

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL081621\
 Data File : VL037467.D
 Acq On : 16 Aug 2021 18:42
 Operator : SY/AP
 Sample : M3277-01DL 2X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Aug 17 02:22:20 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

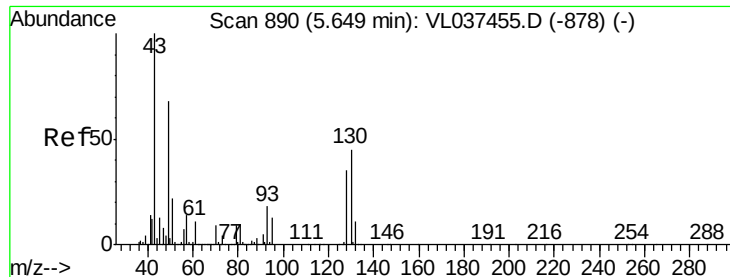
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1456052	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4360167	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3859348	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2750383	10.03	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	2.99	51	10660	0.038	ppbv	94
4) Chloromethane	3.13	50	1386687	13.918	ppbv	89
11) Trichlorofluoromethane	3.94	101	2024831	9.233	ppbv	97
13) Ethanol	3.61	45	29636	3.053	ppbv #	49
15) Acetone	3.84	43	122459	0.826	ppbv #	60
20) Methylene Chloride	4.33	84	692444	9.333	ppbv	96
23) Vinyl Acetate	5.06	43	7705	0.035	ppbv #	72
24) 1,1-Dichloroethane	5.00	63	1197123	7.557	ppbv	99
25) Ethyl Acetate	5.67	43	1520816	4.043	ppbv #	76
26) Hexane	5.68	57	2157902	11.732	ppbv #	45
34) 2-Butanone	5.17	43	18375	0.103	ppbv #	75
35) Carbon Tetrachloride	7.01	117	1211143	4.700	ppbv	98
39) 1,2-Dichloropropane	7.60	63	870976	6.184	ppbv	97
41) Tetrahydrofuran	5.68	42	792131	9.235	ppbv #	49
42) Bromodichloromethane	7.77	83	2869862	10.810	ppbv	98
47) 1,1,2-Trichloroethane	9.46	97	4976	0.033	ppbv #	53
64) n-propylbenzene	15.82	120	1903387	12.229	ppbv #	1
65) tert-Butylbenzene	16.74	119	486157	0.873	ppbv #	71
66) Benzyl Chloride	16.82	91	5190	0.206	ppbv #	1
71) 2-Chlorotoluene	15.82	91	797061	1.777	ppbv #	41
72) 4-Ethyltoluene	15.82	105	6547853	12.703	ppbv	99
73) 1,3,5-Trimethylbenzene	15.82	105	6547853	13.647	ppbv #	75
74) 1,2,4-Trimethylbenzene	16.74	105	4179194	8.197	ppbv #	66
75) 1,3-Dichlorobenzene	16.99	146	12556	0.041	ppbv #	1
77) 1,2-Dichlorobenzene	17.80	146	1012958	3.352	ppbv #	22

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. 0.01 min

Lab File: VL037467.D

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ClientSampleId :

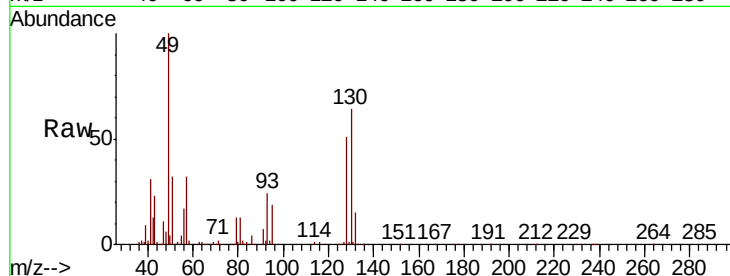
Tot Ion: 49 Resp: 1456052

Ion Ratio Lower Upper

49 100

128 55.4 27.5 82.4

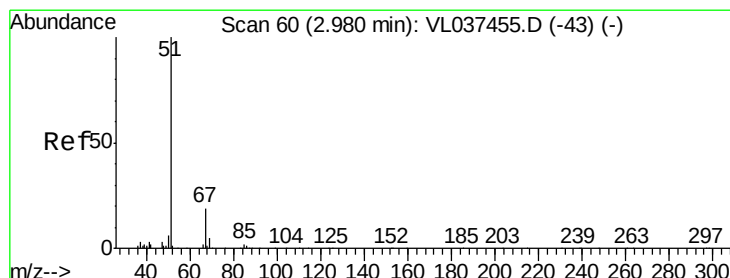
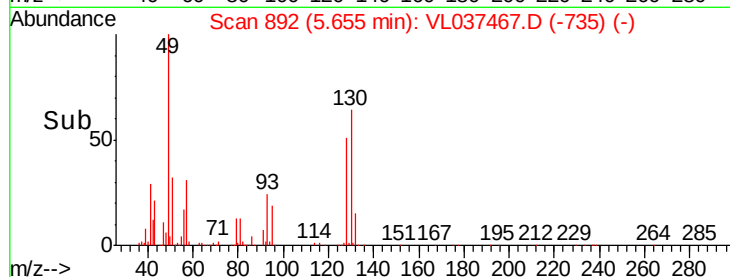
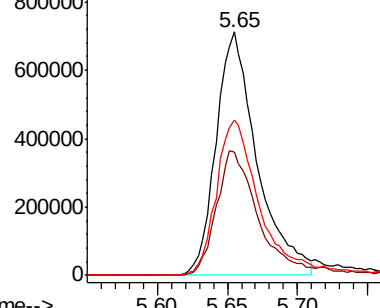
130 69.9 34.0 101.8



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



#3

Chlorodifluoromethane

Concen: 0.038 ppbv

RT: 2.99 min Scan# 63

Delta R.T. 0.01 min

Lab File: VL037467.D

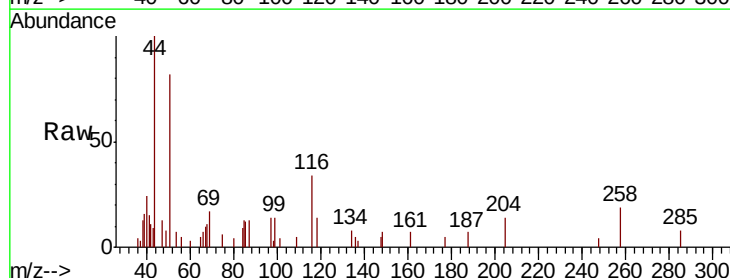
Acq: 16 Aug 2021 18:42

Tgt Ion: 51 Resp: 10660

Ion Ratio Lower Upper

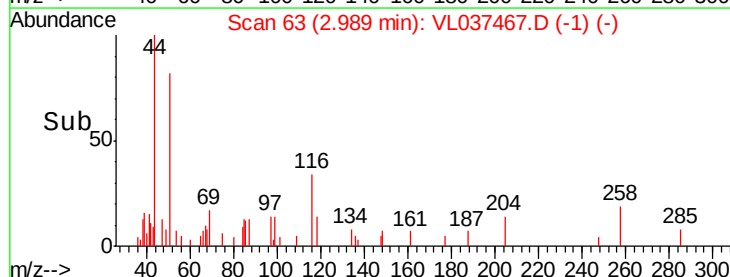
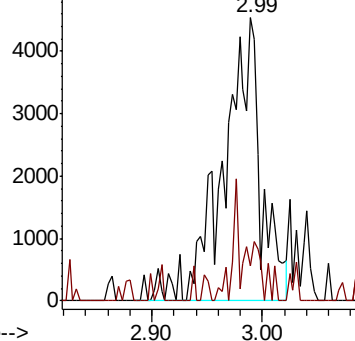
51 100

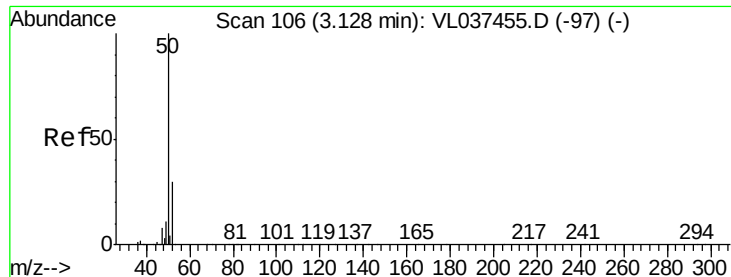
67 20.5 14.2 21.2



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 13.918 ppbv

RT: 3.13 min Scan# 108

Delta R.T. 0.01 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Instrument :

MSVOA_L

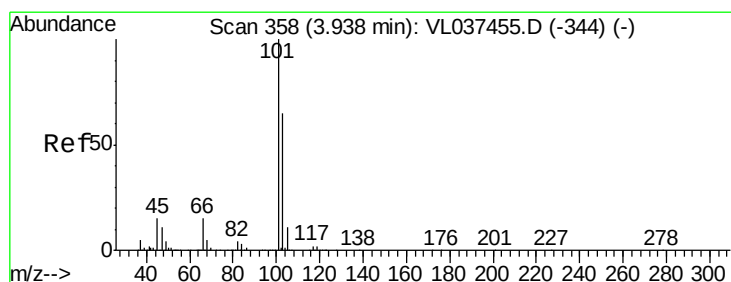
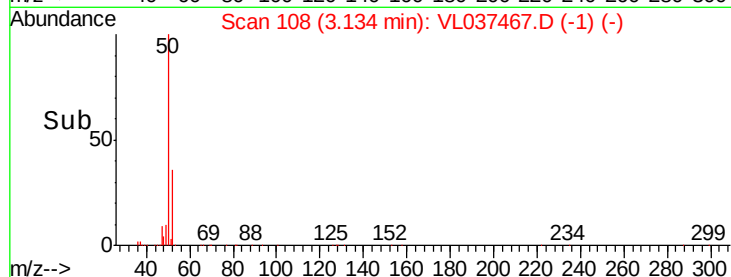
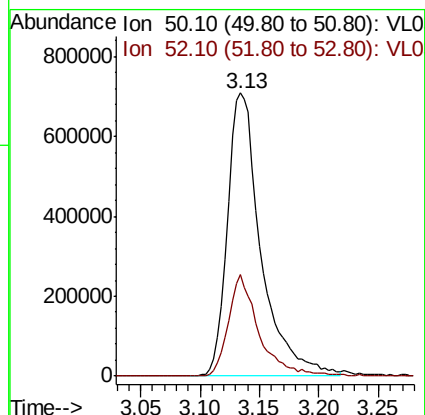
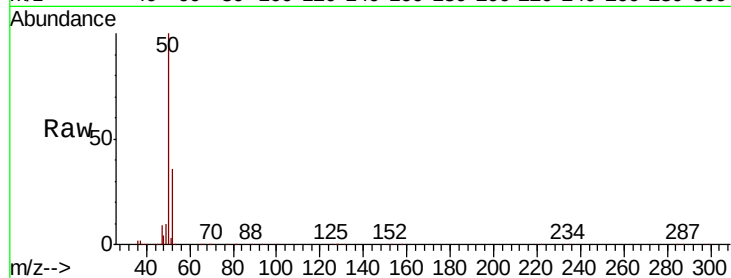
ClientSampleId :

