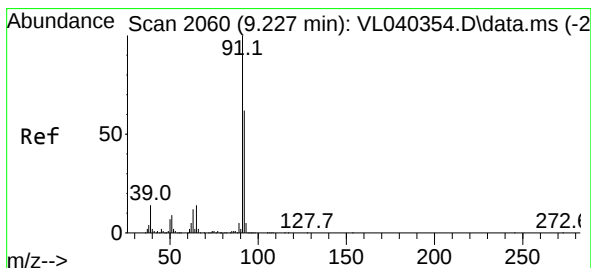
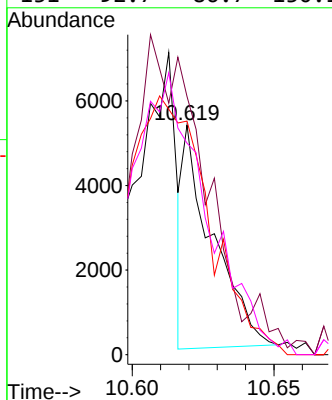
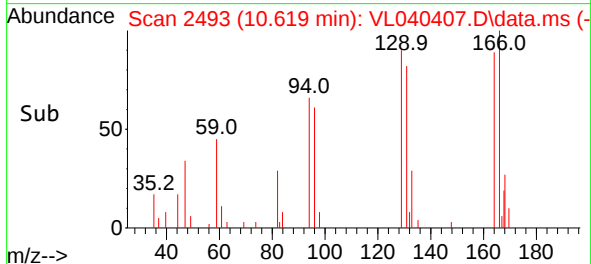


#52
Tetrachloroethene
Concen: 0.059 ppbv
RT: 10.619 min Scan# 2493
Delta R.T. -0.003 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

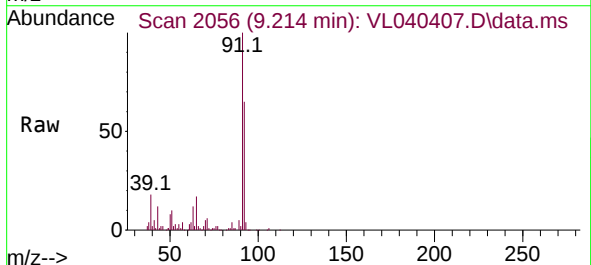
Instrument :
MSVOA_L
ClientSampleId :



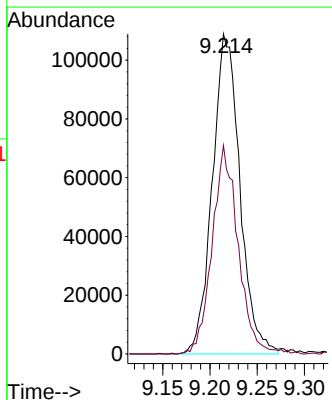
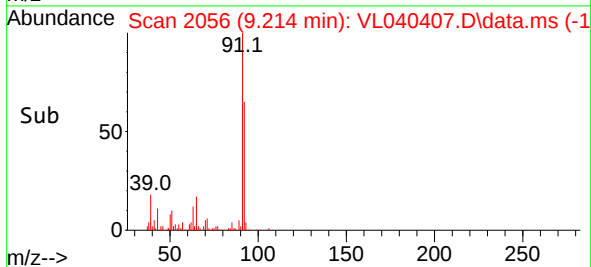
Tgt Ion:	164	Resp:	3814
Ion	Ratio	Lower	Upper
164	100		
166	105.6	105.2	157.8
129	101.8	90.3	135.5
131	92.7	86.7	130.1

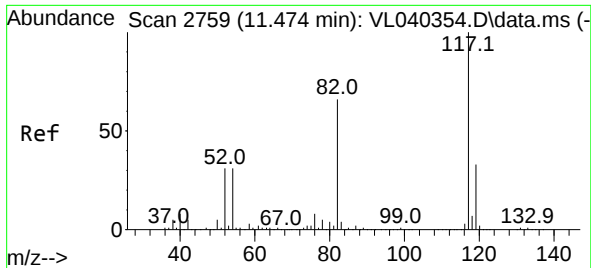


#53
Toluene
Concen: 1.006 ppbv
RT: 9.214 min Scan# 2056
Delta R.T. -0.013 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23



