

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL081621\
 Data File : VL037468.D
 Acq On : 16 Aug 2021 19:21
 Operator : SY/AP
 Sample : M3277-01DL 4X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Aug 17 02:22:32 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL081621AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Aug 17 02:13:47 2021
 QLast Update : Tue Aug 17 02:13:47 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1473198	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4412839	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3777948	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	2659543	9.91	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.10%

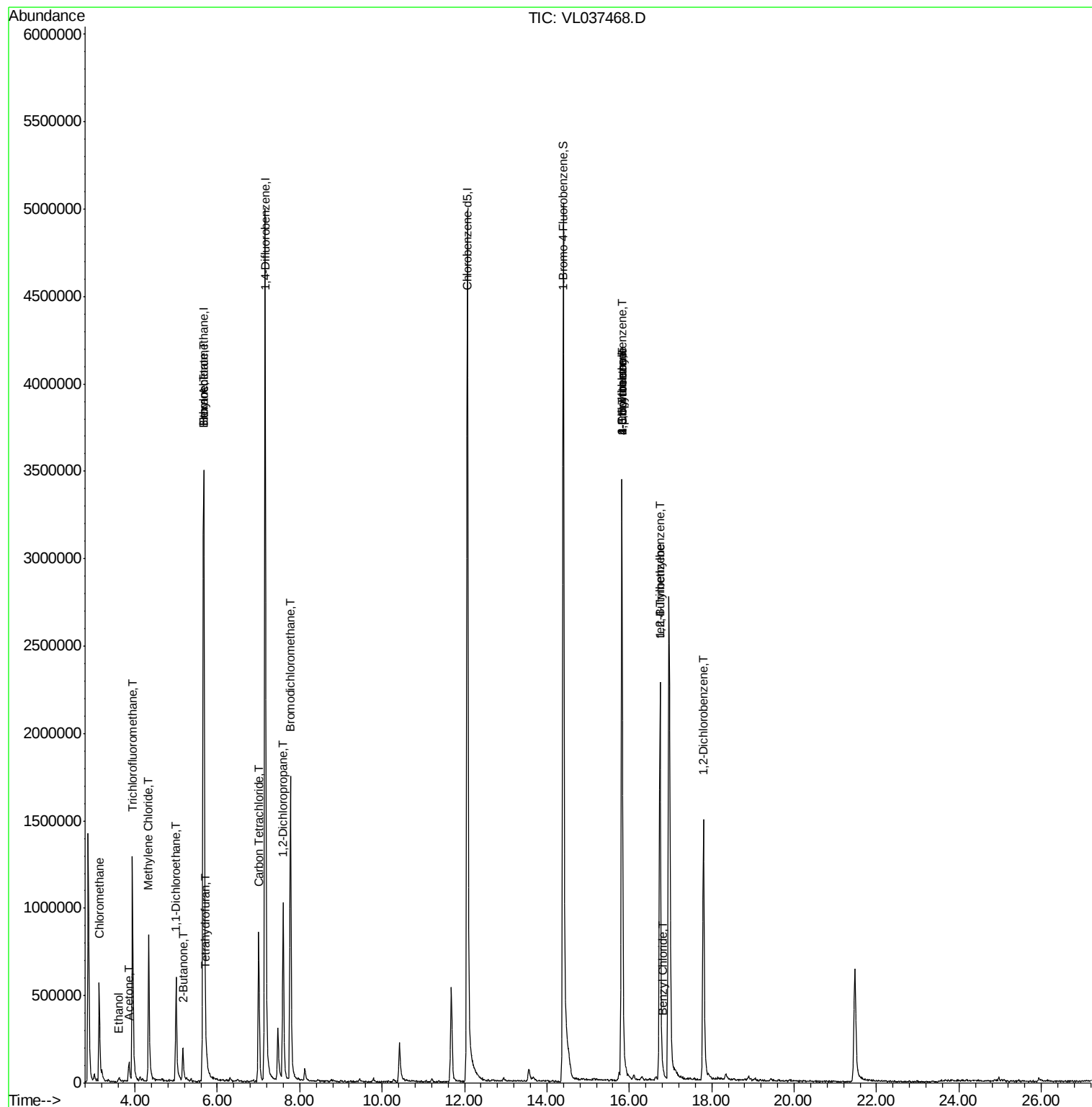
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
4) Chloromethane	3.13	50	660066	6.548	ppbv	89
11) Trichlorofluoromethane	3.94	101	981589	4.424	ppbv	99
13) Ethanol	3.61	45	5699	0.580	ppbv #	1
15) Acetone	3.84	43	52283	0.349	ppbv #	44
20) Methylene Chloride	4.33	84	364126	4.851	ppbv	94
24) 1,1-Dichloroethane	5.00	63	597613	3.728	ppbv	99
25) Ethyl Acetate	5.67	43	726421	1.909	ppbv #	76
26) Hexane	5.67	57	1020099	5.482	ppbv #	45
34) 2-Butanone	5.16	43	26058	0.145	ppbv #	1
35) Carbon Tetrachloride	7.01	117	569619	2.184	ppbv	92
39) 1,2-Dichloropropane	7.60	63	413659	2.902	ppbv	93
41) Tetrahydrofuran	5.72	42	8035	0.093	ppbv #	38
42) Bromodichloromethane	7.77	83	1355682	5.046	ppbv	99
64) n-propylbenzene	15.82	120	385749	2.532	ppbv #	1
65) tert-Butylbenzene	16.74	119	99293	0.182	ppbv #	20
66) Benzyl Chloride	16.81	91	2830	0.115	ppbv #	67
71) 2-Chlorotoluene	15.82	91	367531	0.837	ppbv #	41
72) 4-Ethyltoluene	15.82	105	3188700	6.320	ppbv	99
73) 1,3,5-Trimethylbenzene	15.82	105	3188700	6.789	ppbv #	72
74) 1,2,4-Trimethylbenzene	16.74	105	1919840	3.847	ppbv #	67
77) 1,2-Dichlorobenzene	17.80	146	892126	3.016	ppbv	97

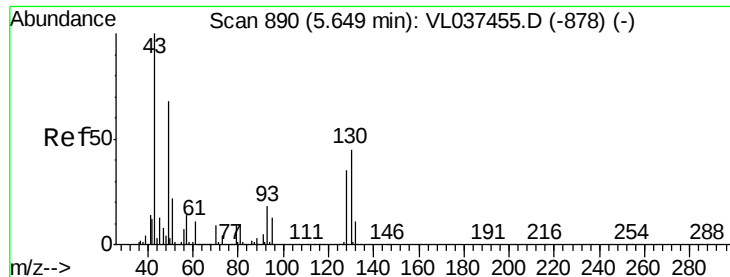
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. 0.01 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Instrument :

MSVOA_L

ClientSampleId :

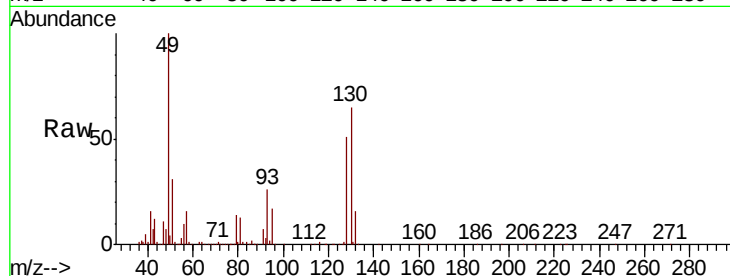
Tot Ion: 49 Resp: 1473198

Ion Ratio Lower Upper

49 100

128 54.6 27.5 82.4

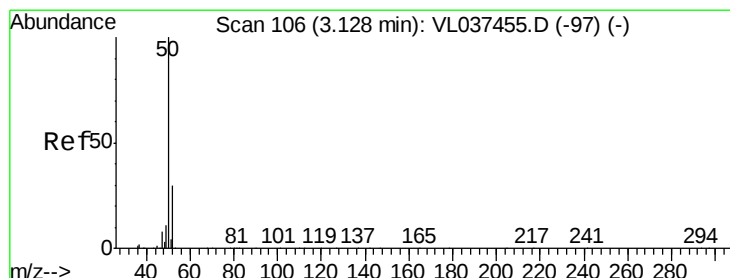
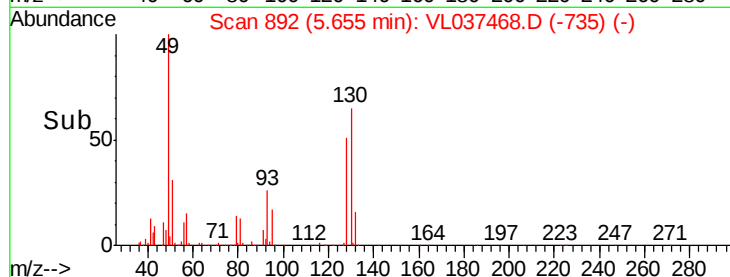
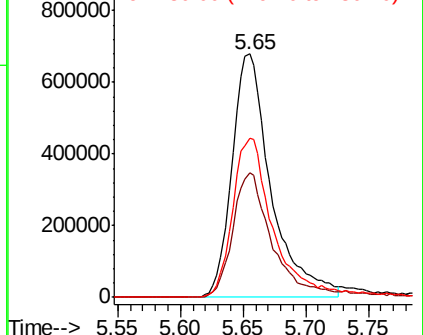
130 71.4 34.0 101.8