Tot Ion: 50 Resp: 1386687

Ion Ratio Lower Upper

50 100

52 35.7 24.0 36.0



#11

Trichlorofluoromethane

Concen: 9.233 ppbv

RT: 3.94 min Scan# 359

Delta R.T. 0.00 min

Lab File: VL037467.D

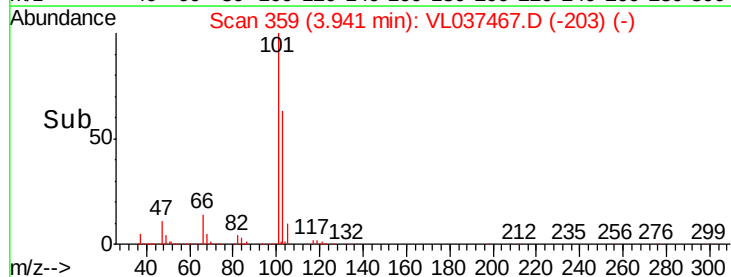
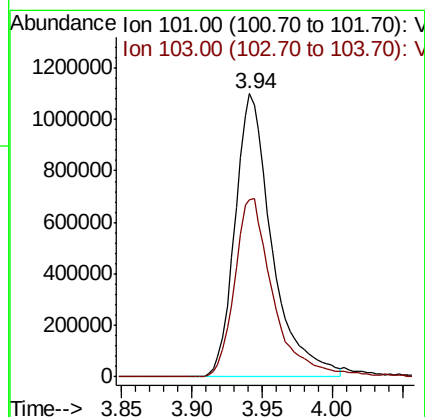
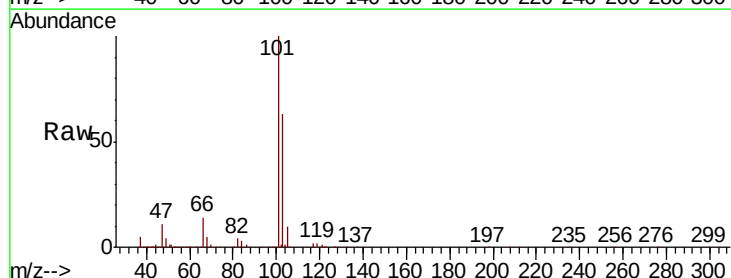
Acq: 16 Aug 2021 18:42

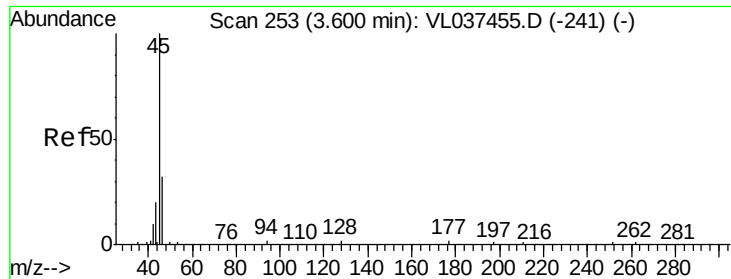
Tgt Ion:101 Resp: 2024831

Ion Ratio Lower Upper

101 100

103 62.6 51.8 77.6

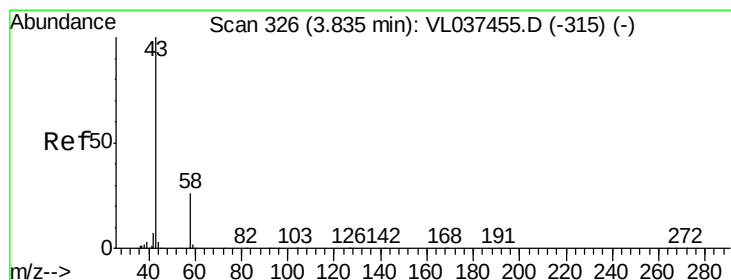
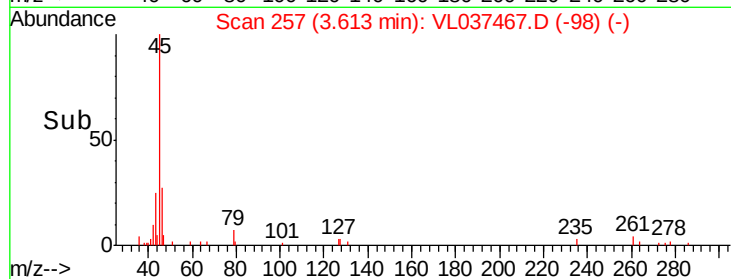
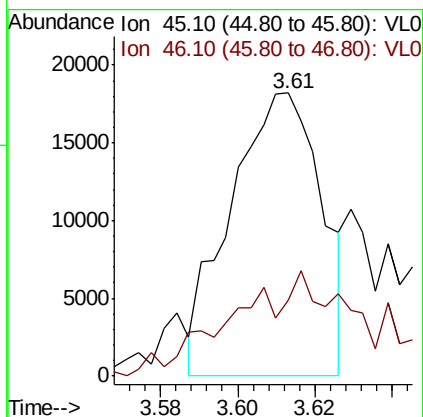
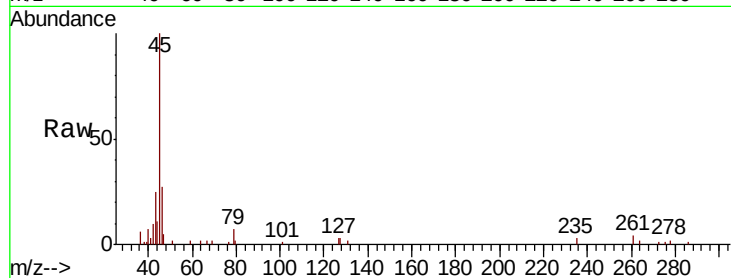




#13
Ethanol
Concen: 3.053 ppbv
RT: 3.61 min Scan# 257
Delta R.T. 0.01 min
Lab File: VL037467.D
Acq: 16 Aug 2021 18:42

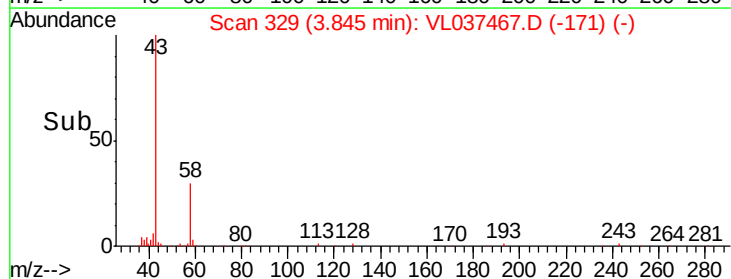
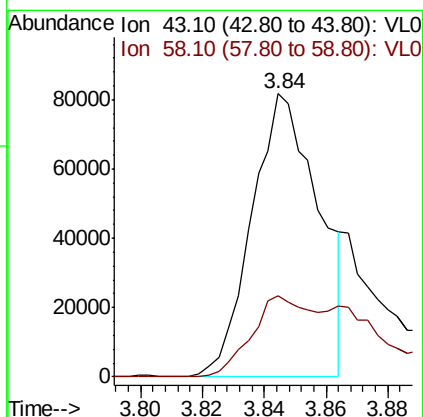
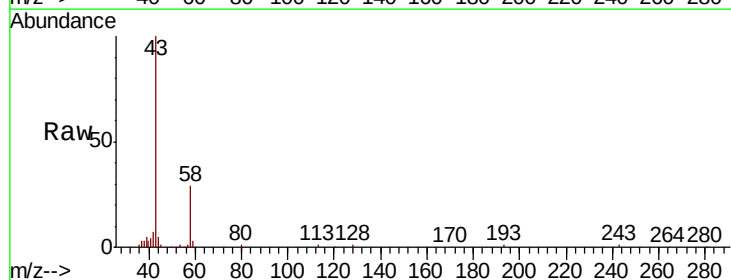
Instrument :
MSVOA_L
ClientSampled :

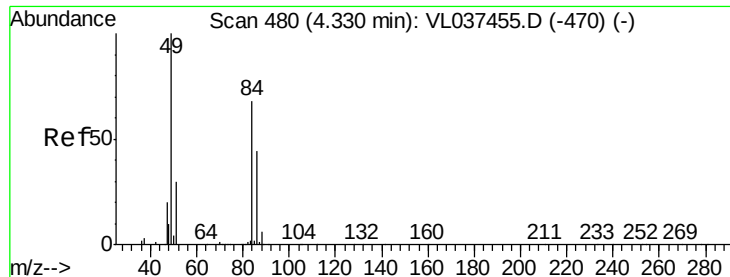
Tot Ion: 45 Resp: 29636
Ion Ratio Lower Upper
45 100
46 65.1 14.1 56.5#



#15
Acetone
Concen: 0.826 ppbv
RT: 3.84 min Scan# 329
Delta R.T. 0.01 min
Lab File: VL037467.D
Acq: 16 Aug 2021 18:42