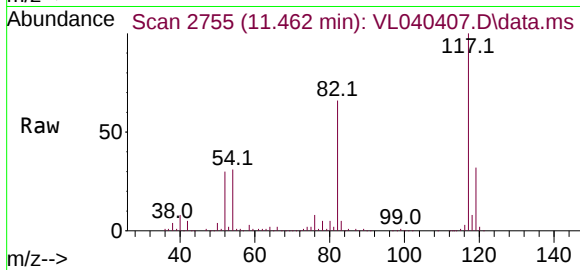
Tgt Ion:	91	Resp:	220409
Ion	Ratio	Lower	Upper
91	100		
92	61.5	48.9	73.3



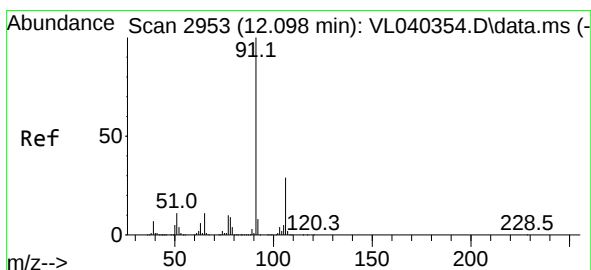
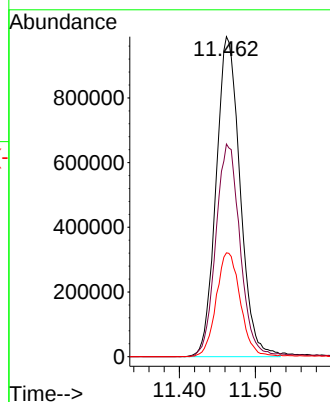
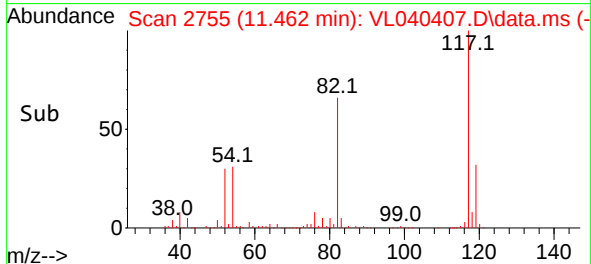


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.462 min Scan# 21
Delta R.T. -0.012 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Instrument :
MSVOA_L
ClientSampleId :

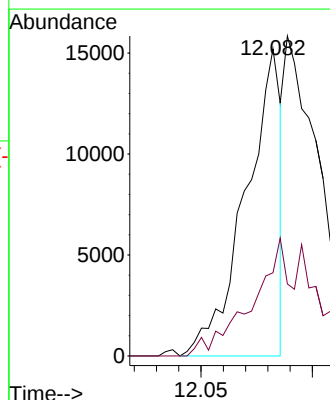
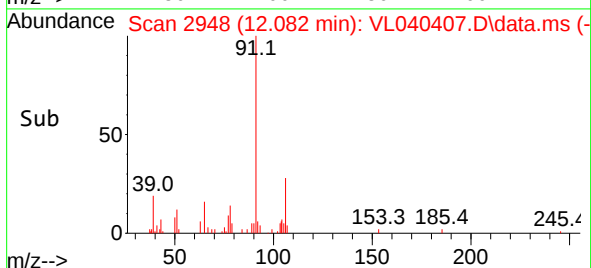
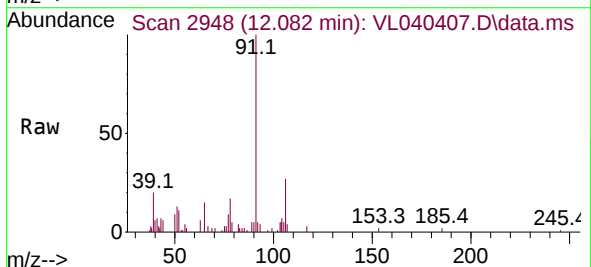