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#4

Chloromethane

Concen: 6.548 ppbv

RT: 3.13 min Scan# 108

Delta R.T. 0.01 min

Lab File: VL037468.D

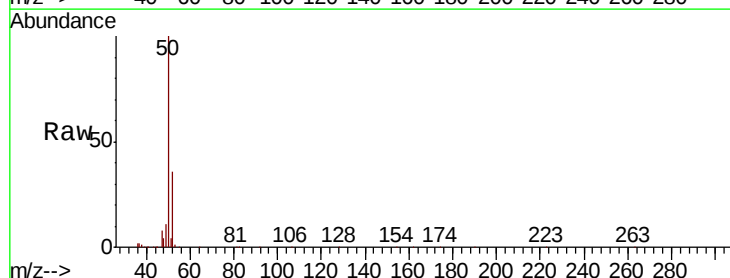
Acq: 16 Aug 2021 19:21

Tgt Ion: 50 Resp: 660066

Ion Ratio Lower Upper

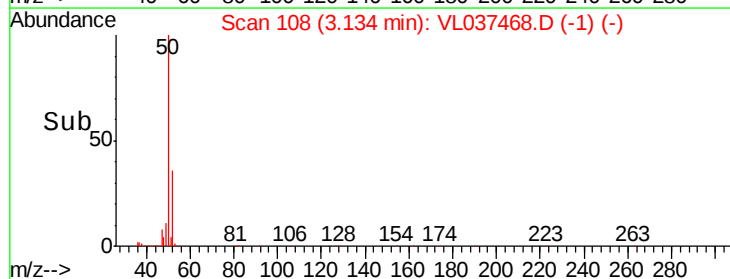
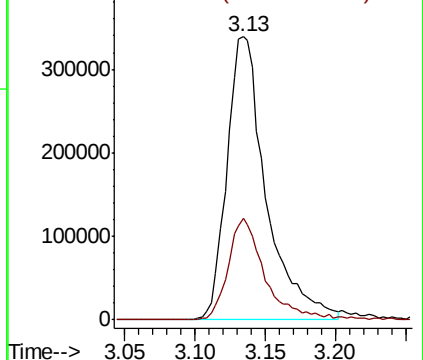
50 100

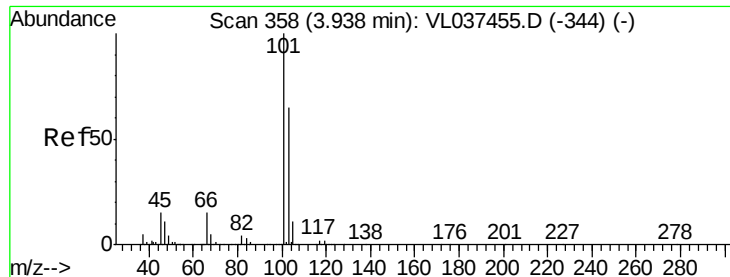
52 35.7 24.0 36.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#11

Trichlorofluoromethane

Concen: 4.424 ppbv

RT: 3.94 min Scan# 359

Delta R.T. 0.00 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Instrument :

MSVOA_L

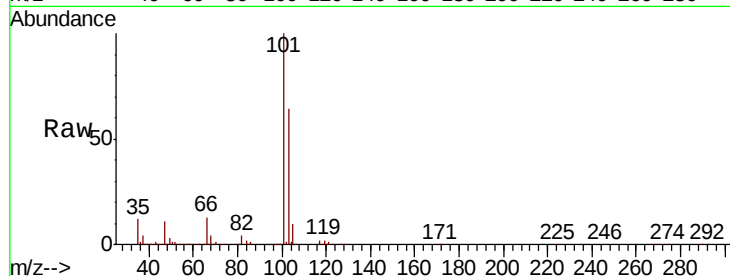
ClientSampleId :

Tot Ion:101 Resp: 981589

Ion Ratio Lower Upper

101 100

103 63.7 51.8 77.6



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

3.94

600000

500000

400000

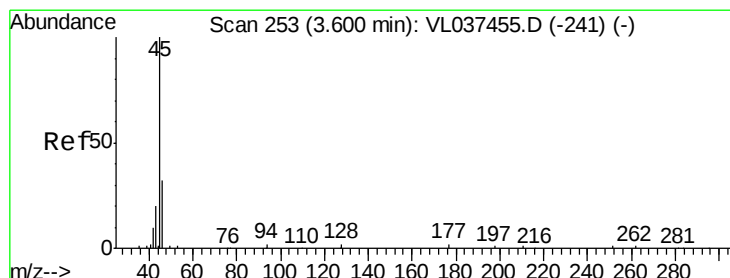
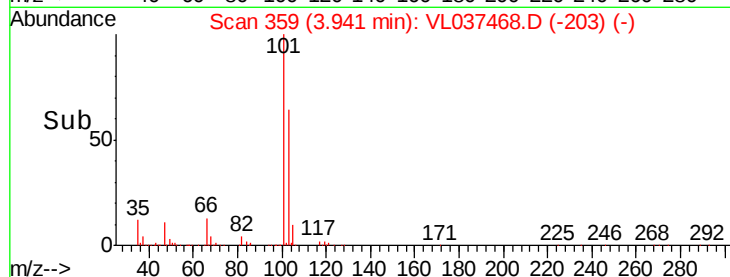
300000

200000

100000

0

Time--> 3.85 3.90 3.95 4.00



#13

Ethanol

Concen: 0.580 ppbv

RT: 3.61 min Scan# 255

Delta R.T. 0.01 min

Lab File: VL037468.D

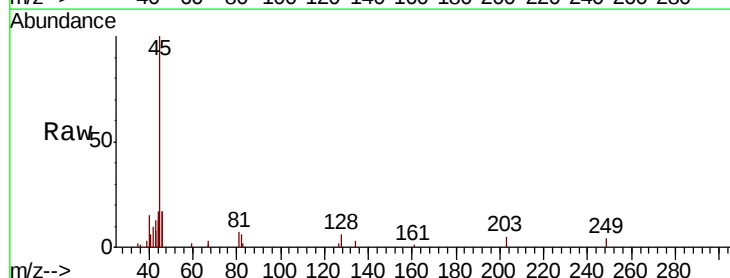
Acq: 16 Aug 2021 19:21

Tgt Ion: 45 Resp: 5699

Ion Ratio Lower Upper

45 100

46 178.2 14.1 56.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

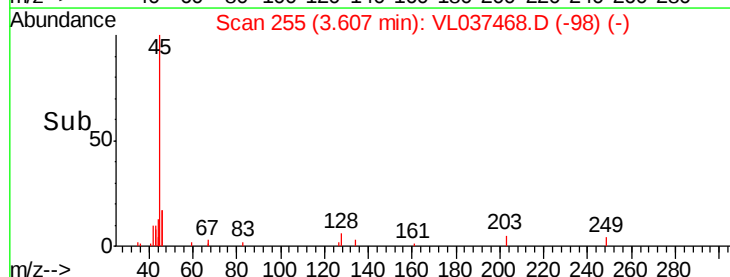
15000

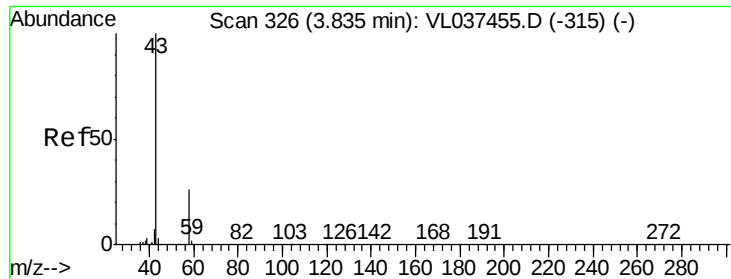
10000

5000

0

Time--> 3.60 3.61 3.61 3.62

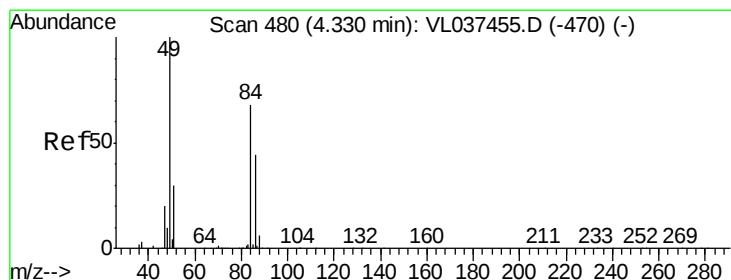
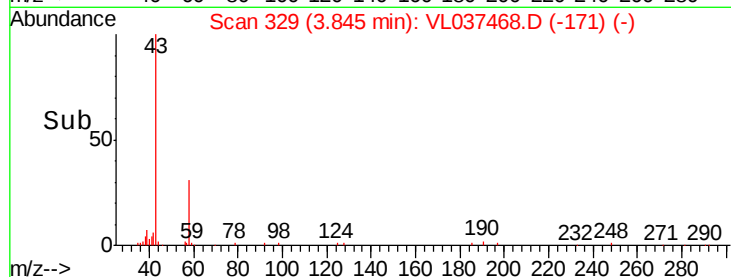
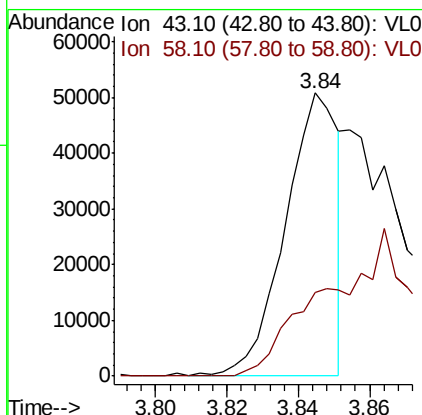
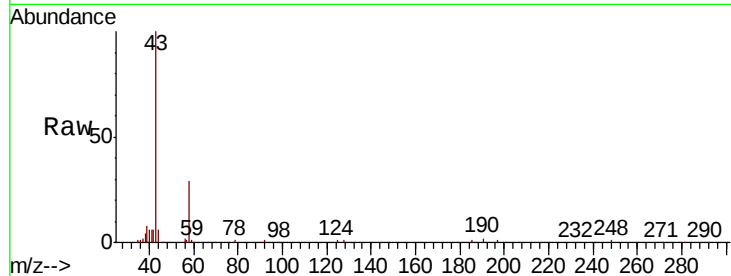