Tgt Ion: 43 Resp: 122459
Ion Ratio Lower Upper
43 100
58 53.1 24.8 37.2#

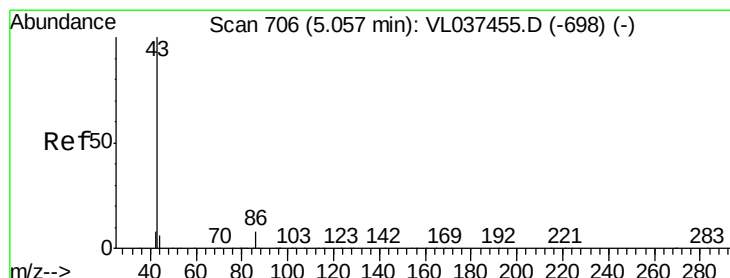
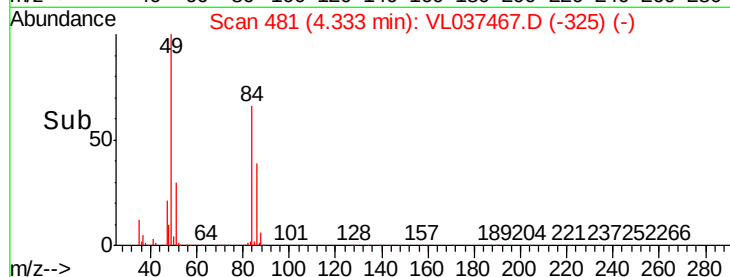
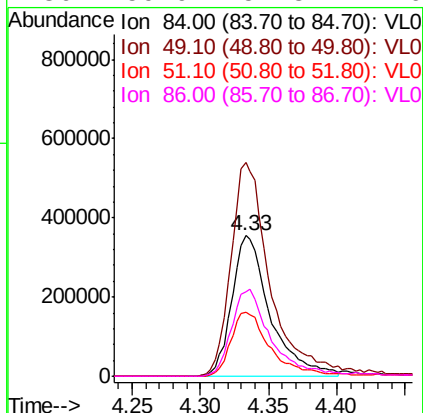
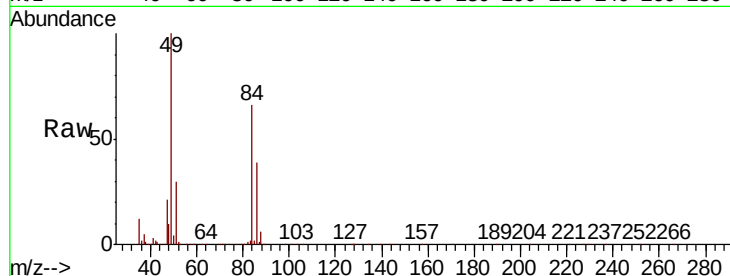




#20
Methylene Chloride
Concen: 9.333 ppbv
RT: 4.33 min Scan# 481
Delta R.T. 0.00 min
Lab File: VL037467.D
Acq: 16 Aug 2021 18:42

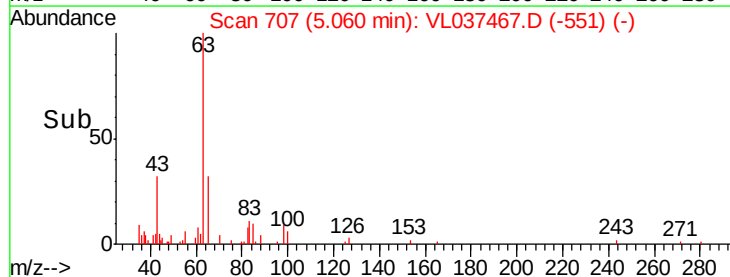
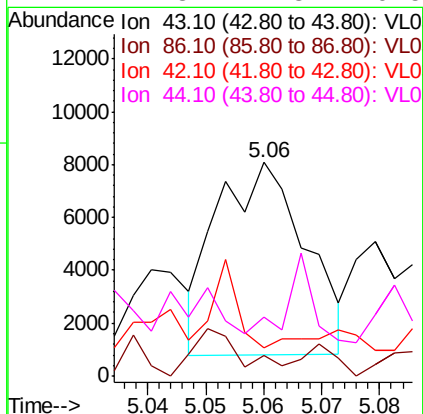
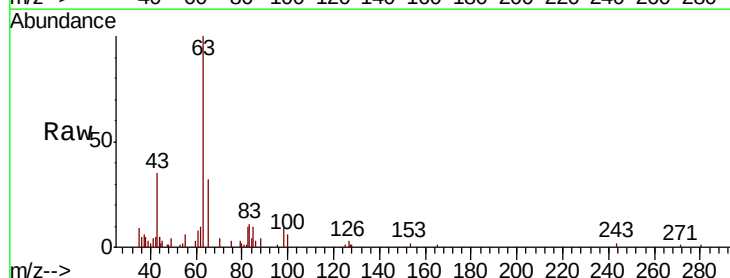
Instrument :
MSVOA_L
ClientSampled :

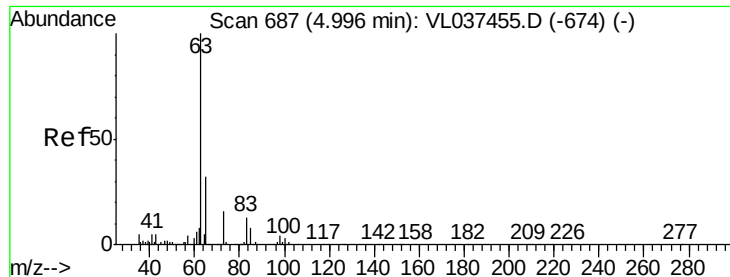
Tot Ion:	84	Resp:	692444
Ion	Ratio	Lower	Upper
84	100		
49	152.3	118.2	177.2
51	45.4	36.6	55.0
86	59.9	51.8	77.6



#23
Vinyl Acetate
Concen: 0.035 ppbv
RT: 5.06 min Scan# 707
Delta R.T. 0.00 min
Lab File: VL037467.D
Acq: 16 Aug 2021 18:42

Tgt Ion:	43	Resp:	7705
Ion	Ratio	Lower	Upper
43	100		
86	1.3	5.7	8.5#
42	0.0	7.4	11.2#
44	21.3	4.3	6.5#





#24

1,1-Dichloroethane

Concen: 7.557 ppbv

RT: 5.00 min Scan# 689

Delta R.T. 0.01 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Instrument :

MSVOA_L

ClientSampleId :

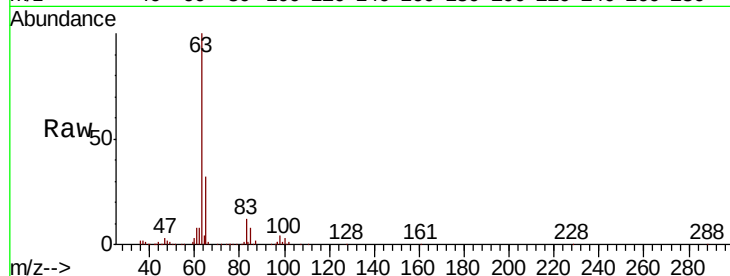
Tot Ion: 63 Resp: 1197123

Ion Ratio Lower Upper

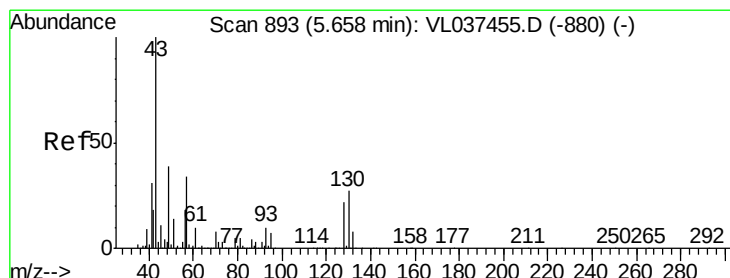
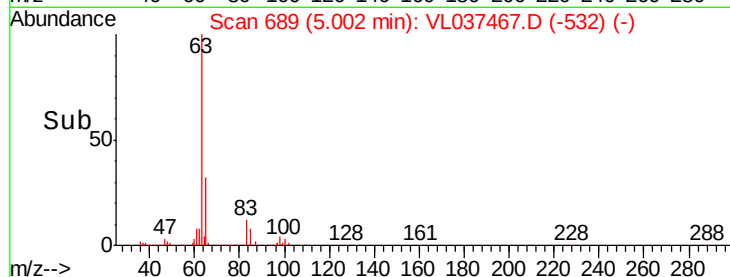
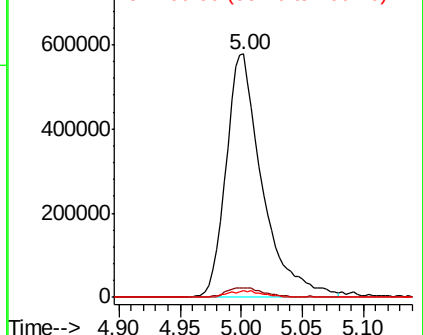
63 100

98 3.9 2.1 6.3

100 2.6 1.6 4.7



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 98.00 (97.70 to 98.70): VL0
Ion 100.00 (99.70 to 100.70): VL0



#25

Ethyl Acetate

Concen: 4.043 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.02 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Tgt Ion: 43 Resp: 1520816

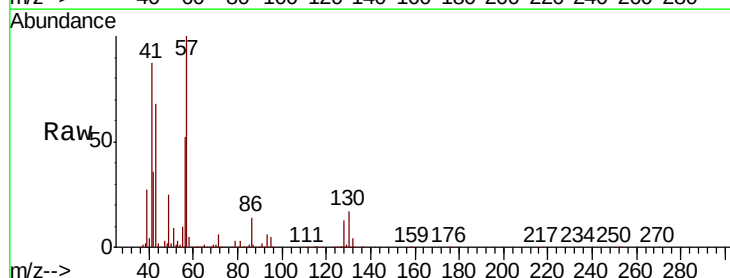
Ion Ratio Lower Upper

43 100

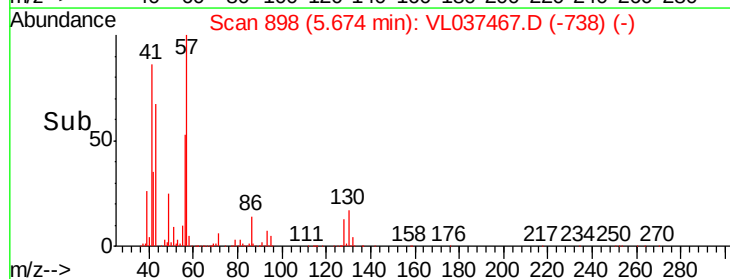
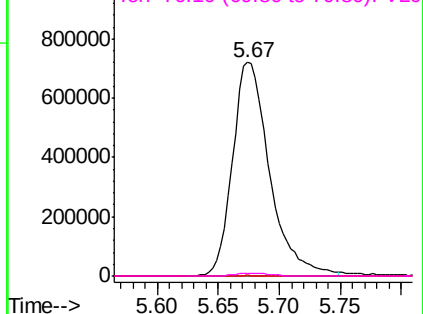
45 0.2 8.0 12.0#

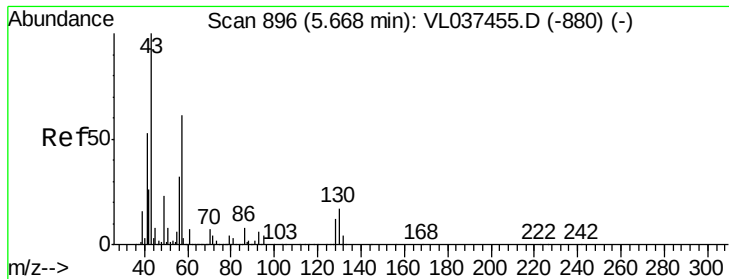
61 0.2 8.0 12.0#

70 1.4 5.6 8.4#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 11.732 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.01 min

