

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091621\
 Data File : VL037622.D
 Acq On : 16 Sep 2021 19:27
 Operator : SY/AP
 Sample : M3277-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Sep 17 05:28:24 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL091621AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Sep 16 13:42:46 2021
 QLast Update : Thu Sep 16 13:42:46 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1672069	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4969438	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	5499856	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	5336719	13.43	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	134.30%

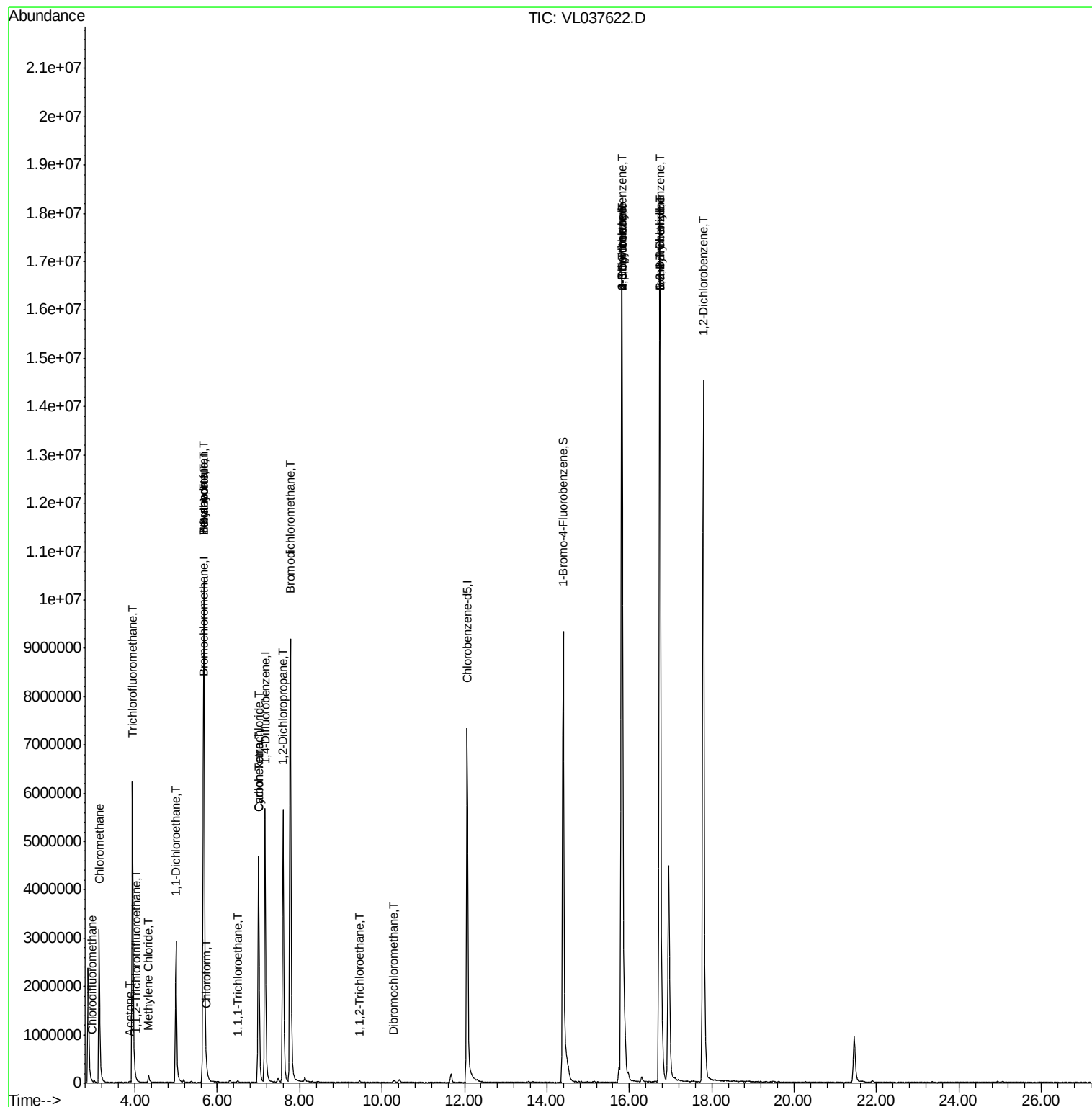
Target Compounds					Ovalue
3) Chlorodifluoromethane	2.96	51	36749	0.117 ppbv	# 64
4) Chloromethane	3.13	50	3717826	31.906 ppbv	98
11) Trichlorofluoromethane	3.94	101	5249947	21.612 ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.04	101	12064	0.067 ppbv	# 10
15) Acetone	3.87	43	17037	0.098 ppbv	# 44
20) Methylene Chloride	4.33	84	49792	0.600 ppbv	98
24) 1,1-Dichloroethane	5.00	63	2948217	17.119 ppbv	98
25) Ethyl Acetate	5.67	43	3182457	7.564 ppbv	# 76
26) Hexane	5.67	57	4520617	22.617 ppbv	# 46
29) Chloroform	5.74	83	48753	0.167 ppbv	86
30) Cyclohexane	7.00	84	526291	3.079 ppbv	# 4
32) 1,1,1-Trichloroethane	6.50	97	13208	0.049 ppbv	# 20
34) 2-Butanone	5.67	43	3093780	15.320 ppbv	# 53
35) Carbon Tetrachloride	7.00	117	3279868	11.668 ppbv	98
39) 1,2-Dichloropropane	7.60	63	2441750	15.384 ppbv	98
41) Tetrahydrofuran	5.67	42	1687726	17.778 ppbv	# 49
42) Bromodichloromethane	7.77	83	7282256	24.930 ppbv	95
47) 1,1,2-Trichloroethane	9.46	97	9345	0.053 ppbv	92
48) Dibromochloromethane	10.28	129	15204	0.062 ppbv	# 1
64) n-propylbenzene	15.82	120	6387427	29.260 ppbv	# 1
65) tert-Butylbenzene	16.74	119	2279401	2.988 ppbv	# 75
66) Benzyl Chloride	16.74	91	2153315	51.661 ppbv	# 65
71) 2-Chlorotoluene	15.82	91	1192527	1.967 ppbv	# 42
72) 4-Ethyltoluene	15.82	105	19051731	27.407 ppbv	93
73) 1,3,5-Trimethylbenzene	15.82	105	19051731	29.404 ppbv	# 86
74) 1,2,4-Trimethylbenzene	16.74	105	16845364	24.683 ppbv	# 80
77) 1,2-Dichlorobenzene	17.80	146	9230206	22.951 ppbv	100