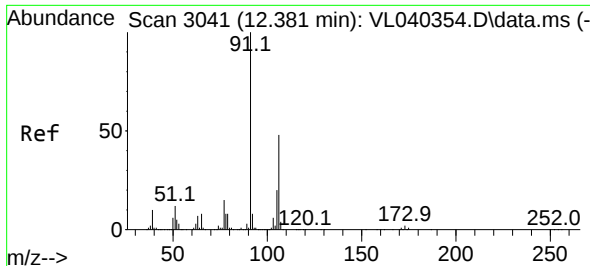
Tgt Ion:117 Resp: 2167195
Ion Ratio Lower Upper
117 100
82 68.4 52.5 78.7
119 33.0 24.3 36.5



#58
Ethyl Benzene
Concen: 0.063 ppbv
RT: 12.082 min Scan# 2948
Delta R.T. -0.016 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Tgt Ion: 91 Resp: 16708
Ion Ratio Lower Upper
91 100
106 27.1 23.5 35.3





#59

m/p-Xylene

Concen: 0.046 ppbv

RT: 12.368 min Scan# 3041

Delta R.T. -0.013 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

Instrument :

MSVOA_L

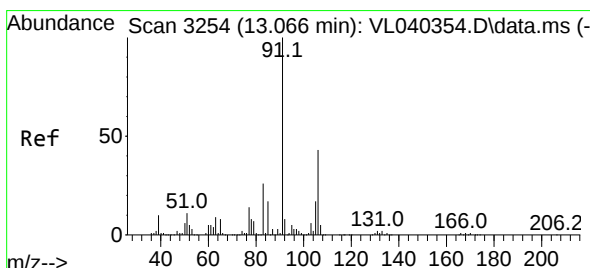
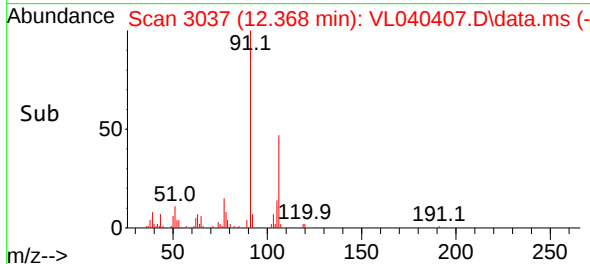
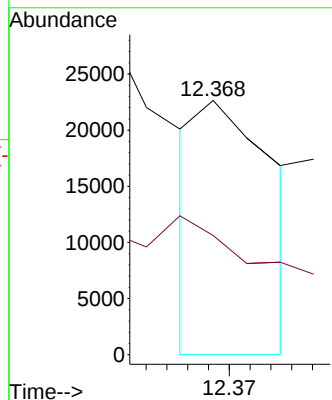
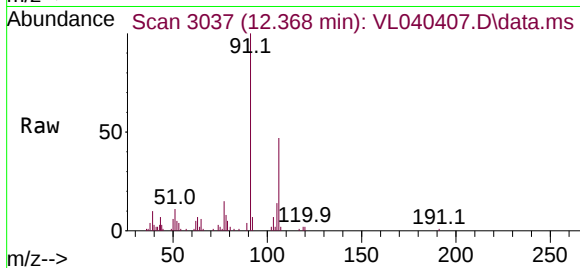
ClientSampleId :