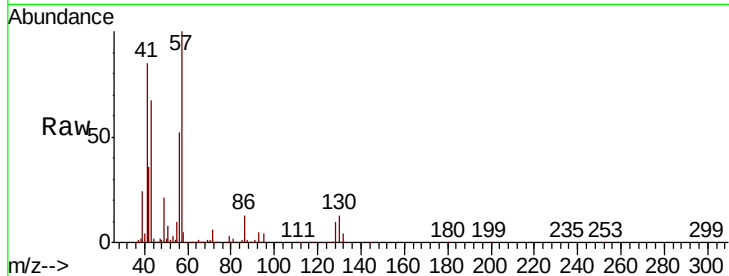
Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

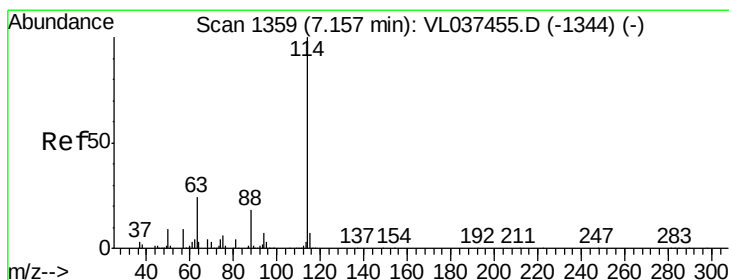
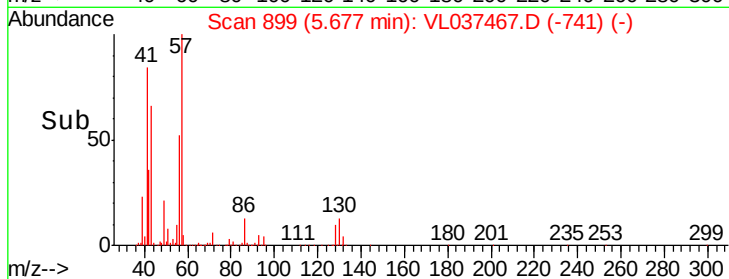
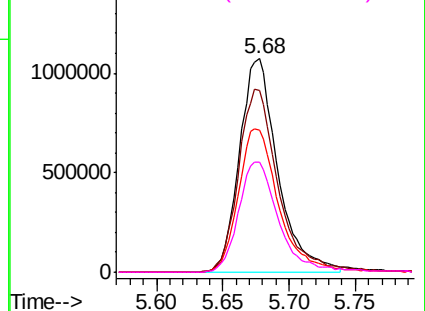
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 57 Resp: 2157902

Ion	Ratio	Lower	Upper
57	100		
41	89.7	72.3	108.5
43	71.6	172.3	258.5#
56	54.7	42.8	64.2



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1361

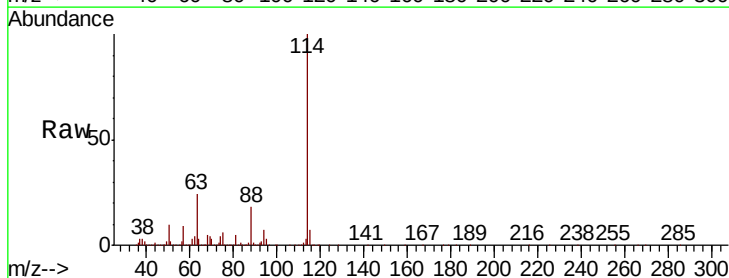
Delta R.T. 0.01 min

Lab File: VL037467.D

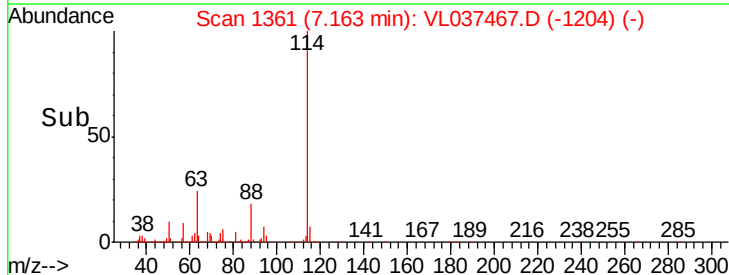
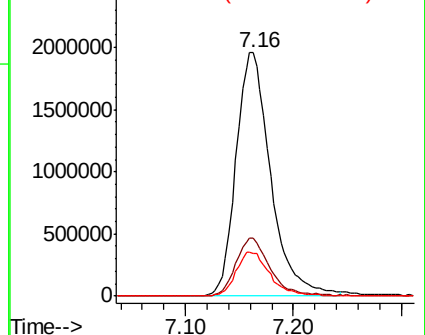
Acq: 16 Aug 2021 18:42

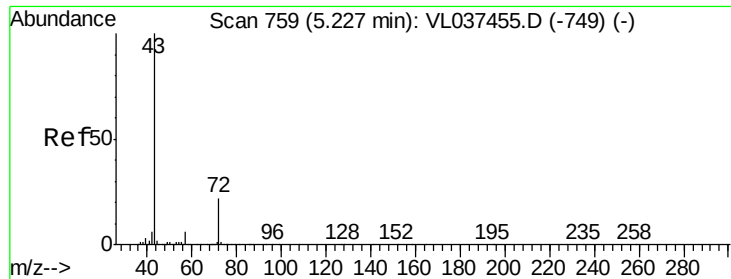
Tgt Ion: 114 Resp: 4360167

Ion	Ratio	Lower	Upper
114	100		
63	23.9	19.3	28.9
88	17.9	14.2	21.4



Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0

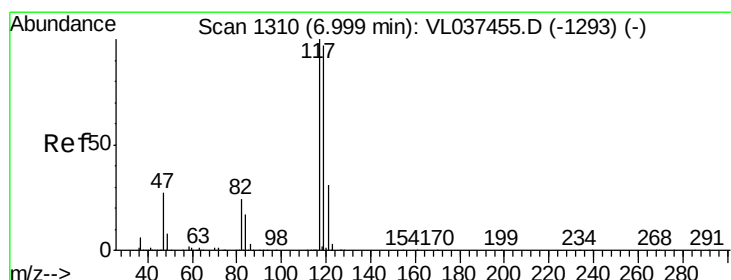
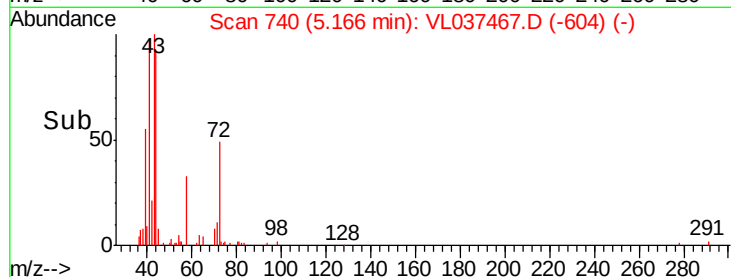
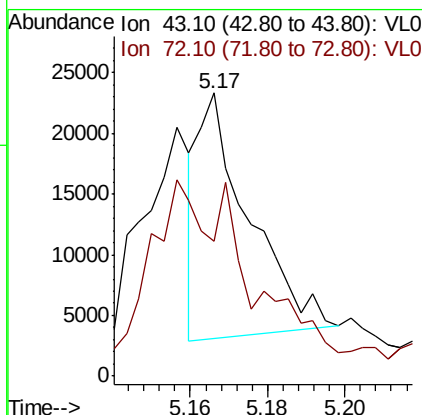
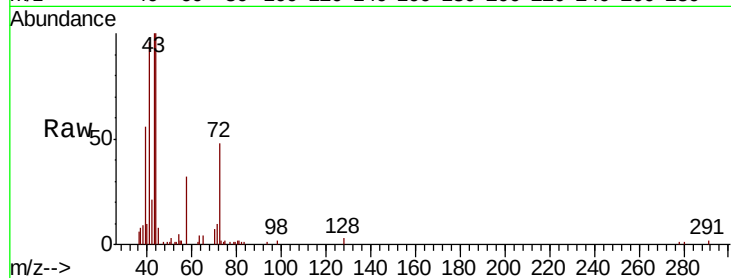




#34
 2-Butanone
 Concen: 0.103 ppbv
 RT: 5.17 min Scan# 740
 Delta R.T. -0.06 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

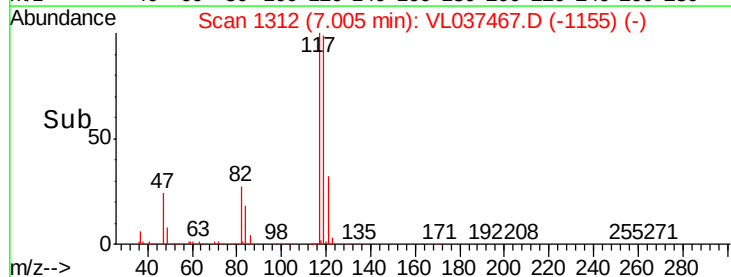
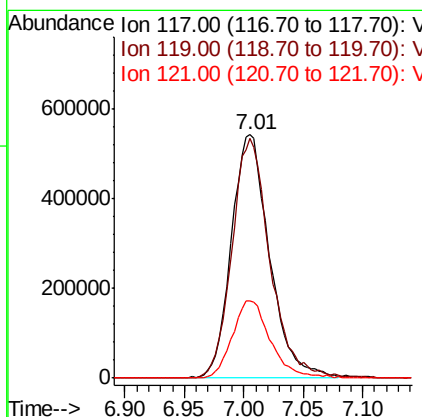
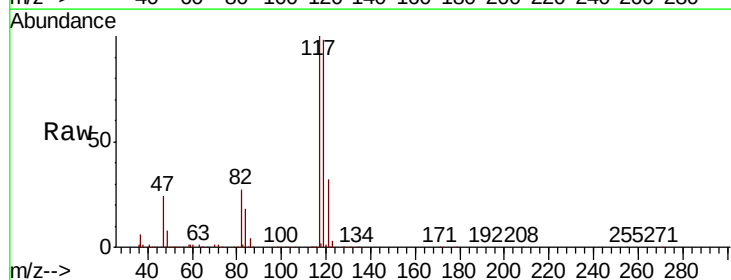
Instrument :
 MSVOA_L
 ClientSampled :