#15
Acetone
Concen: 0.349 ppbv
RT: 3.84 min Scan# 329
Delta R.T. 0.01 min
Lab File: VL037468.D
Acq: 16 Aug 2021 19:21

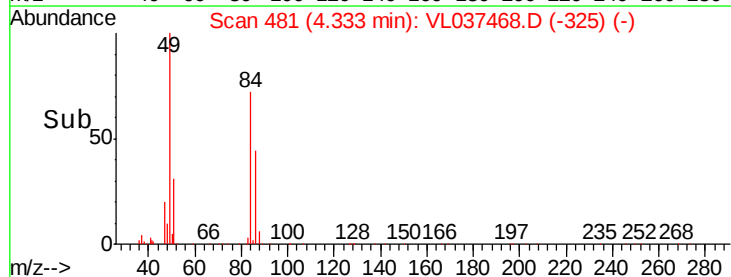
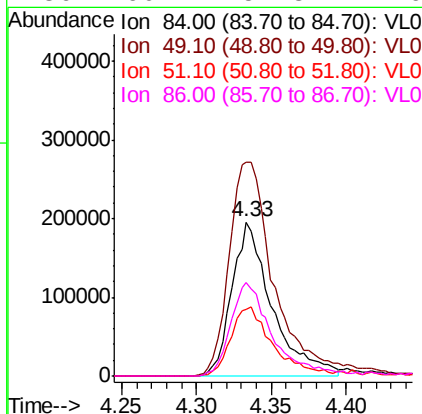
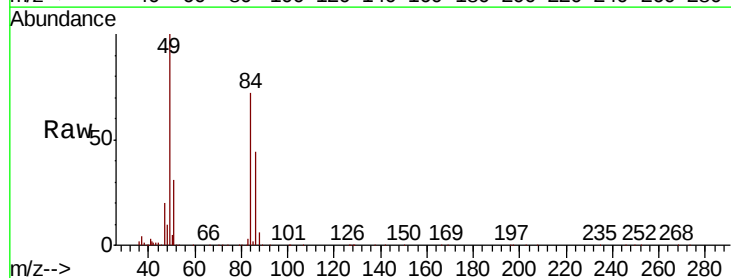
Instrument :
MSVOA_L
ClientSampled :

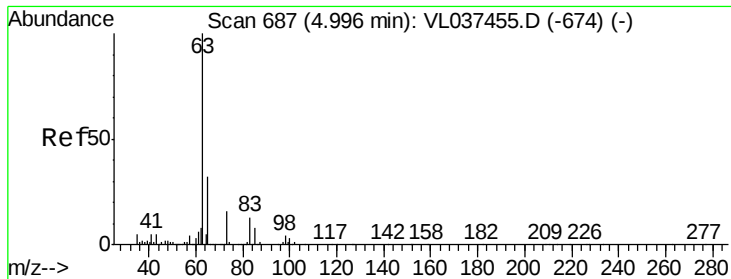
Tot Ion: 43 Resp: 52283
Ion Ratio Lower Upper
43 100
58 0.0 24.8 37.2#



#20
Methylene Chloride
Concen: 4.851 ppbv
RT: 4.33 min Scan# 481
Delta R.T. 0.00 min
Lab File: VL037468.D
Acq: 16 Aug 2021 19:21

Tgt Ion: 84 Resp: 364126
Ion Ratio Lower Upper
84 100
49 138.5 118.2 177.2
51 43.3 36.6 55.0
86 60.2 51.8 77.6





#24

1,1-Dichloroethane

Concen: 3.728 ppbv

RT: 5.00 min Scan# 687

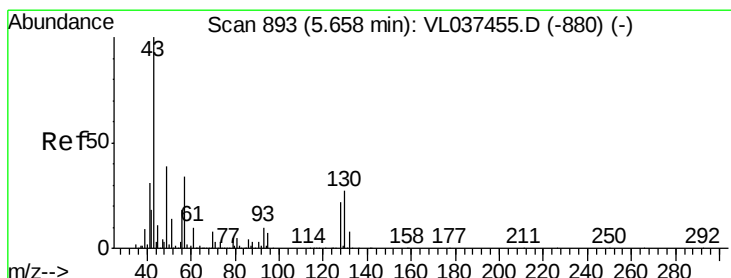
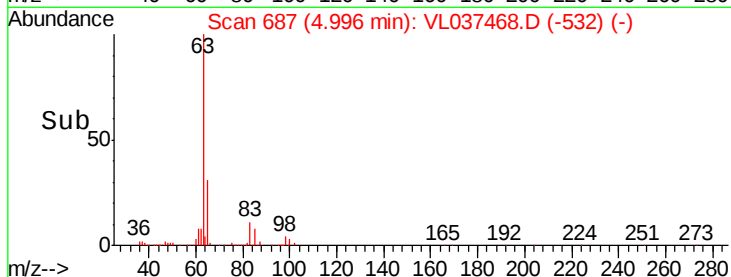
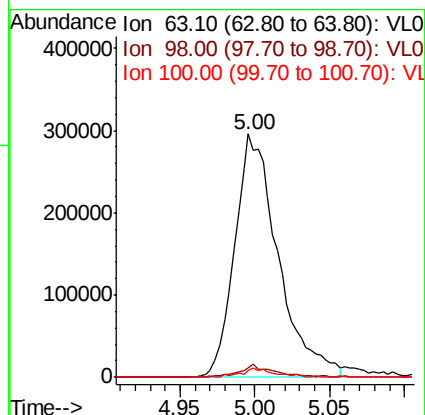
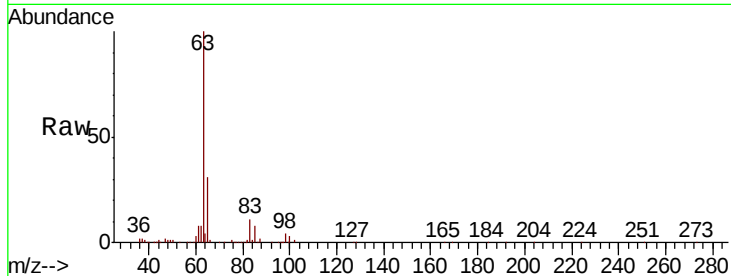
Delta R.T. -0.00 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	63	Resp:	597613
Ion	Ratio	Lower	Upper
63	100		
98	3.8	2.1	6.3
100	3.0	1.6	4.7



#25

Ethyl Acetate

Concen: 1.909 ppbv

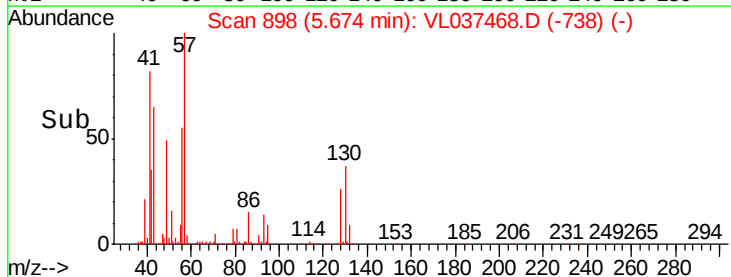
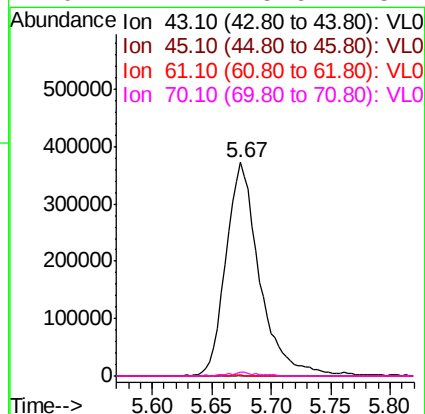
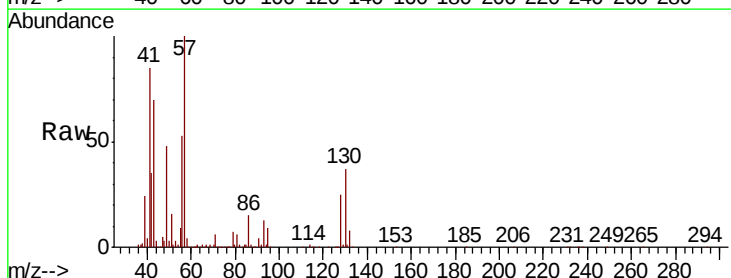
RT: 5.67 min Scan# 898

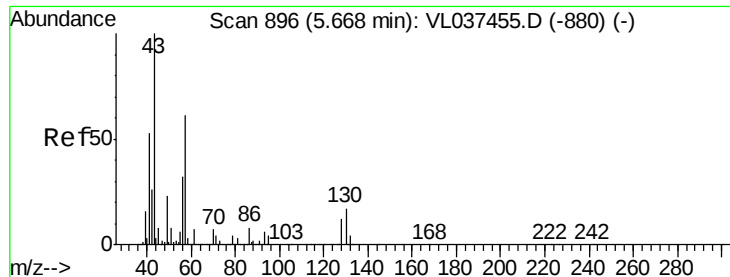
Delta R.T. 0.02 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Tgt Ion:	43	Resp:	726421
Ion	Ratio	Lower	Upper
43	100		
45	0.2	8.0	12.0#
61	0.2	8.0	12.0#
70	1.7	5.6	8.4#