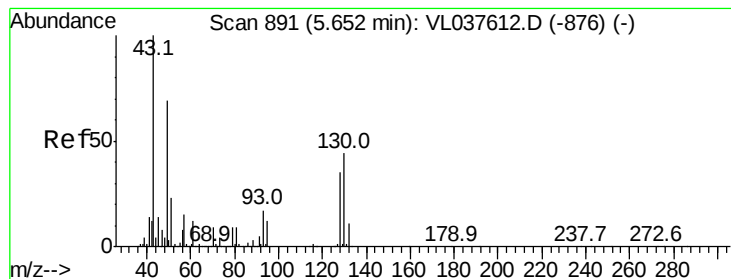
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :
MSVOA_L
ClientSampled :

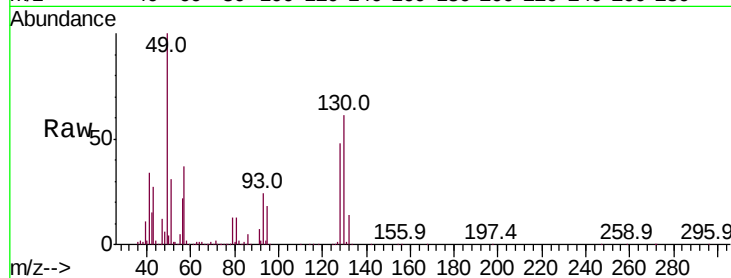
Tot Ion: 49 Resp: 1672069

Ion Ratio Lower Upper

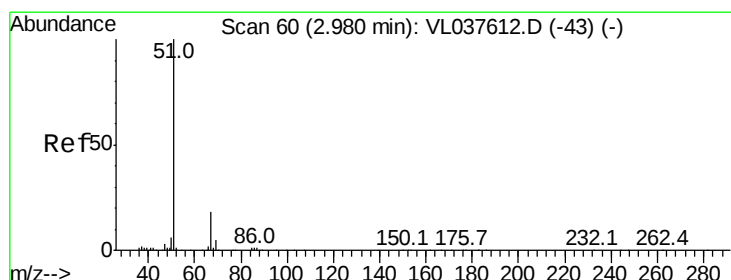
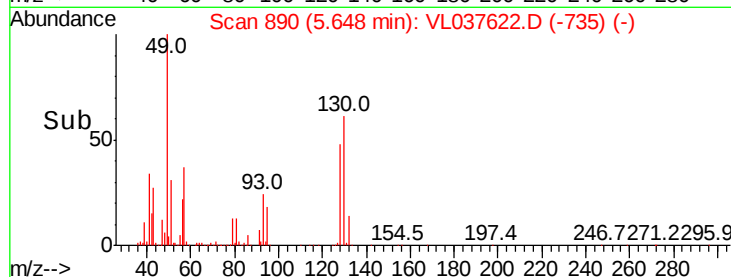
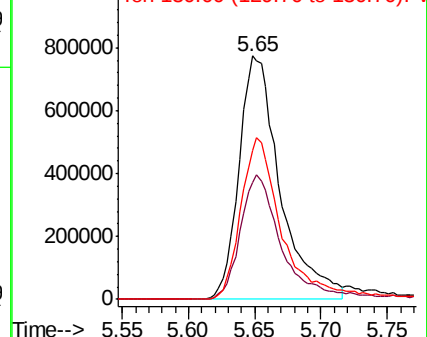
49 100

128 53.1 27.9 83.6

130 67.1 33.9 101.7



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): VL0
Ion 130.00 (129.70 to 130.70): VL0