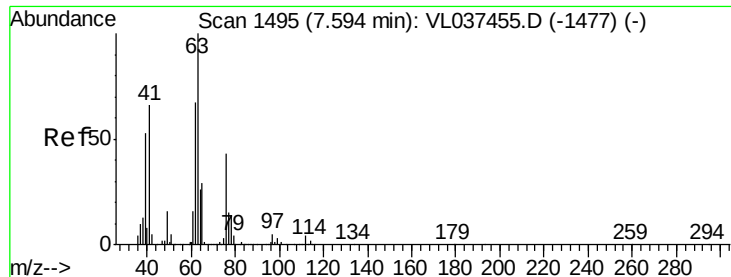
Tot Ion: 43 Resp: 18375
 Ion Ratio Lower Upper
 43 100
 72 33.5 17.4 26.0#



#35
 Carbon Tetrachloride
 Concen: 4.700 ppbv
 RT: 7.01 min Scan# 1312
 Delta R.T. 0.01 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

Tgt Ion: 117 Resp: 1211143
 Ion Ratio Lower Upper
 117 100
 119 98.4 77.3 115.9
 121 31.8 25.2 37.8

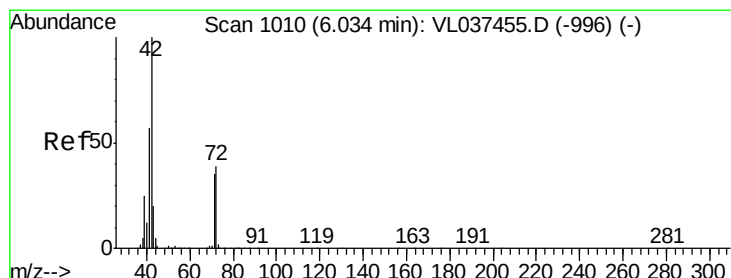
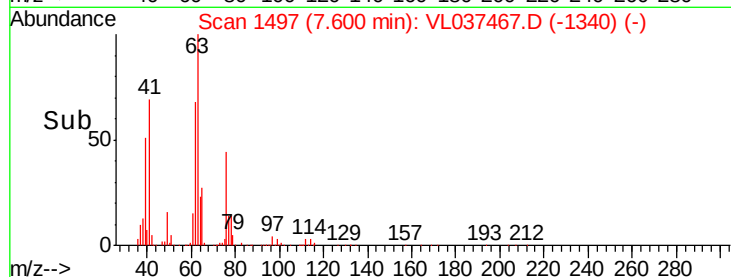
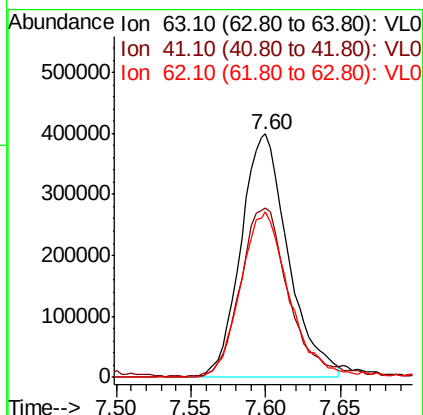
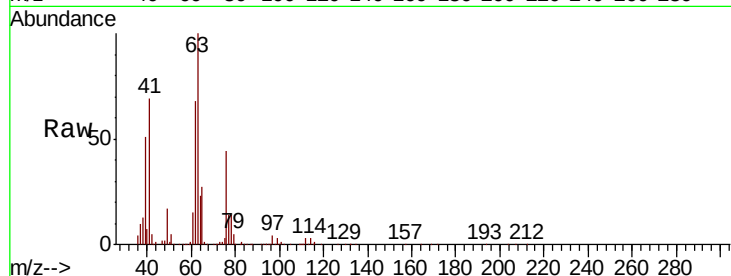




#39
 1,2-Dichloropropane
 Concen: 6.184 ppbv
 RT: 7.60 min Scan# 1497
 Delta R.T. 0.01 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

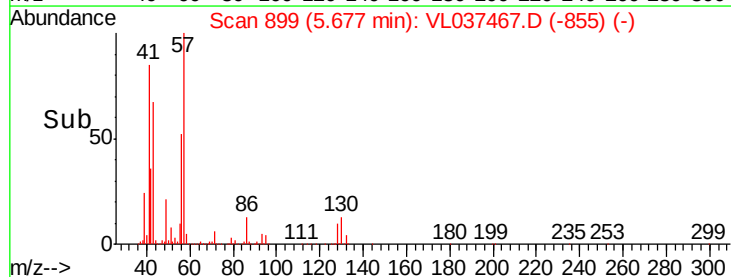
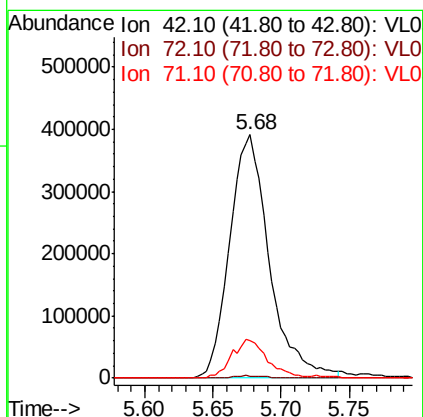
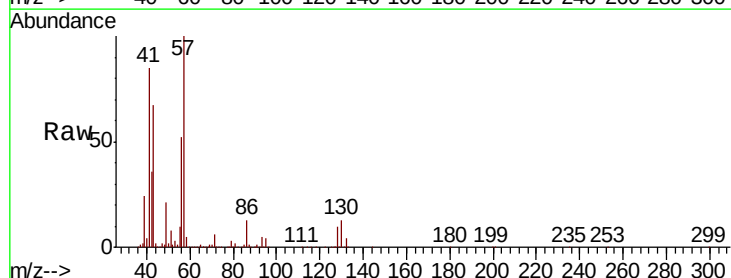
Instrument :
 MSVOA_L
 ClientSampleId :

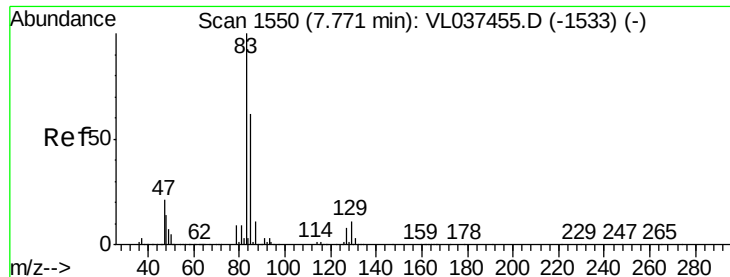
Tot Ion: 63 Resp: 870976
 Ion Ratio Lower Upper
 63 100
 41 69.0 52.4 78.6
 62 67.9 53.6 80.4



#41
 Tetrahydrofuran
 Concen: 9.235 ppbv
 RT: 5.68 min Scan# 899
 Delta R.T. -0.36 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

Tgt Ion: 42 Resp: 792131
 Ion Ratio Lower Upper
 42 100
 72 0.9 32.2 48.4#
 71 15.2 30.5 45.7#





#42

Bromodichloromethane

Concen: 10.810 ppbv

RT: 7.77 min Scan# 1551

Delta R.T. 0.00 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Instrument :

MSVOA_L

ClientSampleId :

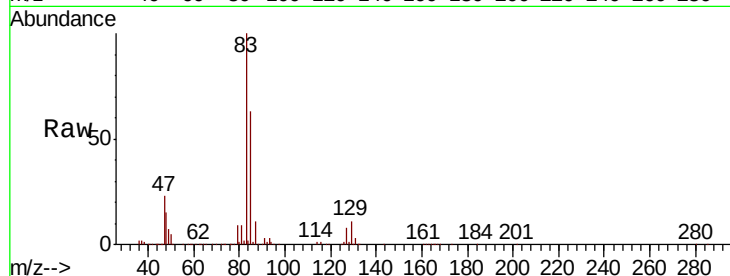
Tot Ion: 83 Resp: 2869862

Ion Ratio Lower Upper

83 100

85 63.2 49.5 74.3

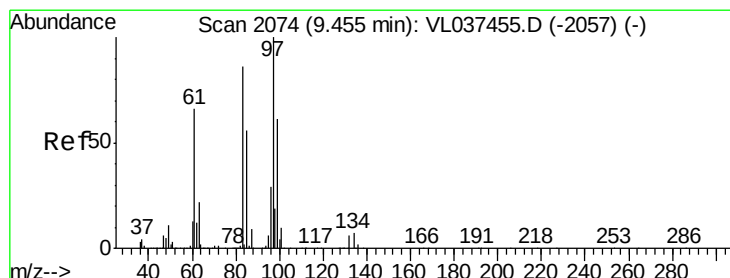
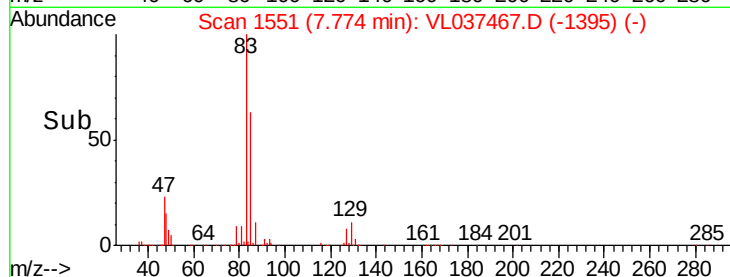
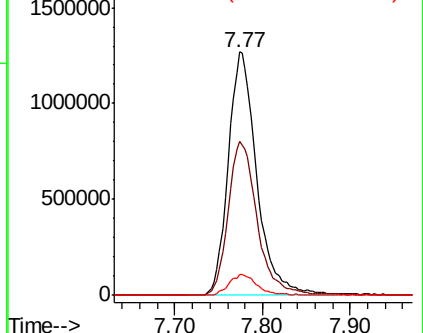
127 8.3 6.3 9.5



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): VL0



#47

1,1,2-Trichloroethane

Concen: 0.033 ppbv

RT: 9.46 min Scan# 2077

Delta R.T. 0.01 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Tgt Ion: 97 Resp: 4976