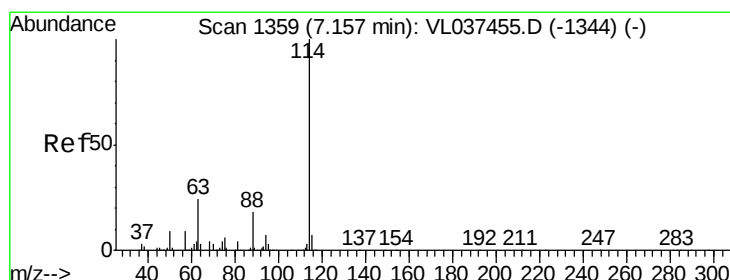
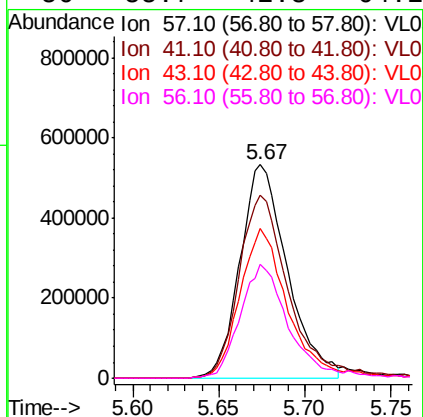
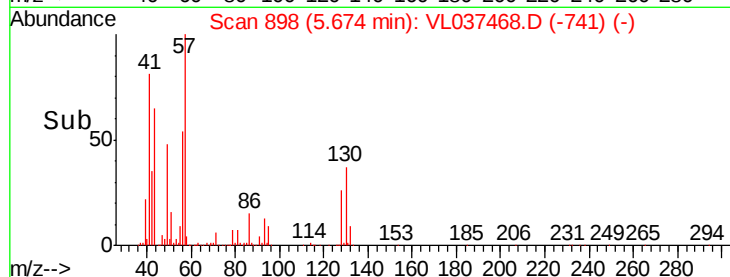
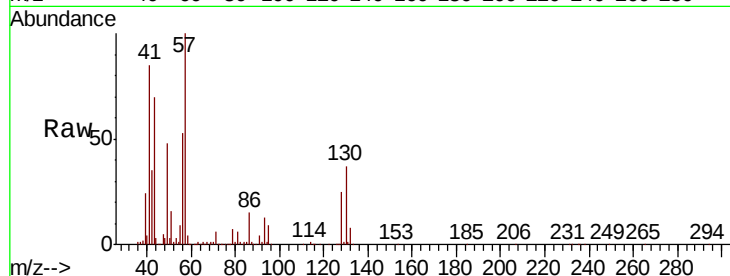




#26
Hexane
Concen: 5.482 ppbv
RT: 5.67 min Scan# 898
Delta R.T. 0.01 min
Lab File: VL037468.D
Acq: 16 Aug 2021 19:21

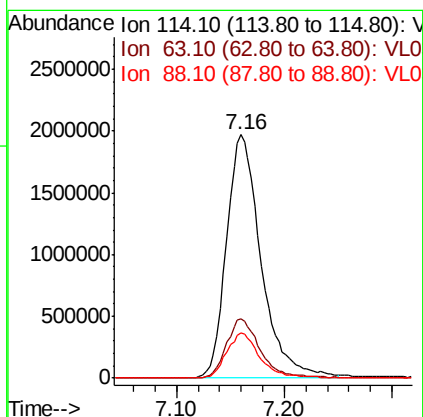
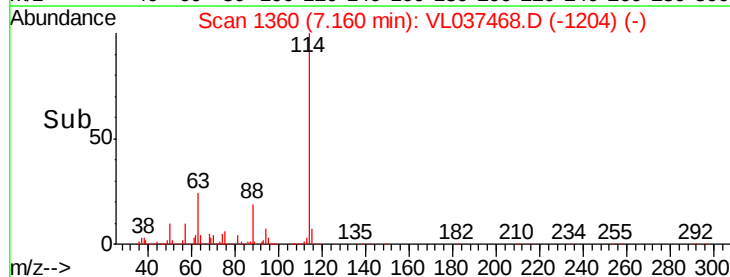
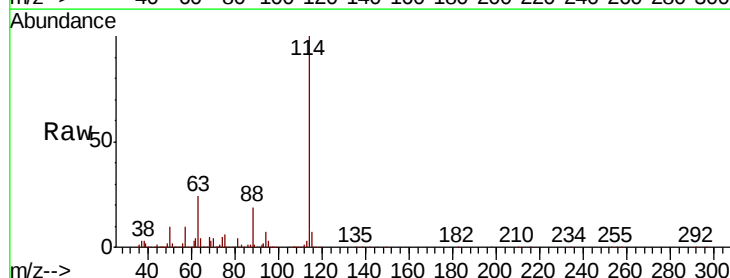
Instrument :
MSVOA_L
ClientSampleId :

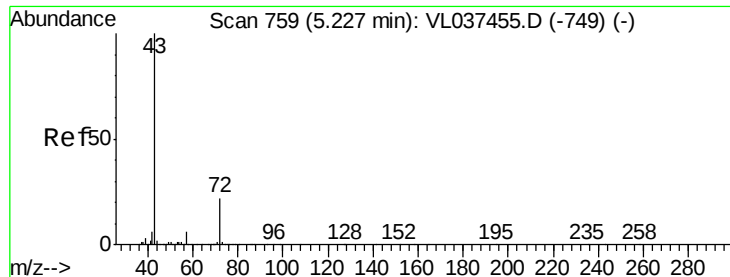
Tot Ion: 57 Resp: 1020099
Ion Ratio Lower Upper
57 100
41 91.6 72.3 108.5
43 72.4 172.3 258.5#
56 55.7 42.8 64.2



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.16 min Scan# 1360
Delta R.T. 0.00 min
Lab File: VL037468.D
Acq: 16 Aug 2021 19:21

Tgt Ion: 114 Resp: 4412839
Ion Ratio Lower Upper
114 100
63 23.9 19.3 28.9
88 18.0 14.2 21.4

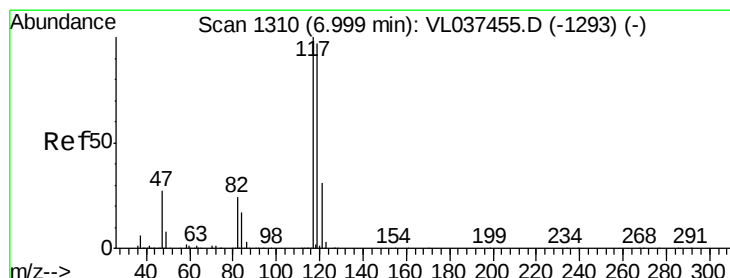
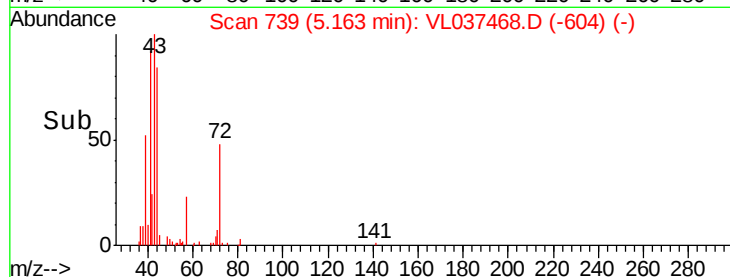
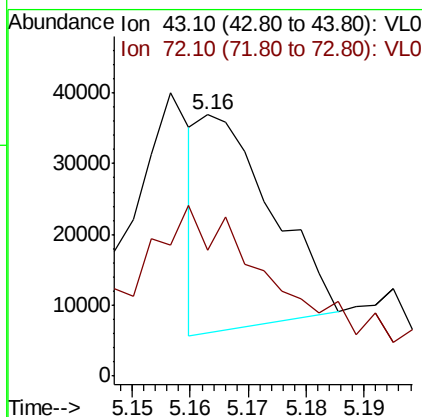
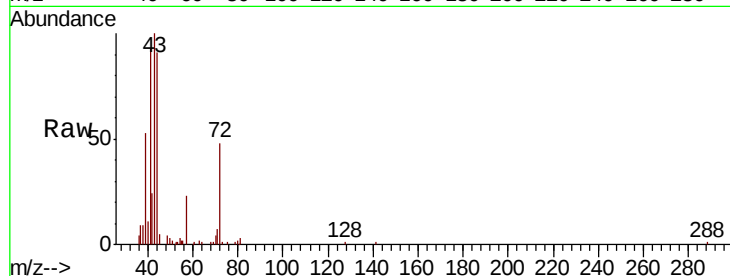




#34
2-Butanone
Concen: 0.145 ppbv
RT: 5.16 min Scan# 739
Delta R.T. -0.06 min
Lab File: VL037468.D
Acq: 16 Aug 2021 19:21