#3

Chlorodifluoromethane

Concen: 0.117 ppbv

RT: 2.96 min Scan# 53

Delta R.T. -0.02 min

Lab File: VL037622.D

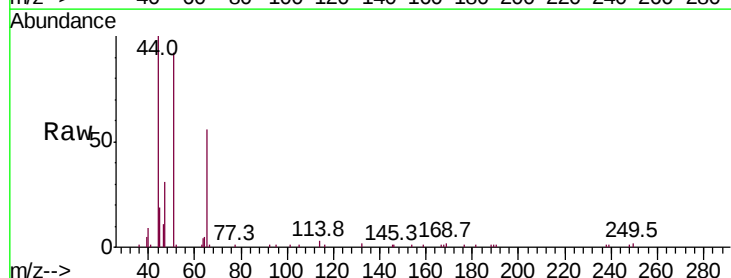
Acq: 16 Sep 2021 19:27

Tgt Ion: 51 Resp: 36749

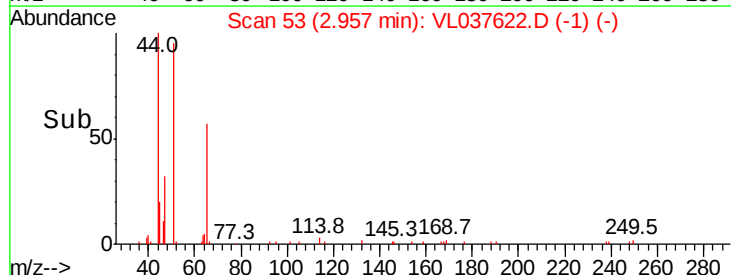
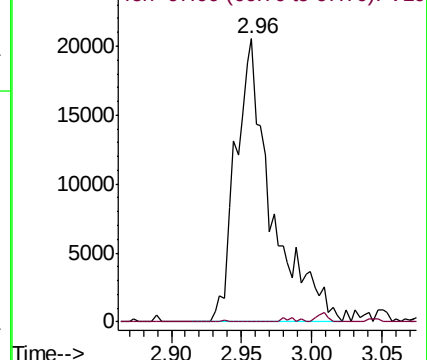
Ion Ratio Lower Upper

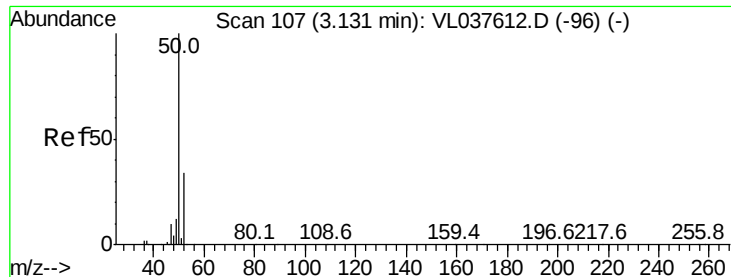
51 100

67 1.5 14.0 21.0#



Abundance Ion 51.00 (50.70 to 51.70): VL0
Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 31.906 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

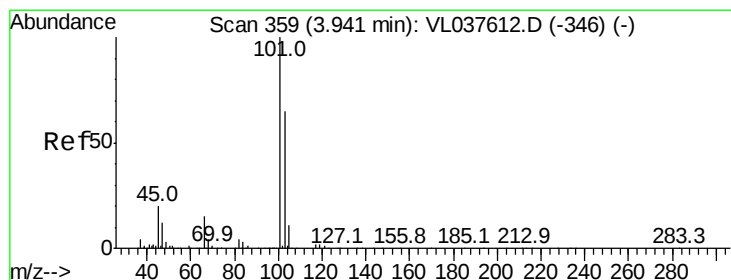
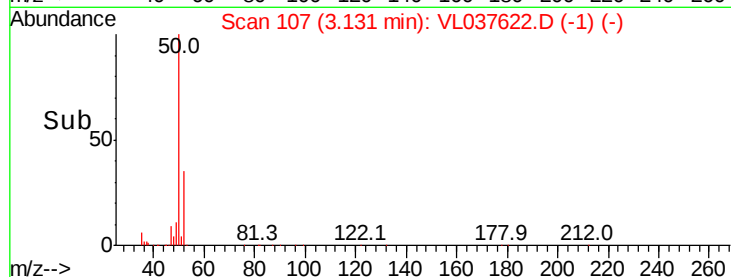
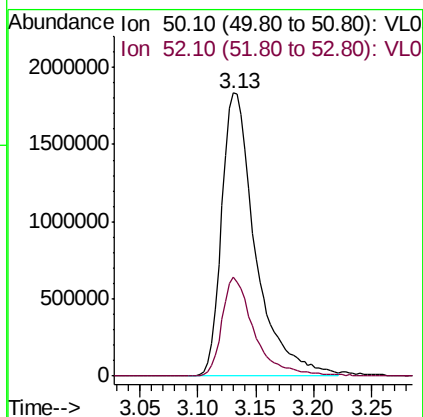
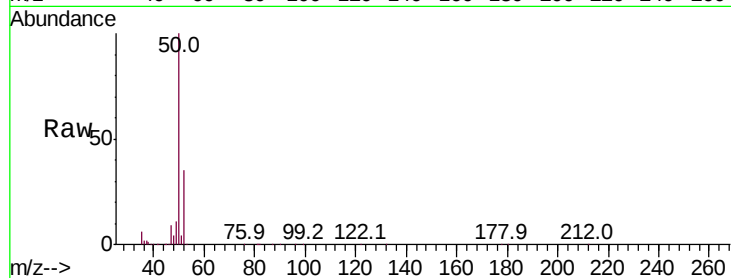
ClientSampled :