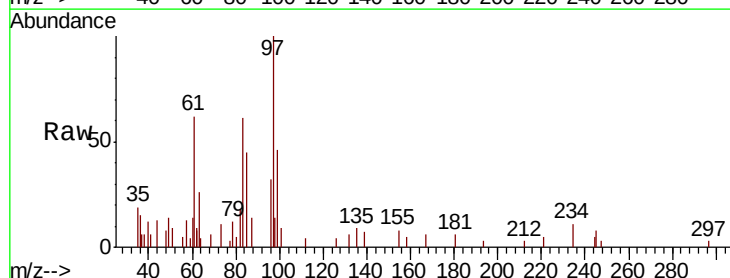
Ion Ratio Lower Upper

97 100

83 35.4 68.7 103.1#

85 41.8 44.7 67.1#

99 12.9 48.6 72.8#

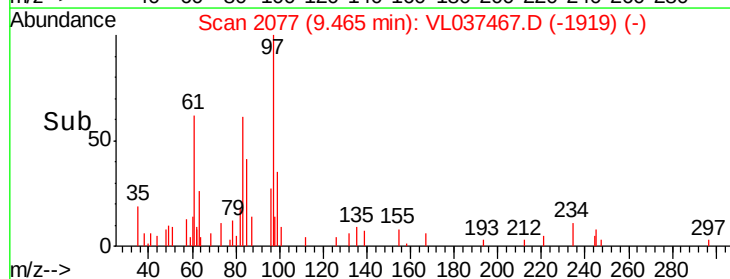
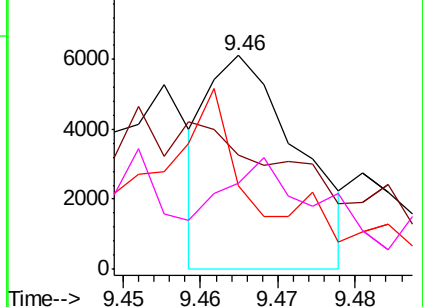


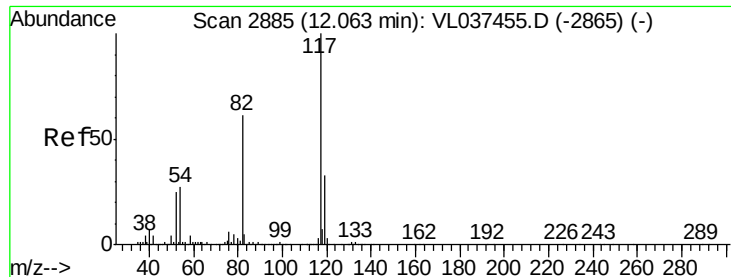
Abundance Ion 97.00 (96.70 to 97.70): VL0

Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

Ion 99.00 (98.70 to 99.70): VL0





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. 0.01 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Instrument :

MSVOA_L

ClientSampleId :

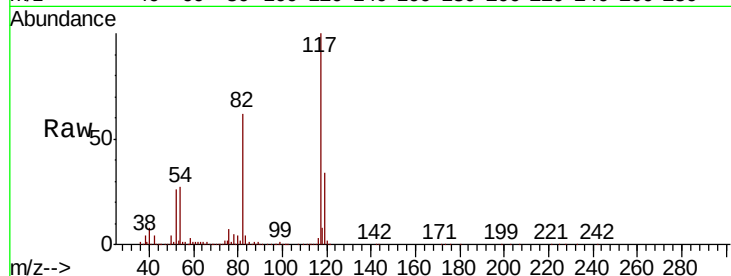
Tot Ion:117 Resp: 3859348

Ion Ratio Lower Upper

117 100

82 63.5 52.9 79.3

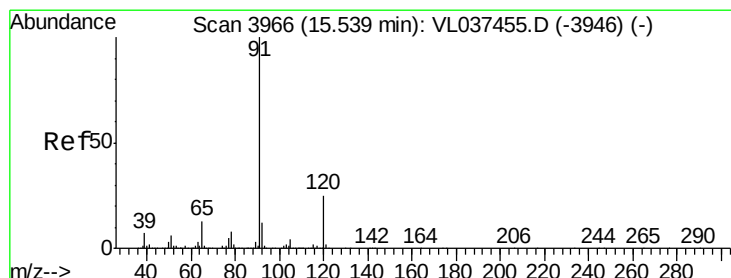
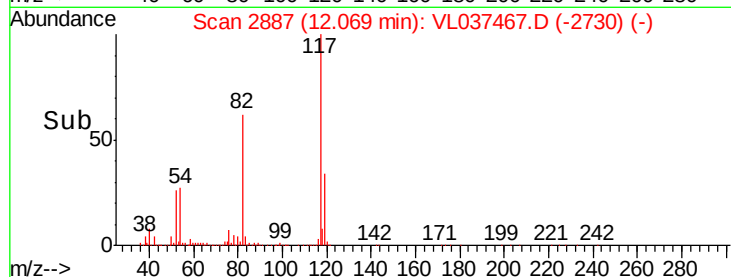
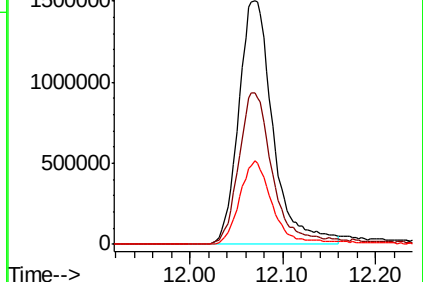
119 34.1 24.8 37.2



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: 12.229 ppbv

RT: 15.82 min Scan# 4053

Delta R.T. 0.28 min

Lab File: VL037467.D

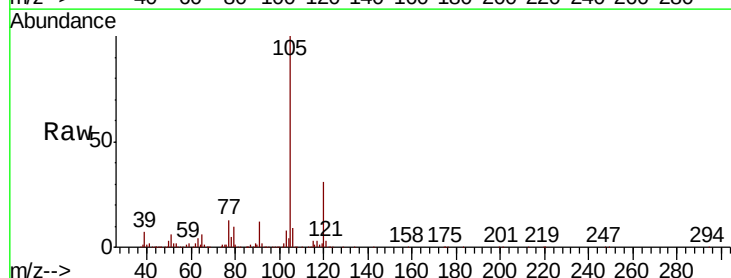
Acq: 16 Aug 2021 18:42

Tgt Ion:120 Resp: 1903387

Ion Ratio Lower Upper

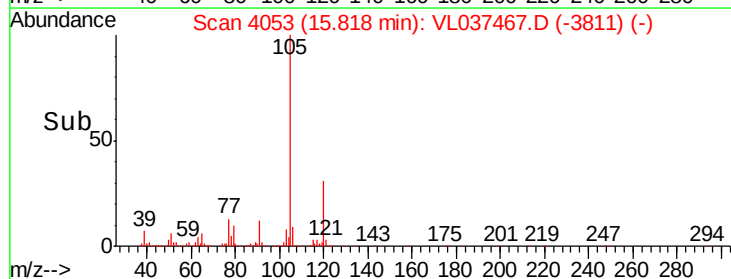
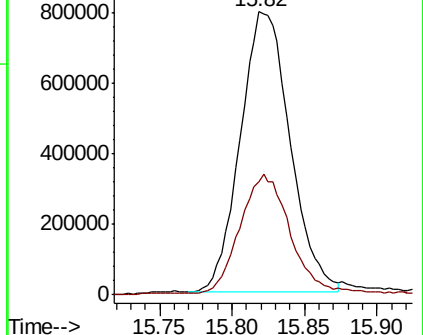
120 100

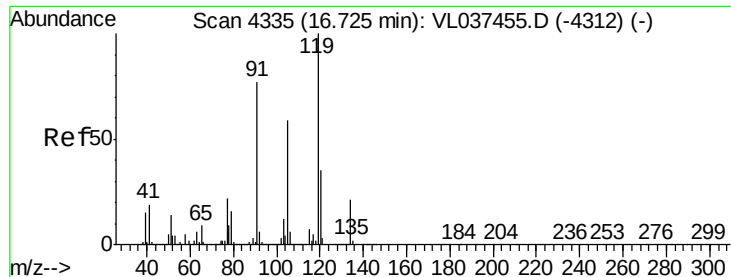
91 0.0 373.8 560.6#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0





#65

tert-Butylbenzene

Concen: 0.873 ppbv

RT: 16.74 min Scan# 4341

Delta R.T. 0.02 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

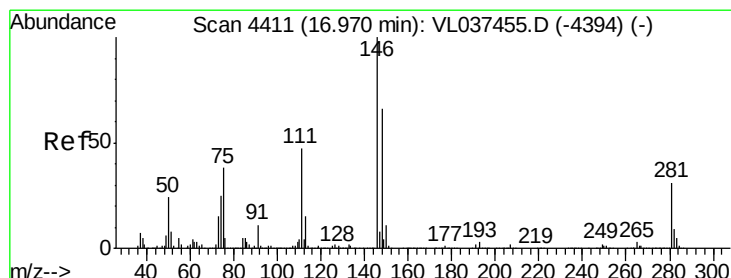
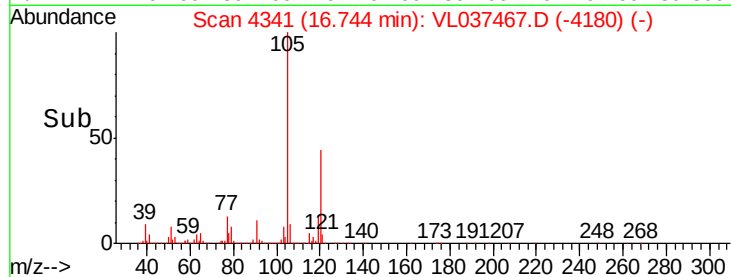
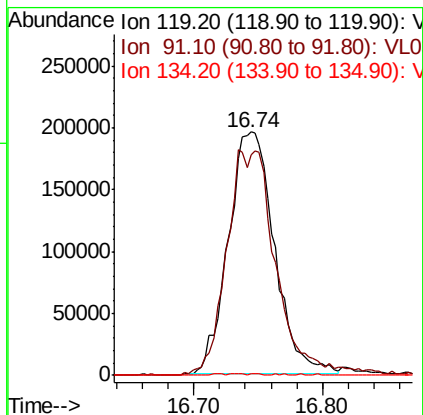
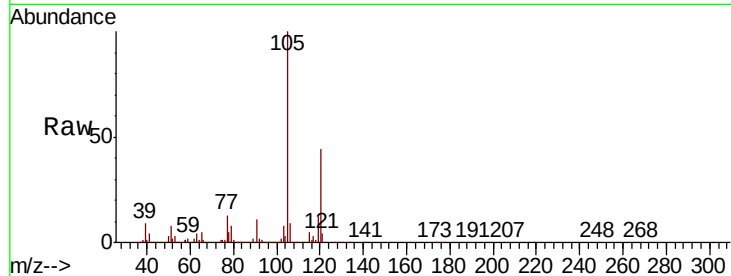
Instrument :

MSVOA_L

ClientSampled :