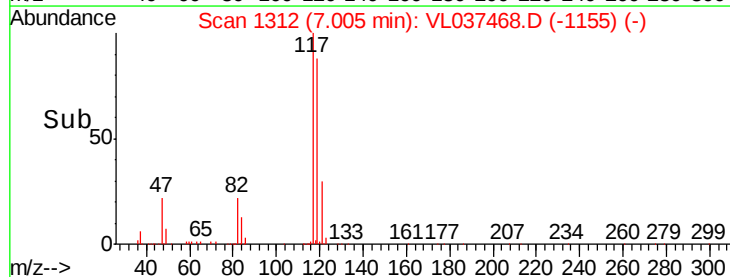
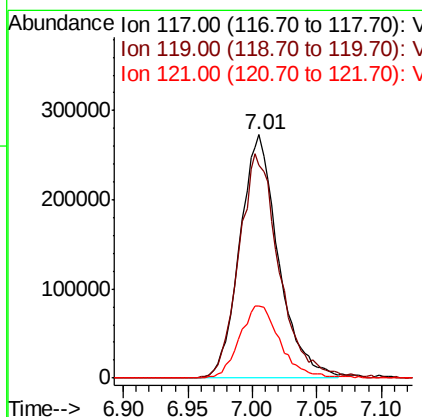
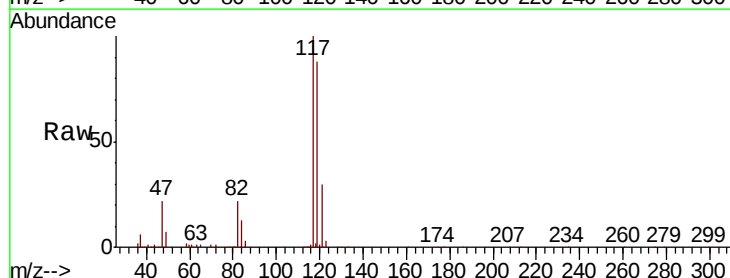
Instrument :
MSVOA_L
ClientSampled :

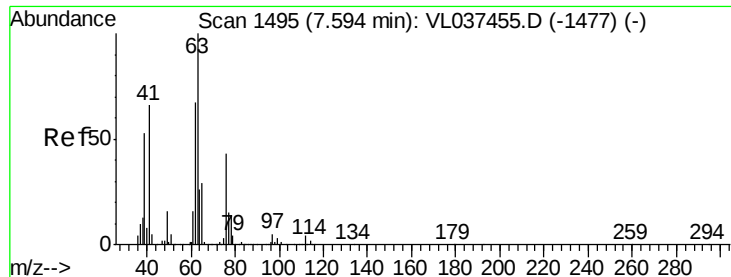
Tot Ion: 43 Resp: 26058
Ion Ratio Lower Upper
43 100
72 197.8 17.4 26.0#



#35
Carbon Tetrachloride
Concen: 2.184 ppbv
RT: 7.01 min Scan# 1312
Delta R.T. 0.01 min
Lab File: VL037468.D
Acq: 16 Aug 2021 19:21

Tgt Ion: 117 Resp: 569619
Ion Ratio Lower Upper
117 100
119 87.3 77.3 115.9
121 29.8 25.2 37.8

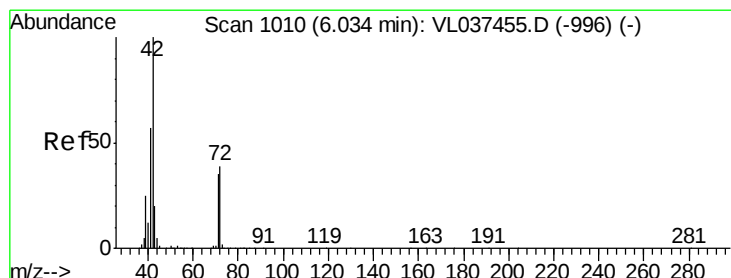
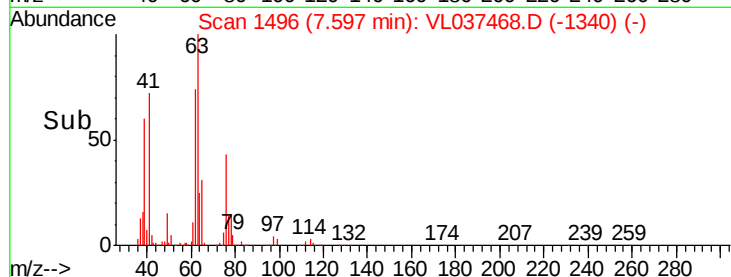
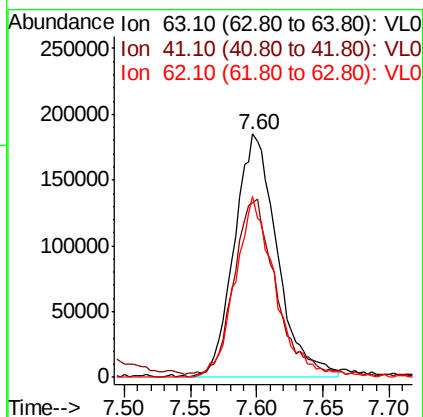
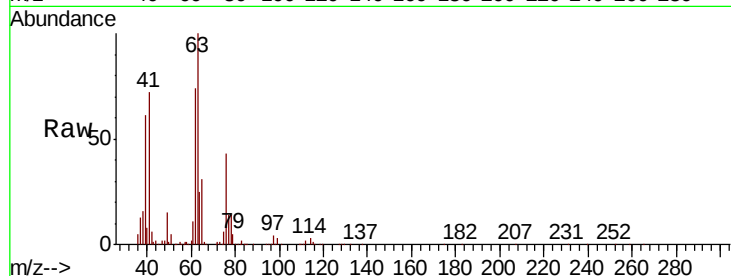




#39
 1,2-Dichloropropane
 Concen: 2.902 ppbv
 RT: 7.60 min Scan# 1496
 Delta R.T. 0.00 min
 Lab File: VL037468.D
 Acq: 16 Aug 2021 19:21

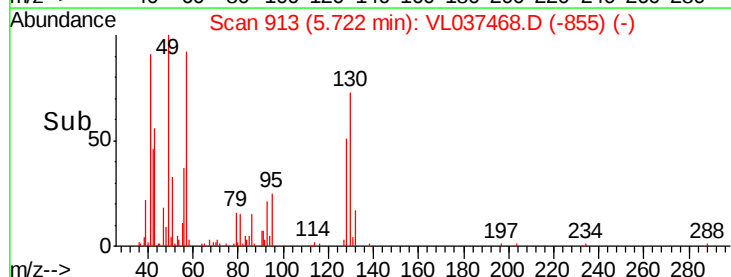
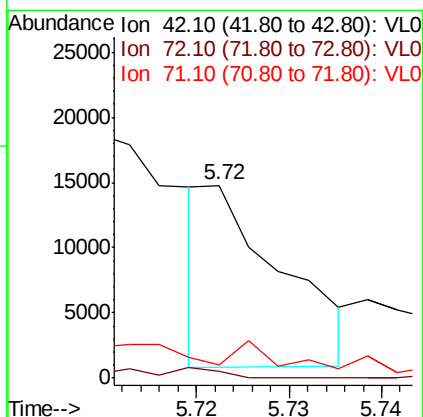
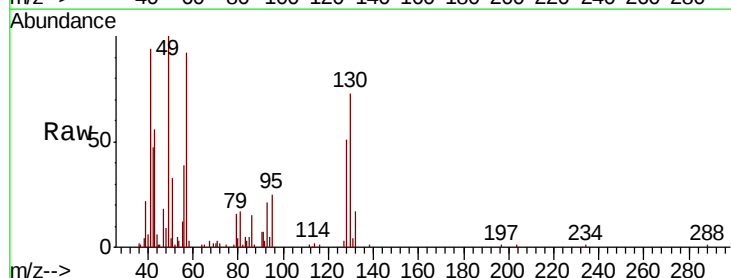
Instrument :
 MSVOA_L
 ClientSampled :

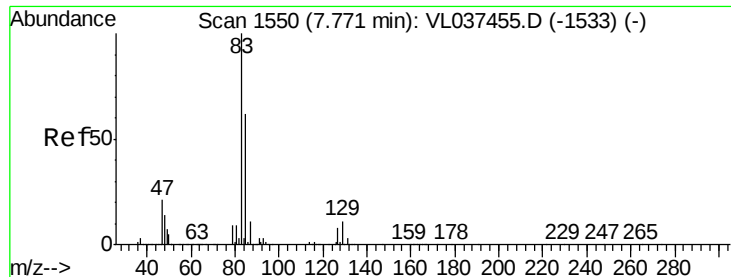
Tot Ion	Ratio	Lower	Upper
63	100		
41	70.0	52.4	78.6
62	74.0	53.6	80.4



#41
 Tetrahydrofuran
 Concen: 0.093 ppbv
 RT: 5.72 min Scan# 913
 Delta R.T. -0.31 min
 Lab File: VL037468.D
 Acq: 16 Aug 2021 19:21

Tgt Ion	Ratio	Lower	Upper
42	100		
72	2.8	32.2	48.4#
71	0.0	30.5	45.7#





#42

Bromodichloromethane

Concen: 5.046 ppbv

RT: 7.77 min Scan# 1551

Delta R.T. 0.00 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Instrument :

MSVOA_L

ClientSampleId :