Tot Ion: 50 Resp: 3717826

Ion Ratio Lower Upper

50 100

52 34.8 27.1 40.7



#11

Trichlorofluoromethane

Concen: 21.612 ppbv

RT: 3.94 min Scan# 358

Delta R.T. -0.00 min

Lab File: VL037622.D

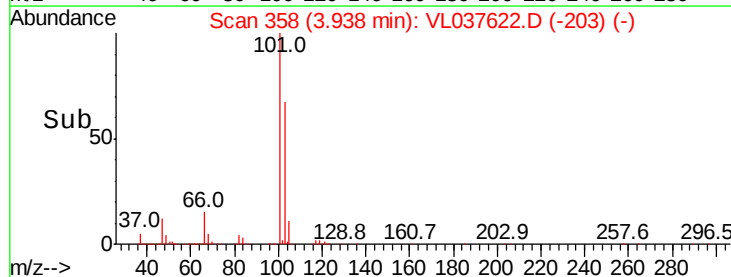
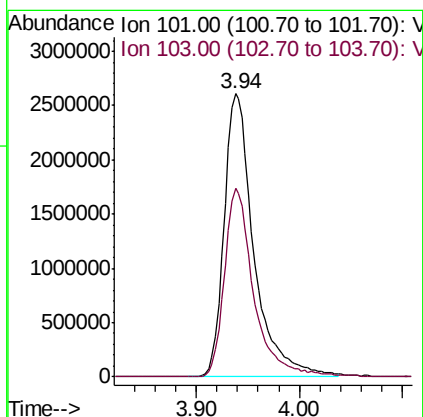
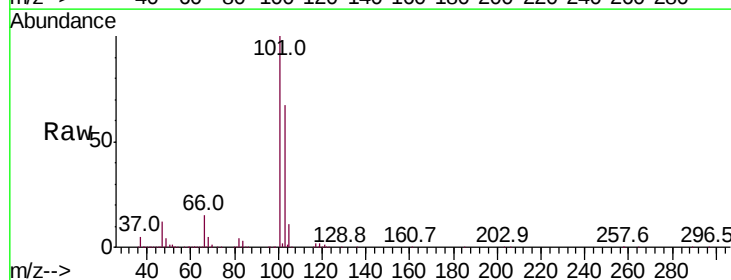
Acq: 16 Sep 2021 19:27

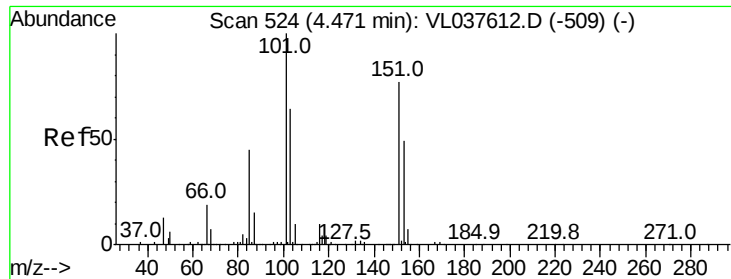
Tgt Ion: 101 Resp: 5249947

Ion Ratio Lower Upper

101 100

103 66.6 51.9 77.9





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.067 ppbv

RT: 4.04 min Scan# 390

Delta R.T. -0.43 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

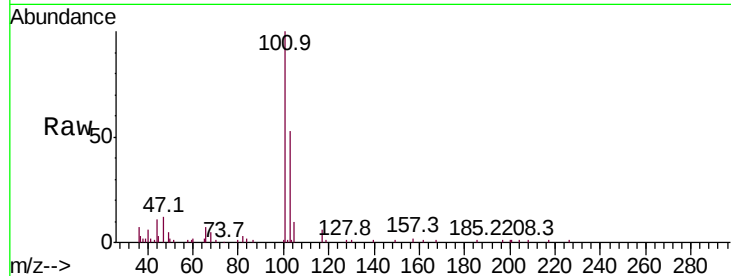
ClientSampleId :