Tot Ion:119 Resp: 486157

Ion	Ratio	Lower	Upper
119	100		
91	100.7	62.9	94.3#
134	0.4	16.4	24.6#



#66

Benzyl Chloride

Concen: 0.206 ppbv

RT: 16.82 min Scan# 4363

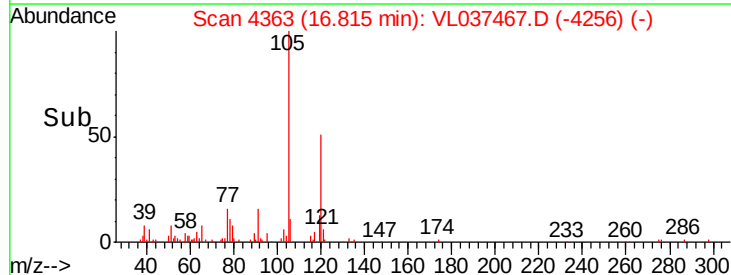
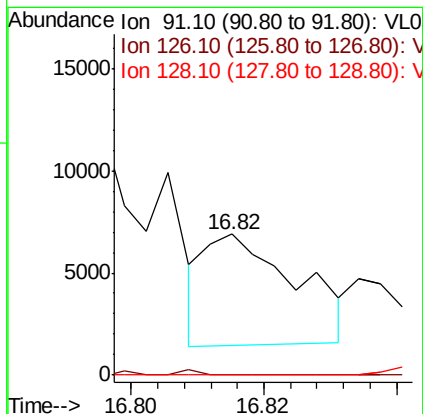
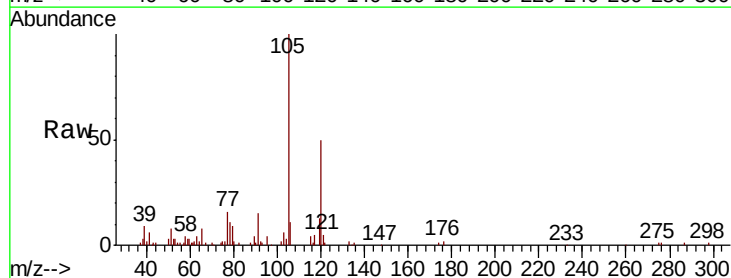
Delta R.T. -0.15 min

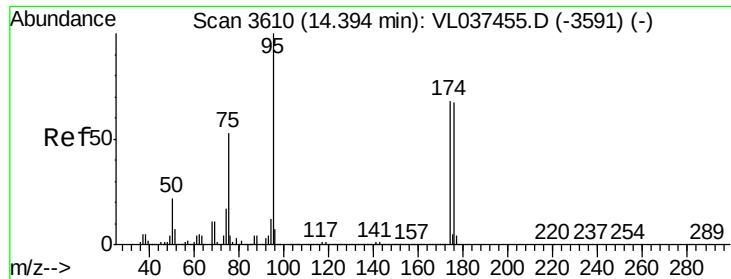
Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Tgt Ion: 91 Resp: 5190

Ion	Ratio	Lower	Upper
91	100		
126	106.0	15.9	23.9#
128	5.4	5.4	8.0#

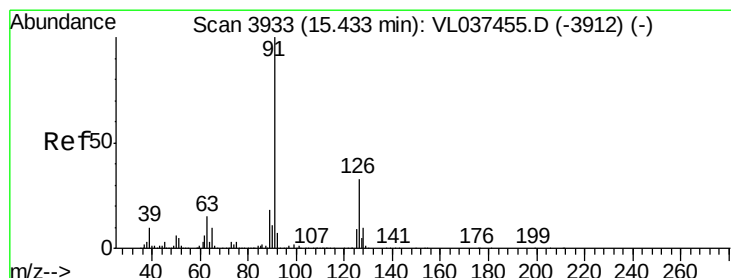
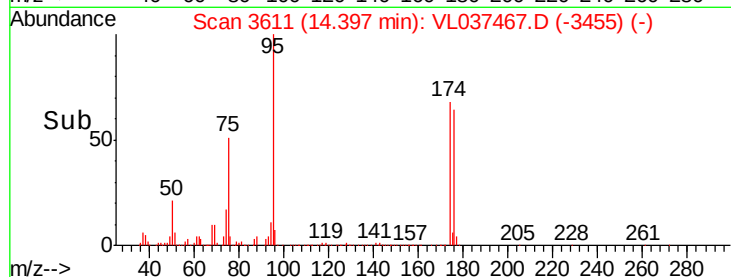
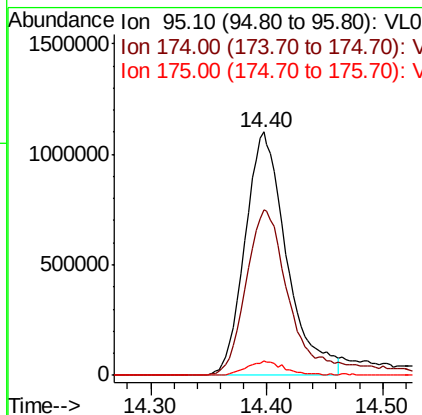
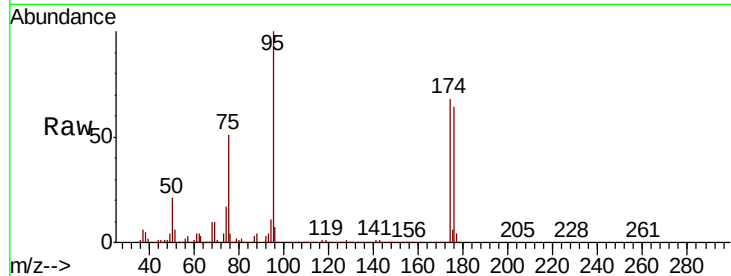




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.031 ppbv
 RT: 14.40 min Scan# 3611
 Delta R.T. 0.00 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

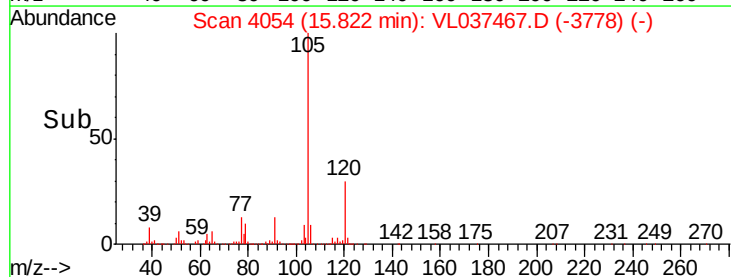
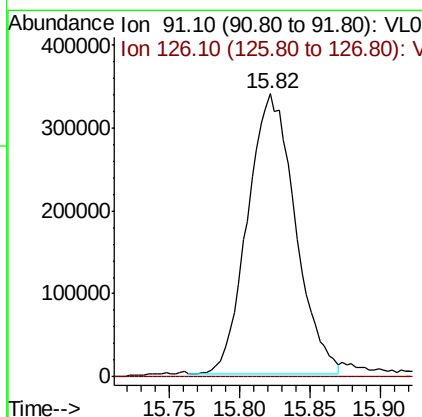
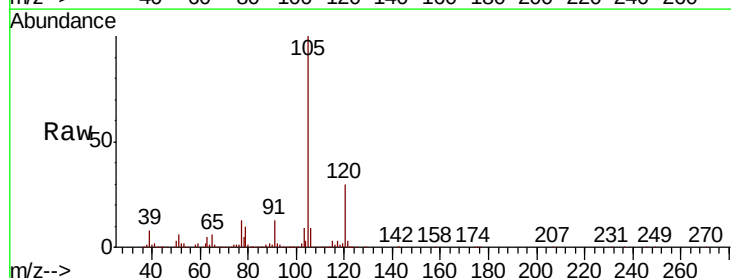
Instrument :
 MSVOA_L
 ClientSampleId :

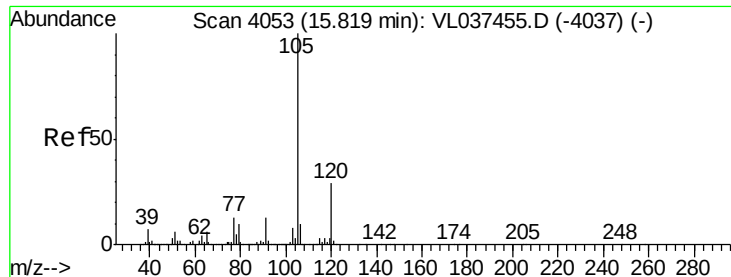
Tot Ion: 95 Resp: 2750383
 Ion Ratio Lower Upper
 95 100
 174 76.7 59.6 89.4
 175 5.8 4.6 7.0



#71
 2-Chlorotoluene
 Concen: 1.777 ppbv
 RT: 15.82 min Scan# 4054
 Delta R.T. 0.39 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

Tgt Ion: 91 Resp: 797061
 Ion Ratio Lower Upper
 91 100
 126 0.0 13.6 54.4#





#72

4-Ethyltoluene

Concen: 12.703 ppbv

RT: 15.82 min Scan# 4055

Delta R.T. 0.01 min

Lab File: VL037467.D

Acq: 16 Aug 2021 18:42

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 6547853

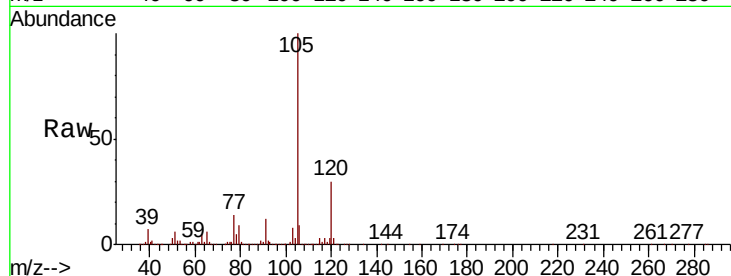
Ion	Ratio	Lower	Upper
105	100		
120	31.3	24.7	37.1
91	13.4	9.8	14.8
77	14.0	10.6	15.8