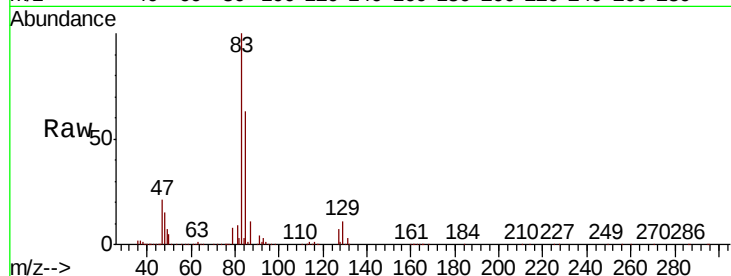
Tot Ion: 83 Resp: 1355682

Ion Ratio Lower Upper

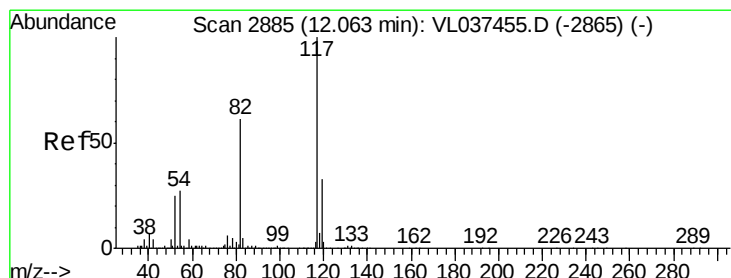
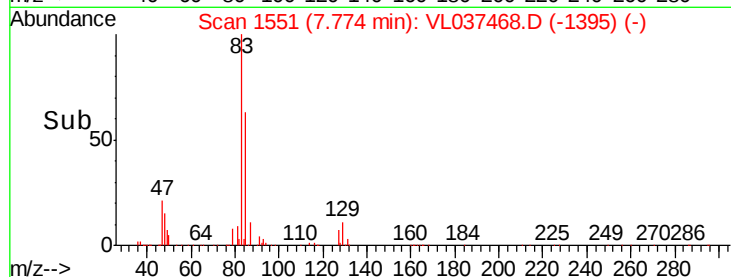
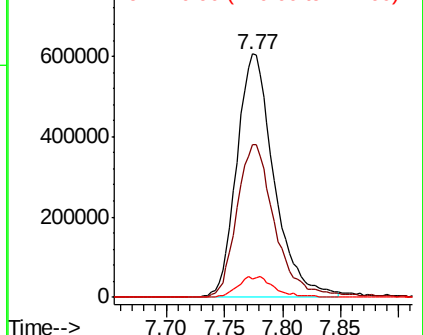
83 100

85 62.7 49.5 74.3

127 7.4 6.3 9.5



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0
Ion 126.90 (126.60 to 127.60): V



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. 0.01 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

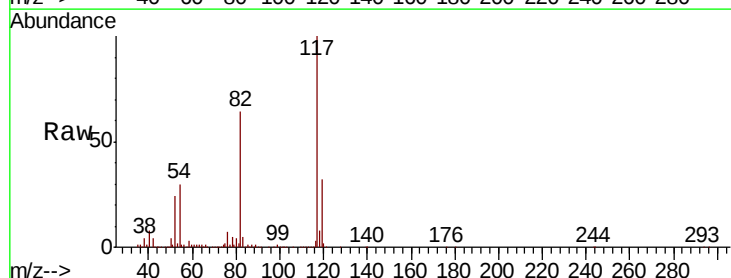
Tgt Ion: 117 Resp: 3777948

Ion Ratio Lower Upper

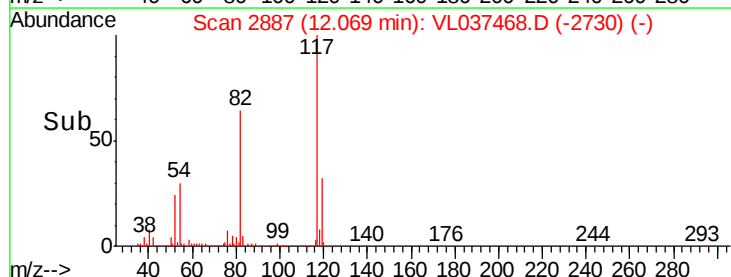
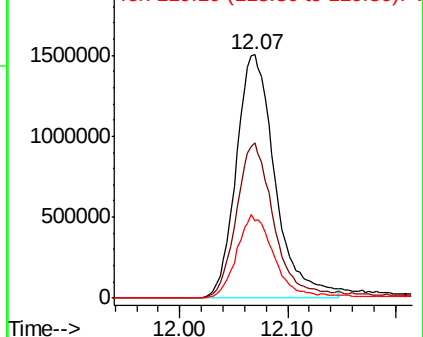
117 100

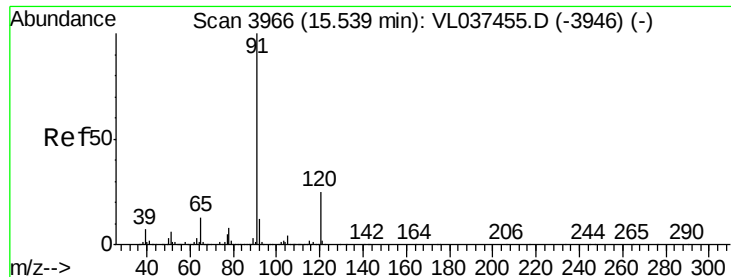
82 65.8 52.9 79.3

119 35.1 24.8 37.2



Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V





#64

n-propylbenzene

Concen: 2.532 ppbv

RT: 15.82 min Scan# 4052

Delta R.T. 0.28 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Instrument :

MSVOA_L

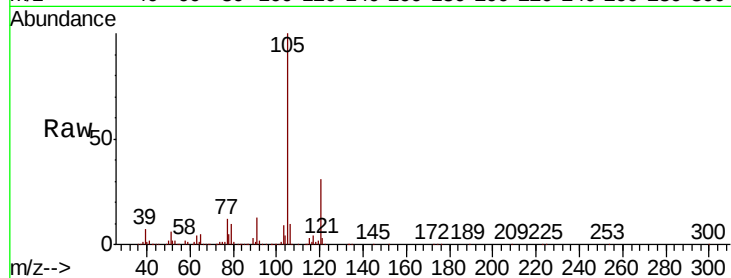
ClientSampled :

Tot Ion:120 Resp: 385749

Ion Ratio Lower Upper

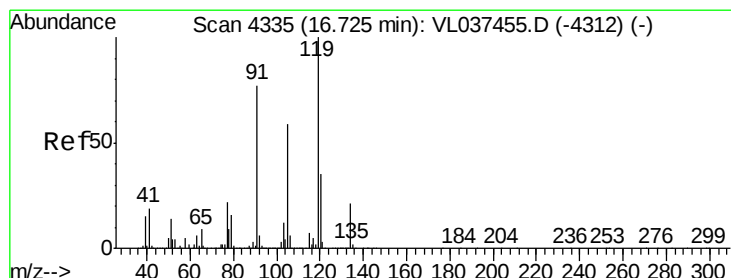
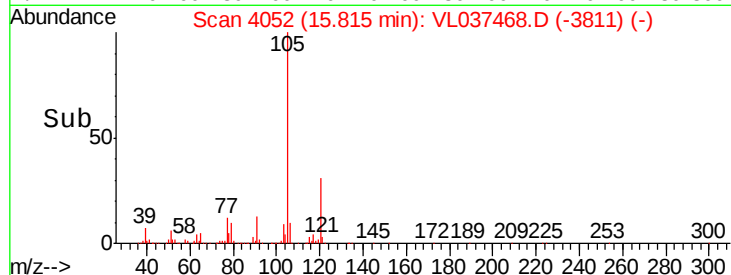
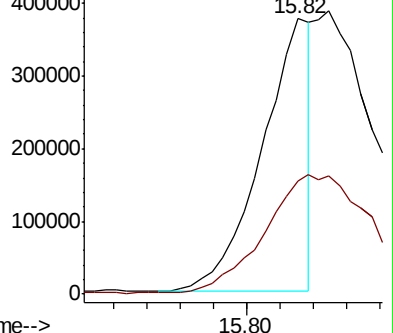
120 100

91 106.3 373.8 560.6#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#65

tert-Butylbenzene

Concen: 0.182 ppbv

RT: 16.74 min Scan# 4339

Delta R.T. 0.01 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

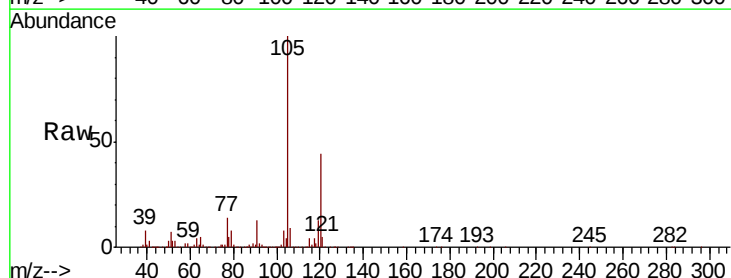
Tgt Ion:119 Resp: 99293

Ion Ratio Lower Upper

119 100

91 0.0 62.9 94.3#

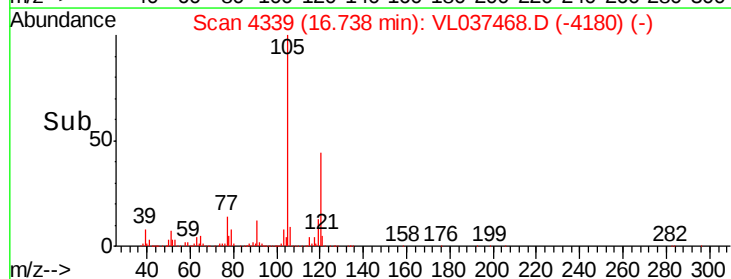
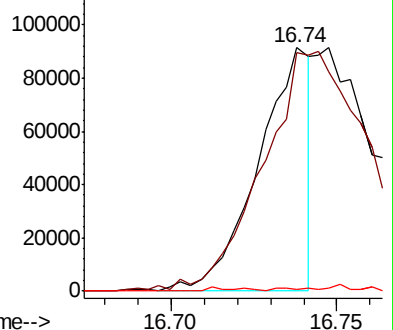
134 1.8 16.4 24.6#