Tot Ion:101 Resp: 12064

Ion Ratio Lower Upper

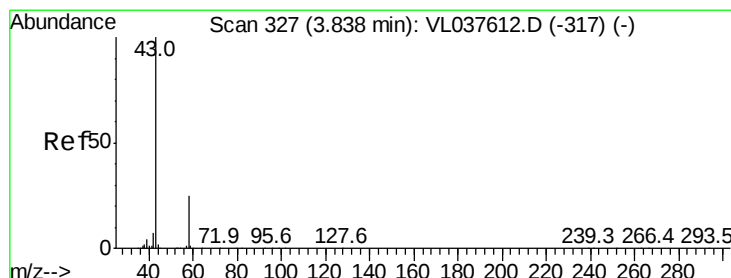
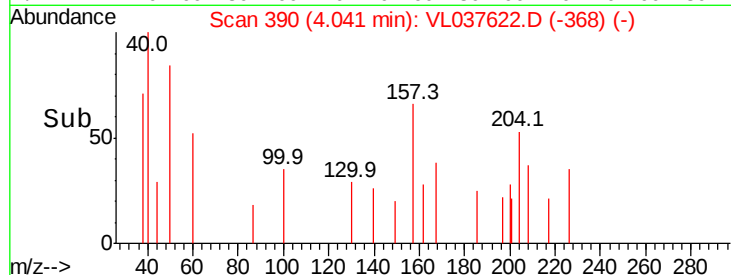
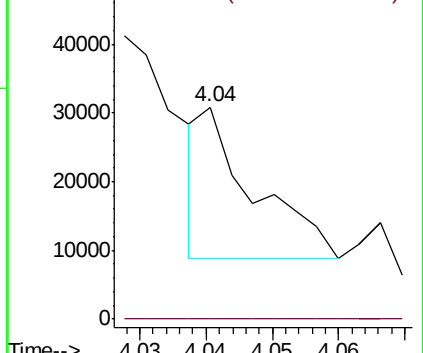
101 100

151 0.0 63.5 95.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#15

Acetone

Concen: 0.098 ppbv

RT: 3.87 min Scan# 336

Delta R.T. 0.03 min

Lab File: VL037622.D

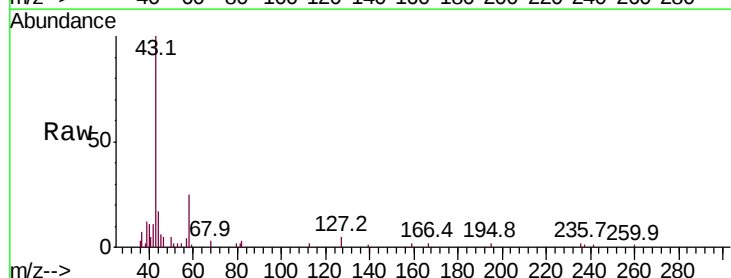
Acq: 16 Sep 2021 19:27

Tgt Ion: 43 Resp: 17037

Ion Ratio Lower Upper

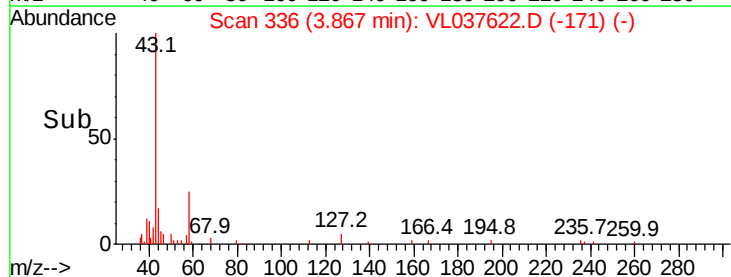
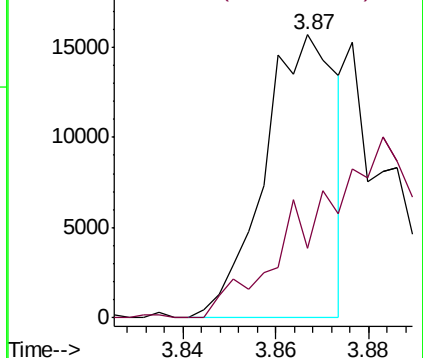
43 100

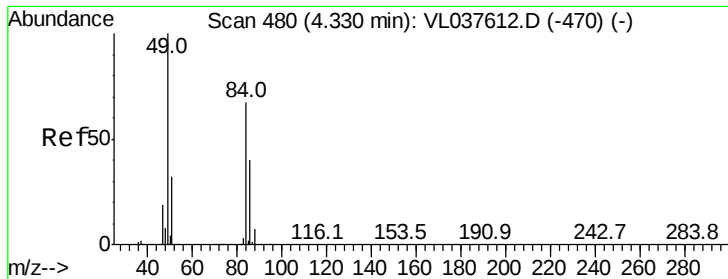
58 0.0 24.9 37.3#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

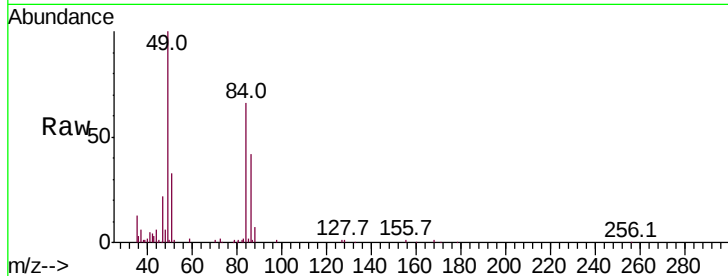




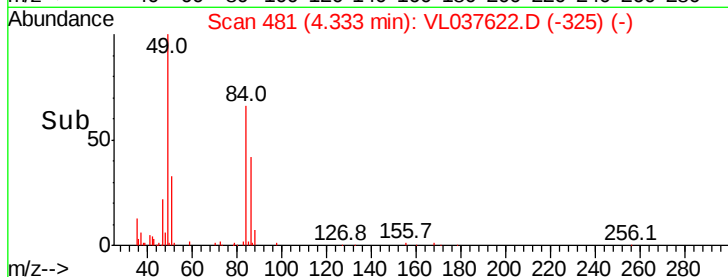
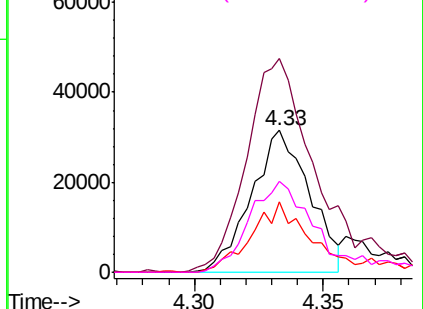
#20
Methylene Chloride
Concen: 0.600 ppbv
RT: 4.33 min Scan# 481
Delta R.T. 0.00 min
Lab File: VL037622.D
Acq: 16 Sep 2021 19:27