105 100

120 31.3 24.7 37.1

91 13.4 9.8 14.8

77 14.0 10.6 15.8

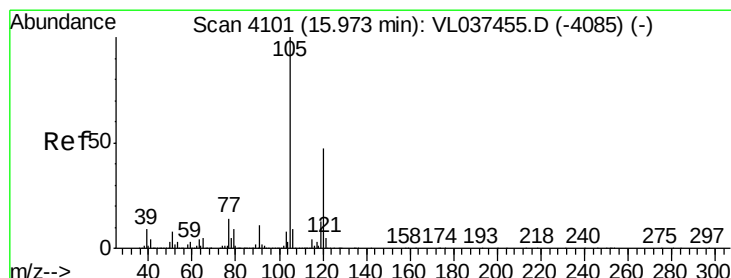
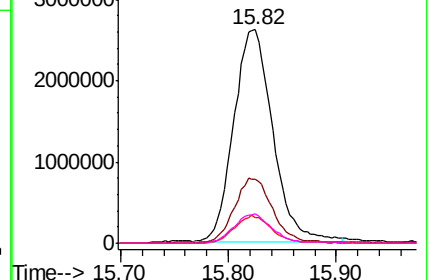
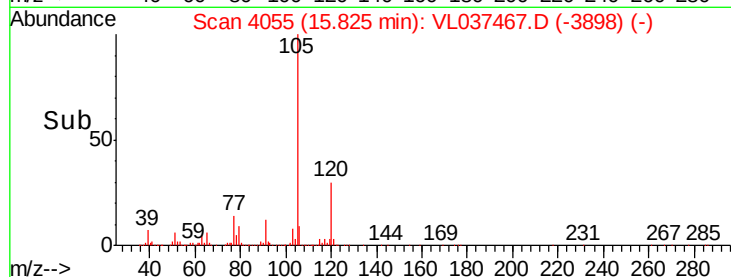


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#73

1,3,5-Trimethylbenzene

Concen: 13.647 ppbv

RT: 15.82 min Scan# 4055

Delta R.T. -0.15 min

Lab File: VL037467.D

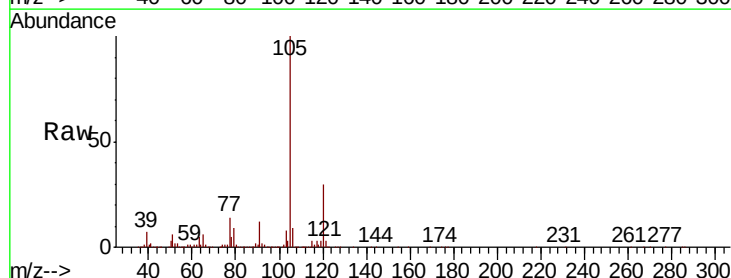
Acq: 16 Aug 2021 18:42

Tgt Ion:105 Resp: 6547853

Ion	Ratio	Lower	Upper
105	100		
120	30.1	37.6	56.4

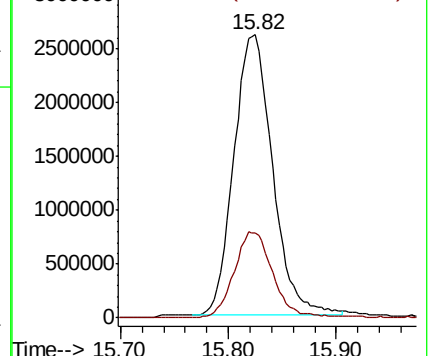
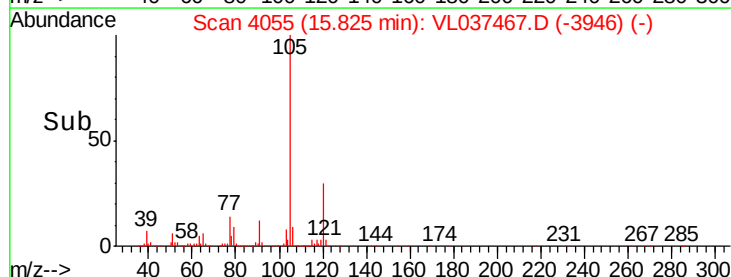
105 100

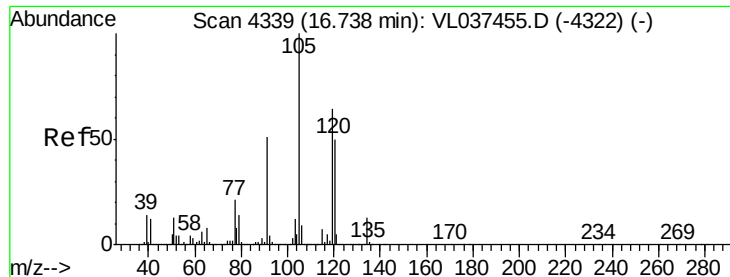
120 30.1 37.6 56.4



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

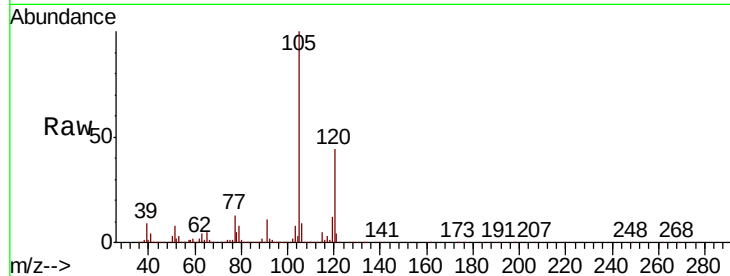




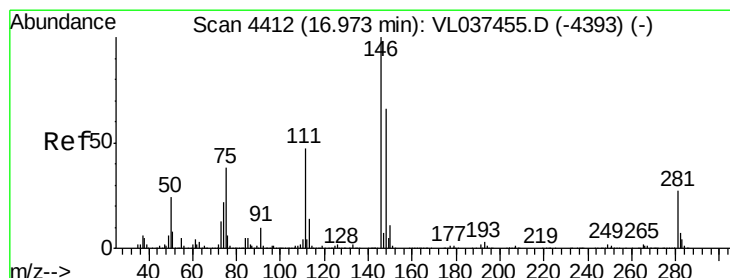
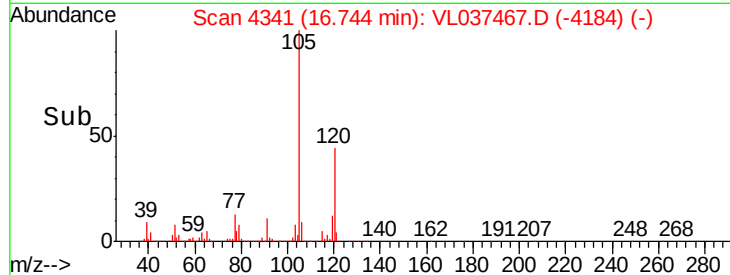
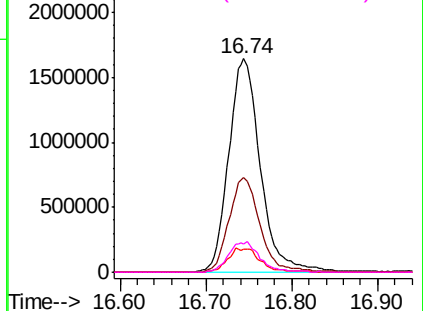
#74
 1,2,4-Trimethylbenzene
 Concen: 8.197 ppbv
 RT: 16.74 min Scan# 4341
 Delta R.T. 0.01 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion:105 Resp: 4179194
 Ion Ratio Lower Upper
 105 100
 120 44.2 40.4 60.6
 91 10.8 44.6 67.0#
 77 13.3 17.8 26.6#

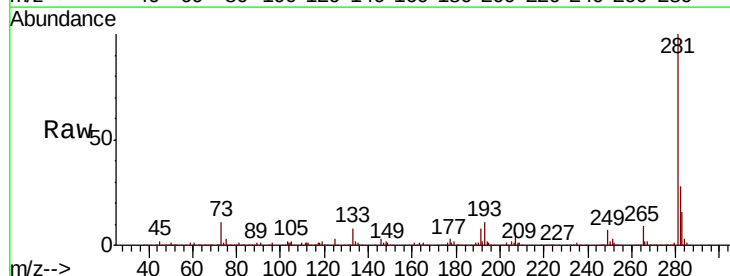


Abundance Ion 105.10 (104.80 to 105.80): V
 Ion 120.20 (119.90 to 120.90): V
 Ion 91.10 (90.80 to 91.80): VL0
 Ion 77.10 (76.80 to 77.80): VL0

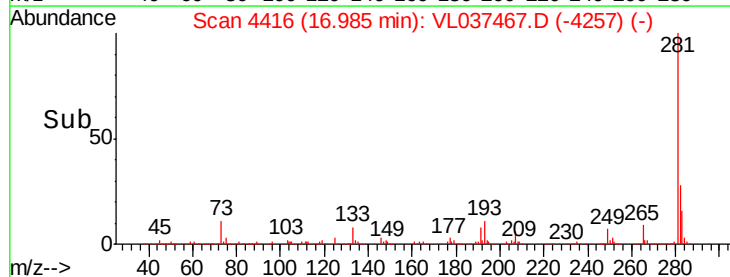
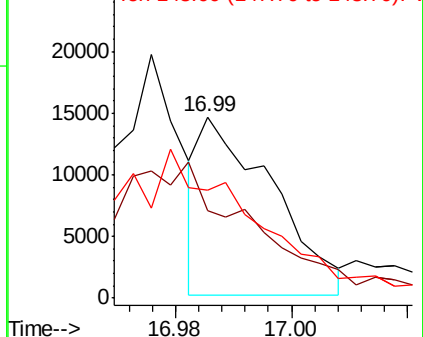


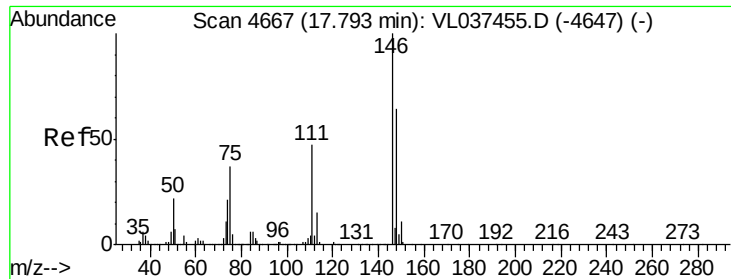
#75
 1,3-Dichlorobenzene
 Concen: 0.041 ppbv
 RT: 16.99 min Scan# 4416
 Delta R.T. 0.01 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

Tgt Ion:146 Resp: 12556
 Ion Ratio Lower Upper
 146 100
 111 246.0 23.4 70.0#
 148 228.7 33.1 99.5#



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





#77
 1,2-Dichlorobenzene
 Concen: 3.352 ppbv
 RT: 17.80 min Scan# 4670
 Delta R.T. 0.01 min
 Lab File: VL037467.D
 Acq: 16 Aug 2021 18:42

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:146 Resp: 1012958
 Ion Ratio Lower Upper
 146 100
 111 95.2 23.4 70.3#
 148 0.0 32.5 97.5#