Tgt Ion: 91 Resp: 11327

Ion Ratio Lower Upper

91 100

106 0.0 34.7 52.1#



#60

o-Xylene

Concen: 0.064 ppbv

RT: 13.047 min Scan# 3248

Delta R.T. -0.019 min

Lab File: VL040407.D

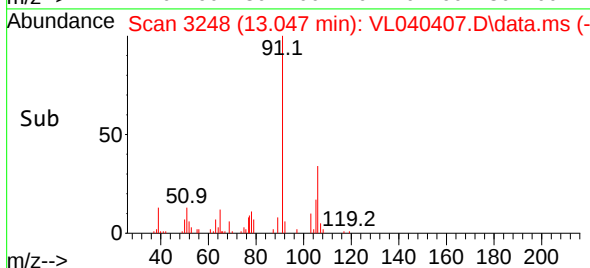
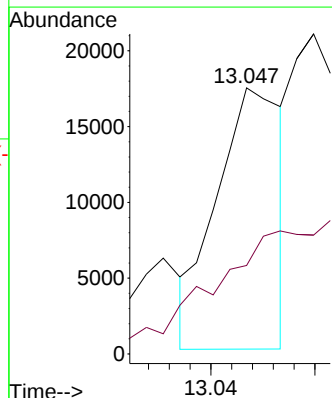
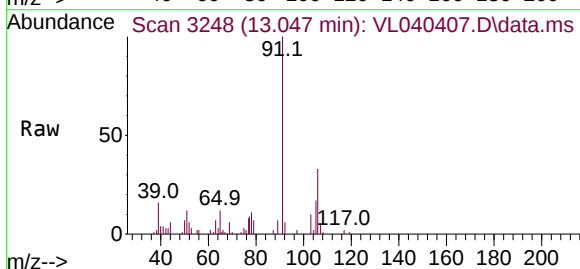
Acq: 11 May 2023 19:23

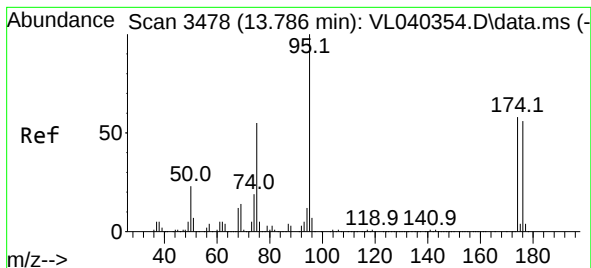
Tgt Ion: 91 Resp: 15003

Ion Ratio Lower Upper

91 100

106 0.0 21.9 65.8#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.493 ppbv

RT: 13.774 min Scan# 3478

Delta R.T. -0.012 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

Instrument :

MSVOA_L

ClientSampleId :

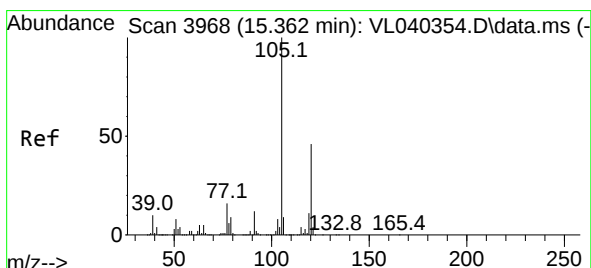
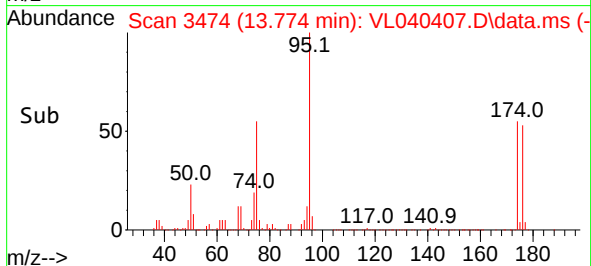
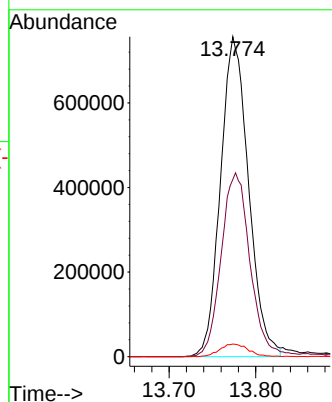
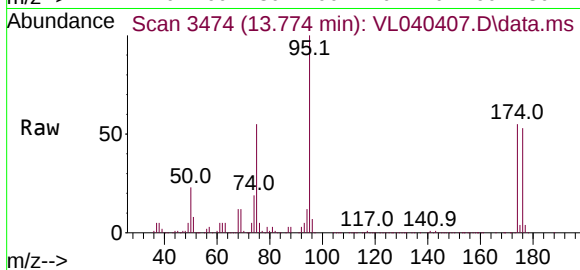
Tgt Ion: 95 Resp: 1701266