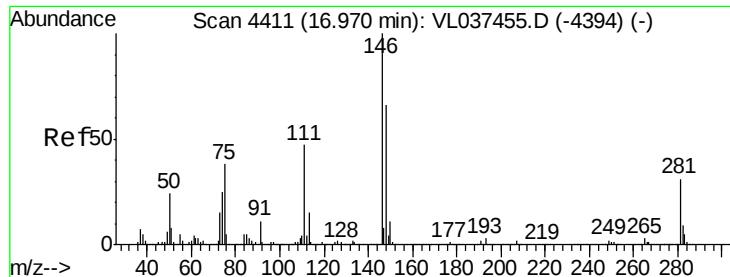


Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V





#66

Benzyl Chloride

Concen: 0.115 ppbv

RT: 16.81 min Scan# 4362

Delta R.T. -0.16 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Instrument :

MSVOA_L

ClientSampleId :

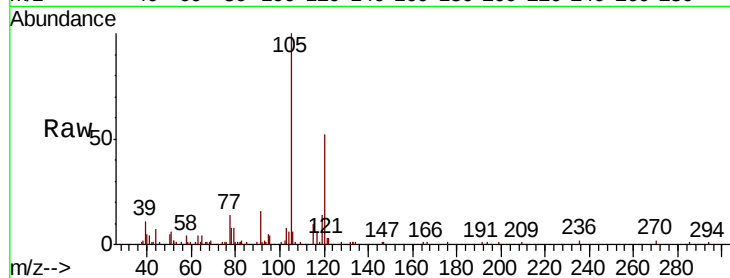
Tot Ion: 91 Resp: 2830

Ion Ratio Lower Upper

91 100

126 0.0 15.9 23.9#

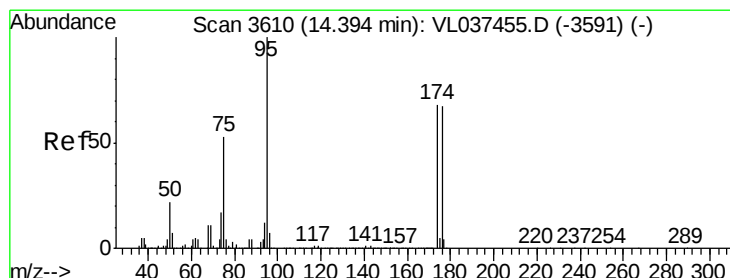
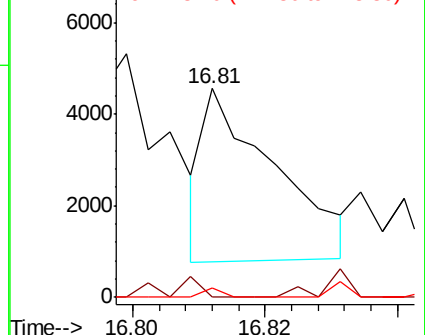
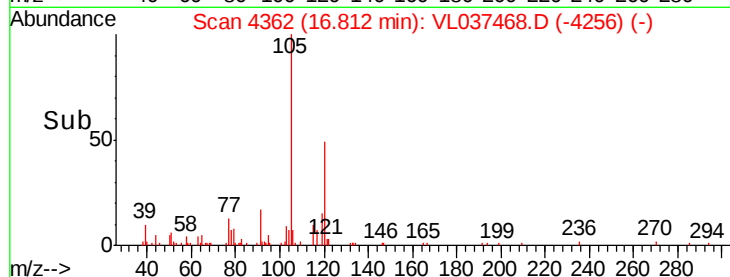
128 5.6 5.4 8.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V

Ion 128.10 (127.80 to 128.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.909 ppbv

RT: 14.40 min Scan# 3611

Delta R.T. 0.00 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

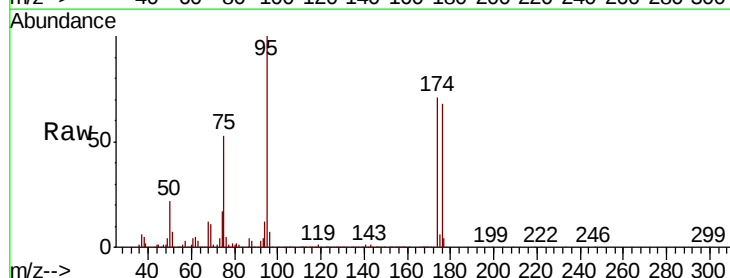
Tgt Ion: 95 Resp: 2659543

Ion Ratio Lower Upper

95 100

174 77.6 59.6 89.4

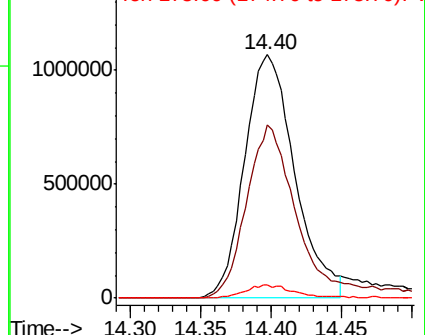
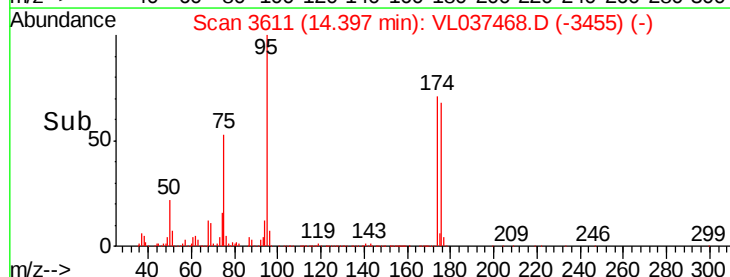
175 5.7 4.6 7.0

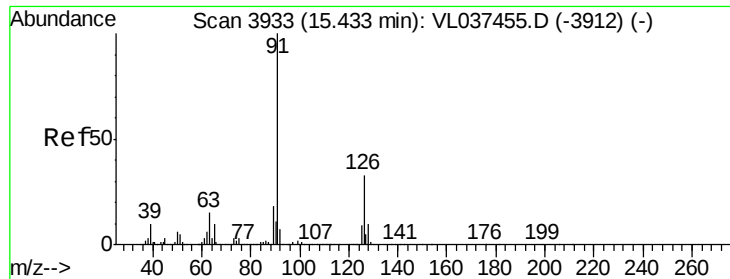


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

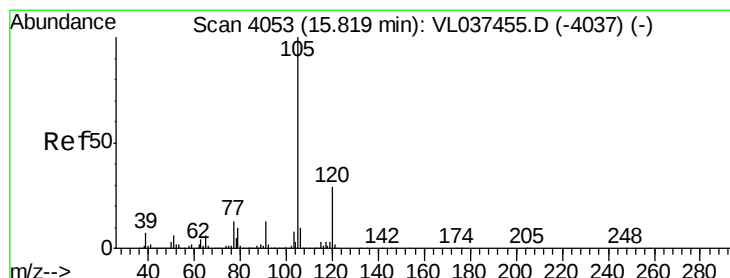
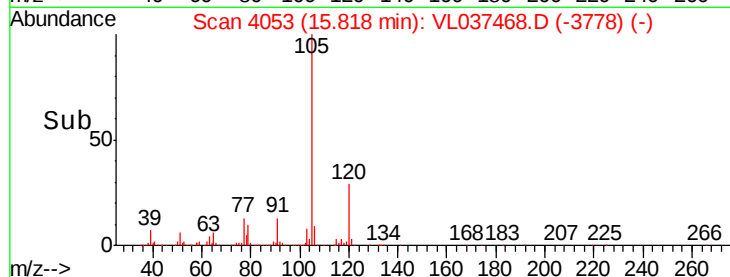
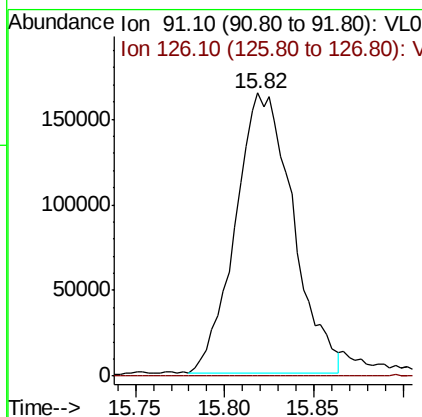
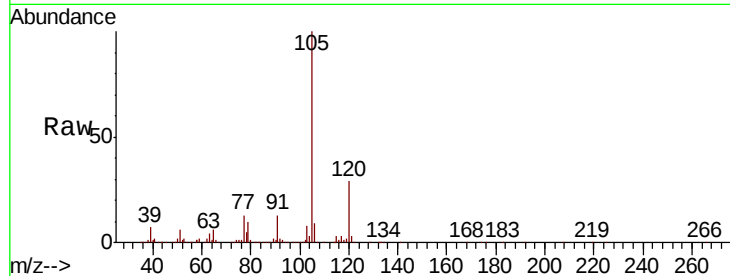




#71
 2-Chlorotoluene
 Concen: 0.837 ppbv
 RT: 15.82 min Scan# 4053
 Delta R.T. 0.39 min
 Lab File: VL037468.D
 Acq: 16 Aug 2021 19:21