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	84	Resp:	49792
Ion	Ratio	Lower	Upper
84	100		
49	149.6	120.0	180.0
51	50.2	38.0	57.0
86	64.0	48.2	72.2

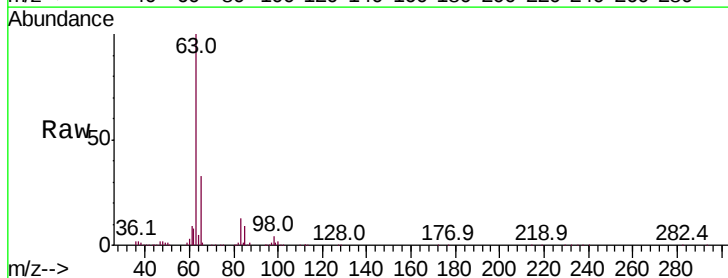
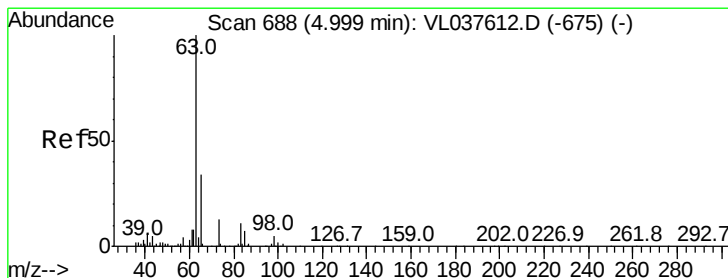


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

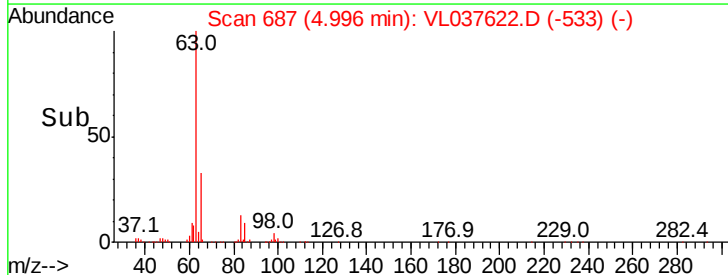
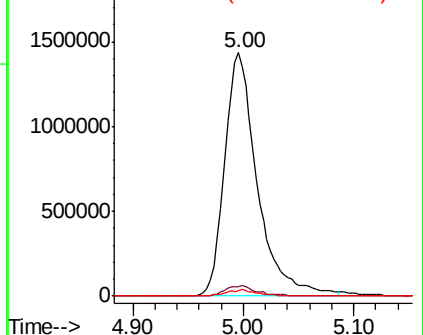


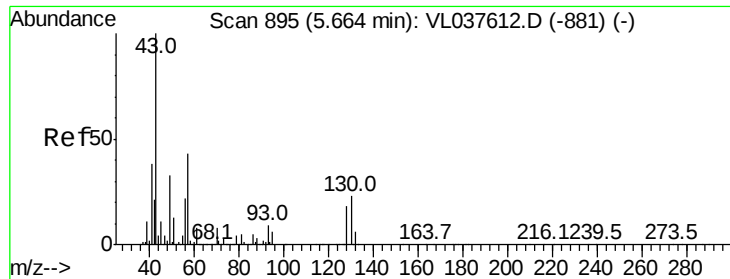
#24
1,1-Dichloroethane
Concen: 17.119 ppbv
RT: 5.00 min Scan# 687
Delta R.T. -0.00 min
Lab File: VL037622.D
Acq: 16 Sep 2021 19:27

Tgt Ion:	63	Resp:	2948217
Ion	Ratio	Lower	Upper
63	100		
98	3.9	2.4	7.2
100	2.4	1.1	3.5