Ion Ratio Lower Upper

95 100

174 60.2 47.2 70.8

175 4.1 3.5 5.3



#73

1,3,5-Trimethylbenzene

Concen: 0.049 ppbv

RT: 15.352 min Scan# 3965

Delta R.T. -0.010 min

Lab File: VL040407.D

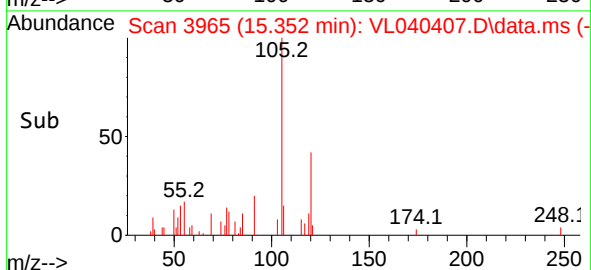
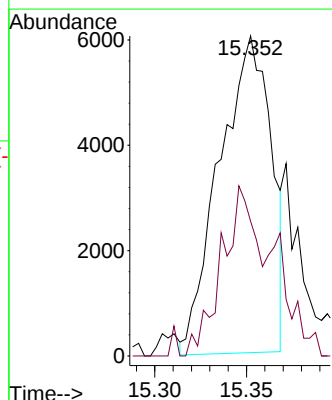
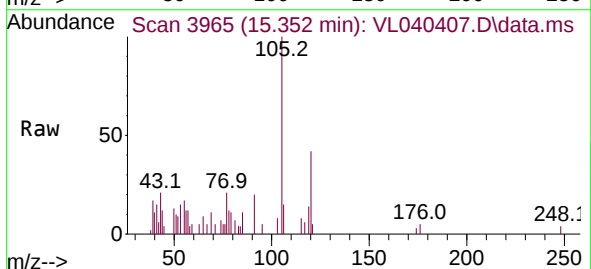
Acq: 11 May 2023 19:23

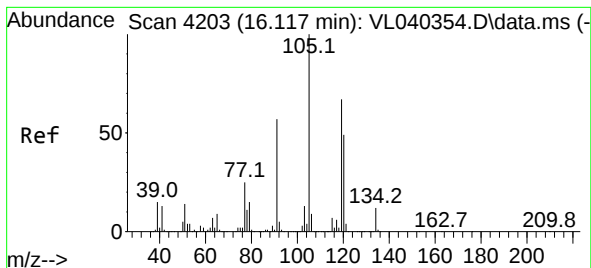
Tgt Ion: 105 Resp: 11798

Ion Ratio Lower Upper

105 100

120 49.3 36.9 55.3





#74

1,2,4-Trimethylbenzene

Concen: 0.159 ppbv

RT: 16.105 min Scan# 41199

Delta R.T. -0.012 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

Instrument :

MSVOA_L

ClientSampleId :

Tgt Ion:105 Resp: 43644

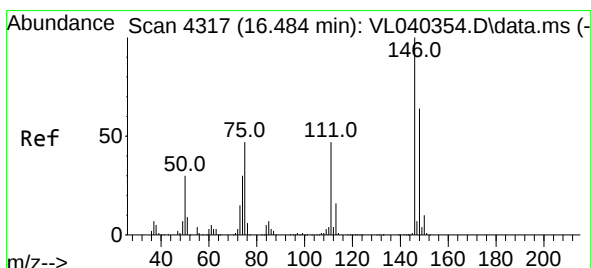
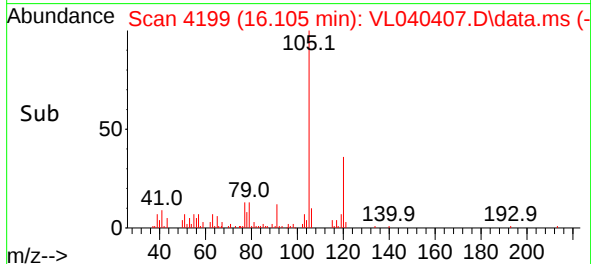
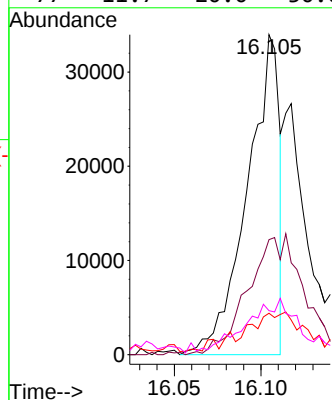
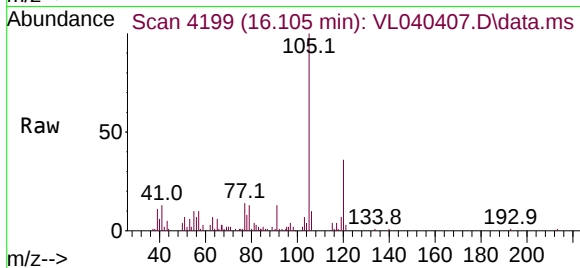
Ion Ratio Lower Upper