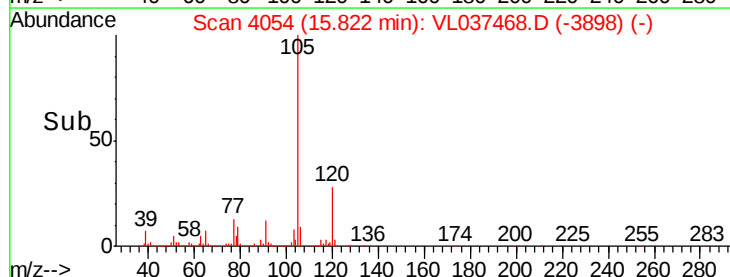
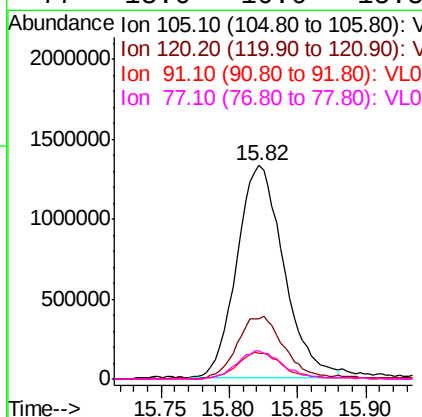
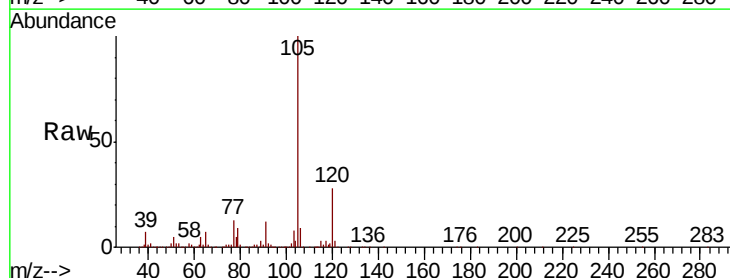
Instrument :
 MSVOA_L
 ClientSampleId :

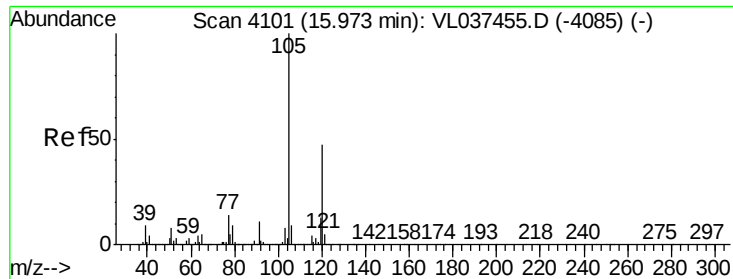
Tot Ion: 91 Resp: 367531
 Ion Ratio Lower Upper
 91 100
 126 0.0 13.6 54.4#



#72
 4-Ethyltoluene
 Concen: 6.320 ppbv
 RT: 15.82 min Scan# 4054
 Delta R.T. 0.00 min
 Lab File: VL037468.D
 Acq: 16 Aug 2021 19:21

Tgt Ion:105 Resp: 3188700
 Ion Ratio Lower Upper
 105 100
 120 30.9 24.7 37.1
 91 12.9 9.8 14.8
 77 13.6 10.6 15.8

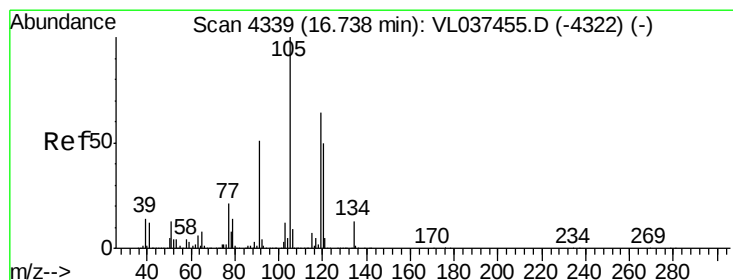
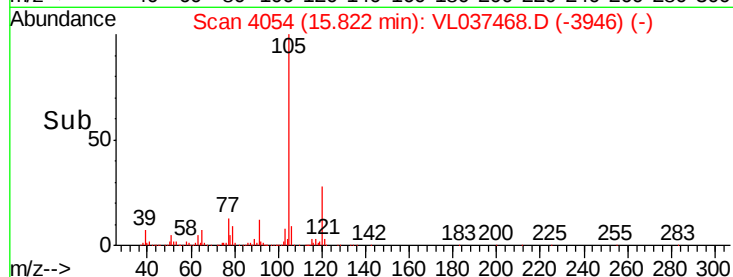
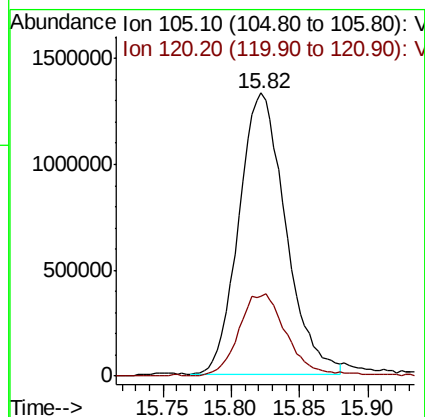
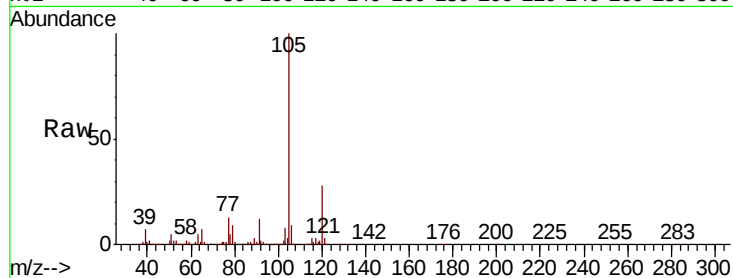




#73
 1,3,5-Trimethylbenzene
 Concen: 6.789 ppbv
 RT: 15.82 min Scan# 4054
 Delta R.T. -0.15 min
 Lab File: VL037468.D
 Acq: 16 Aug 2021 19:21

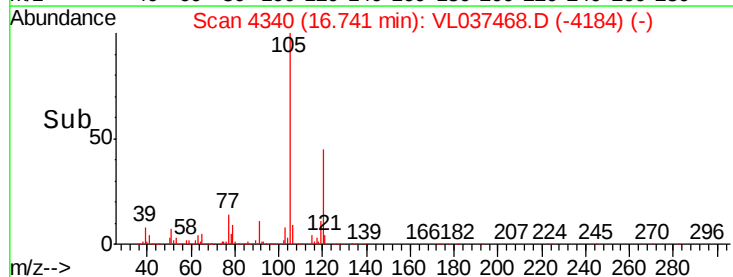
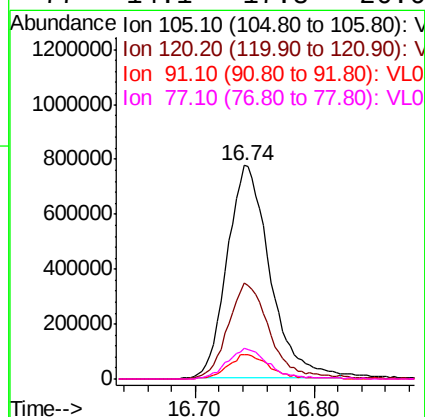
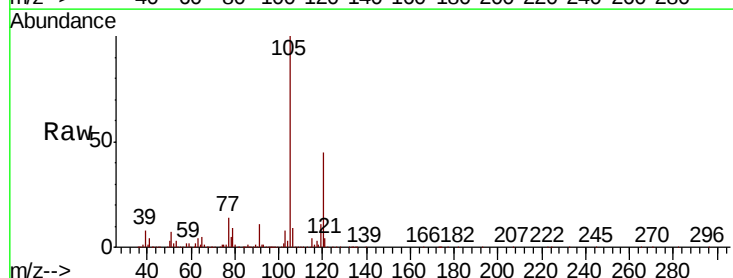
Instrument :
 MSVOA_L
 ClientSampleId :

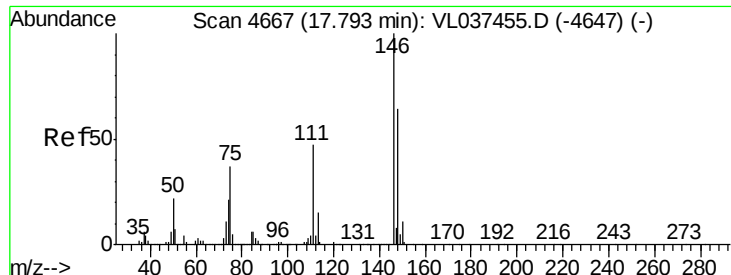
Tot Ion:105 Resp: 3188700
 Ion Ratio Lower Upper
 105 100
 120 28.0 37.6 56.4#



#74
 1,2,4-Trimethylbenzene
 Concen: 3.847 ppbv
 RT: 16.74 min Scan# 4340
 Delta R.T. 0.00 min
 Lab File: VL037468.D
 Acq: 16 Aug 2021 19:21

Tgt Ion:105 Resp: 1919840
 Ion Ratio Lower Upper
 105 100
 120 44.8 40.4 60.6
 91 11.2 44.6 67.0#
 77 14.1 17.8 26.6#





#77

1,2-Dichlorobenzene

Concen: 3.016 ppbv

RT: 17.80 min Scan# 4669

Delta R.T. 0.01 min

Lab File: VL037468.D

Acq: 16 Aug 2021 19:21

Instrument :

MSVOA_L

ClientSampleId :

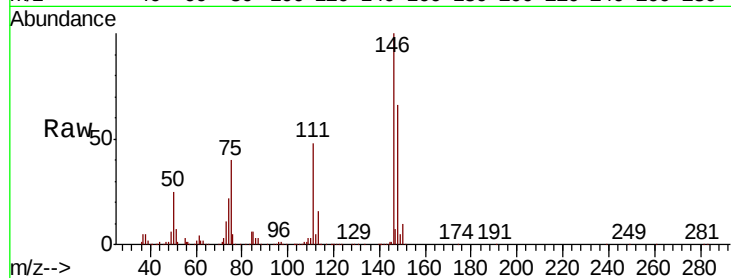
Tot Ion:146 Resp: 892126

Ion Ratio Lower Upper

146 100

111 49.6 23.4 70.3

148 66.8 32.5 97.5



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