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

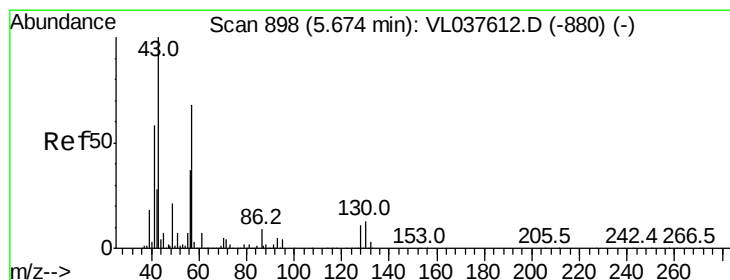
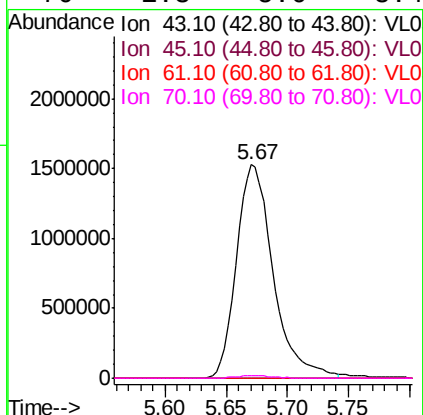
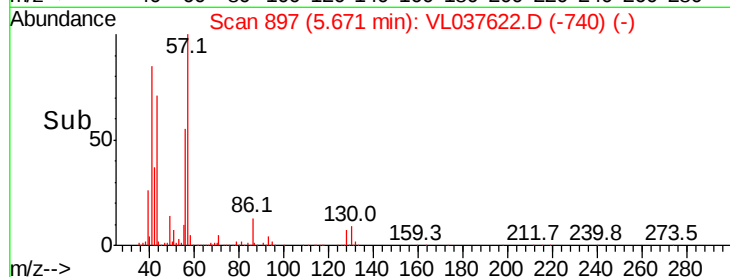
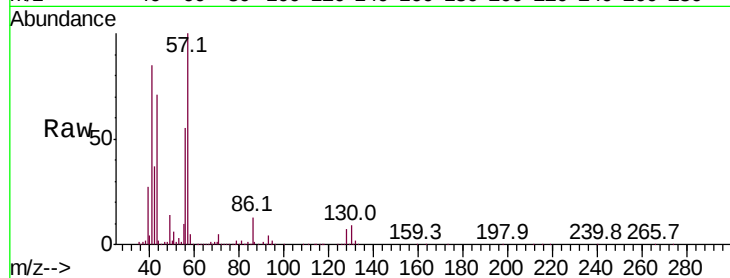




#25
Ethyl Acetate
Concen: 7.564 ppbv
RT: 5.67 min Scan# 897
Delta R.T. 0.01 min
Lab File: VL037622.D
Acq: 16 Sep 2021 19:27

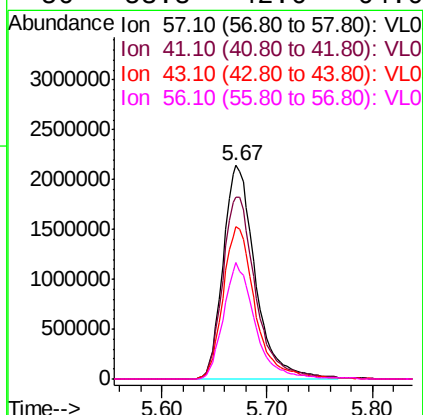
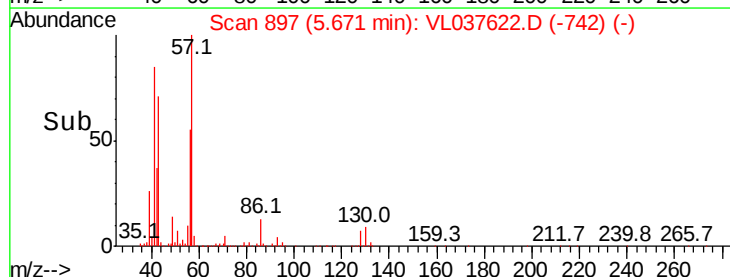
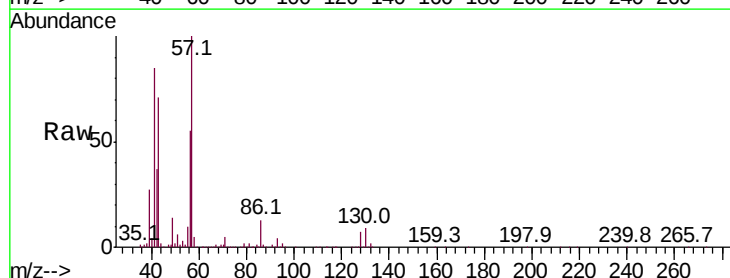
Instrument :
MSVOA_L
ClientSampleId :

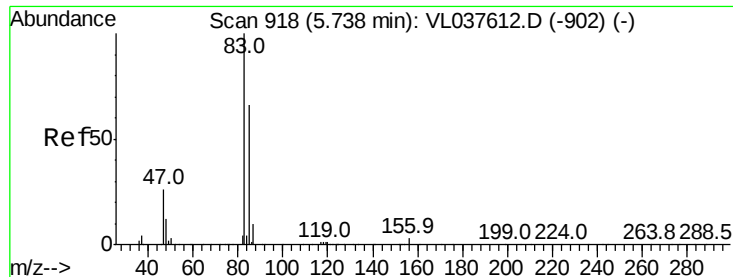
Tot Ion: 43 Resp: 3182457
Ion Ratio Lower Upper
43 100
45 0.1 8.0 12.0#
61 0.2 7.5 11.3#
70 1.3 5.6 8.4#



#26
Hexane
Concen: 22.617 ppbv
RT: 5.67 min Scan# 897
Delta R.T. -0.00 min
Lab File: VL037622.D
Acq: 16 Sep 2021 19:27