105 100

120 35.2 38.9 58.3#

91 12.0 46.0 69.0#

77 11.7 20.0 30.0#



#76

1,4-Dichlorobenzene

Concen: 0.030 ppbv

RT: 16.465 min Scan# 4311

Delta R.T. -0.019 min

Lab File: VL040407.D

Acq: 11 May 2023 19:23

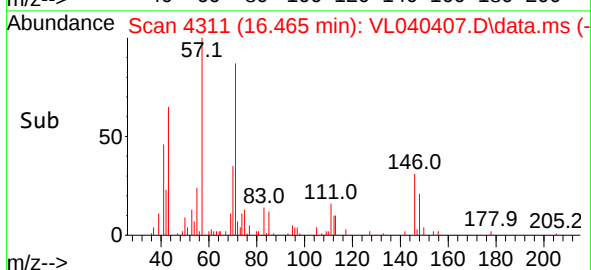
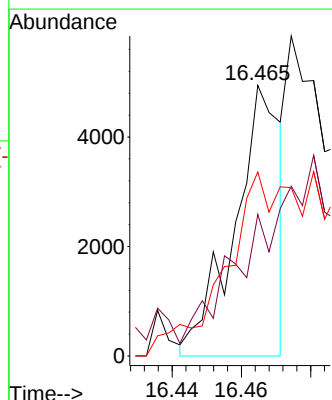
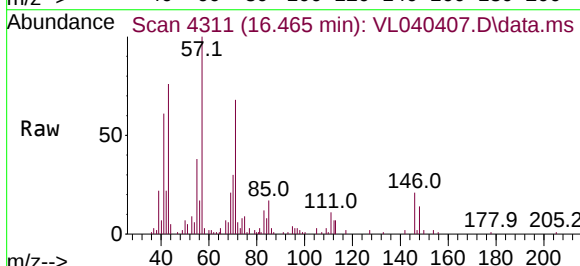
Tgt Ion:146 Resp: 4522

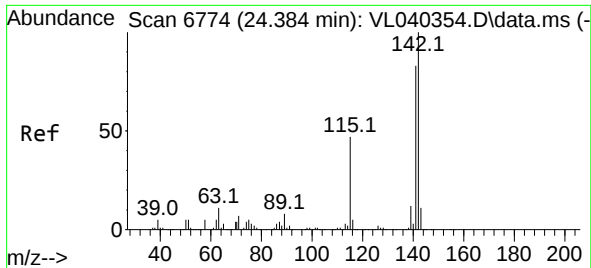
Ion Ratio Lower Upper

146 100

111 0.0 23.8 71.4#

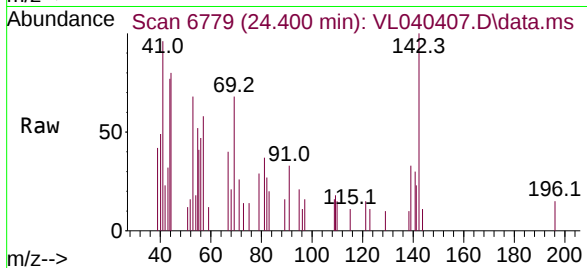
148 0.0 32.4 97.2#





#80
Naphthalene, 2-methyl-
Concen: 0.053 ppbv
RT: 24.400 min Scan# 61
Delta R.T. 0.016 min
Lab File: VL040407.D
Acq: 11 May 2023 19:23

Instrument :
MSVOA_L
ClientSampleId :



Tgt Ion: 142 Resp: 2937
Ion Ratio Lower Upper
142 100
141 0.0 65.1 97.7#
115 24.3 36.5 54.7#