Tgt Ion: 57 Resp: 4520617
Ion Ratio Lower Upper
57 100
41 88.1 70.9 106.3
43 71.6 170.4 255.6#
56 53.8 42.6 64.0

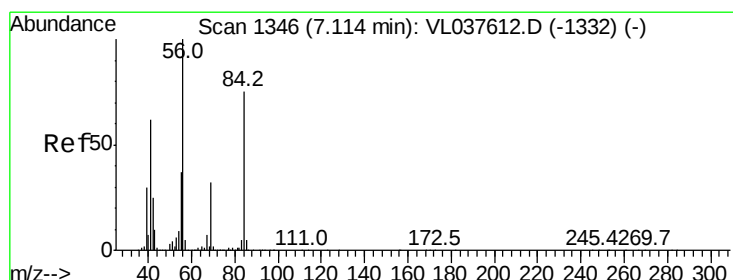
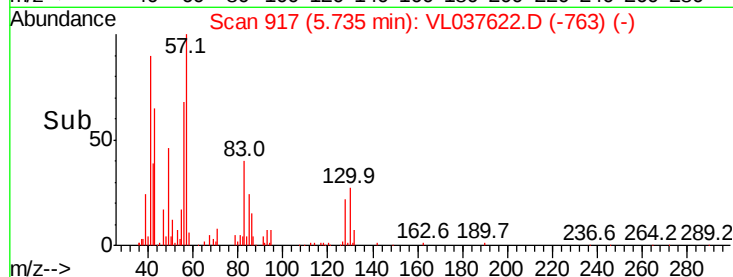
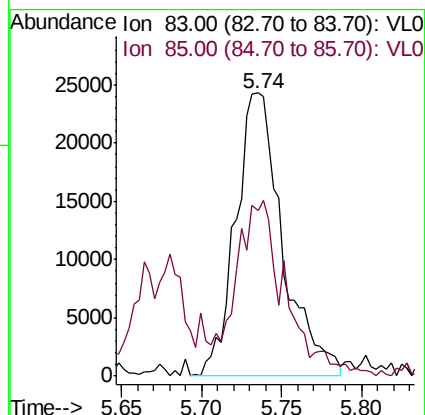
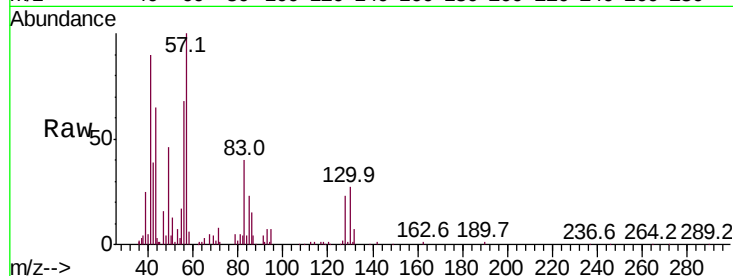




#29
Chloroform
Concen: 0.167 ppbv
RT: 5.74 min Scan# 917
Delta R.T. -0.00 min
Lab File: VL037622.D
Acq: 16 Sep 2021 19:27

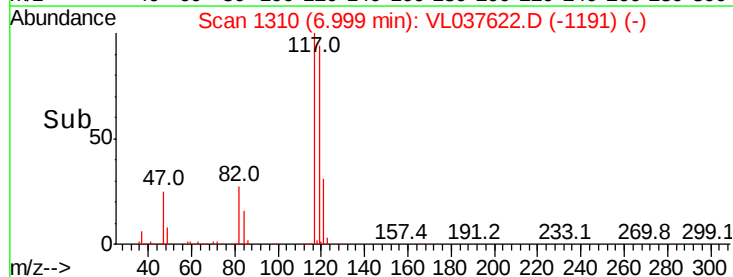
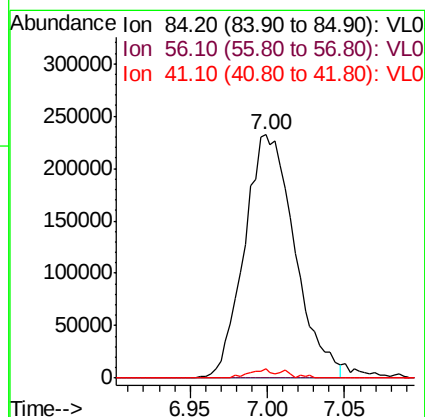
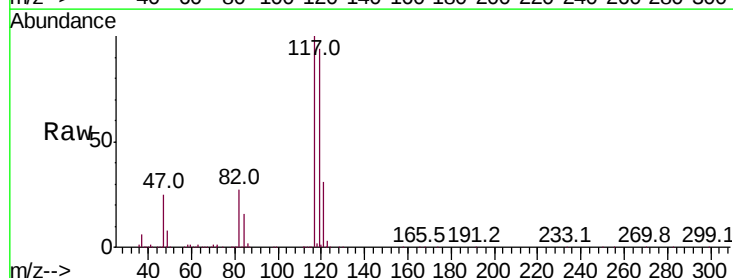
Instrument :
MSVOA_L
ClientSampleId :

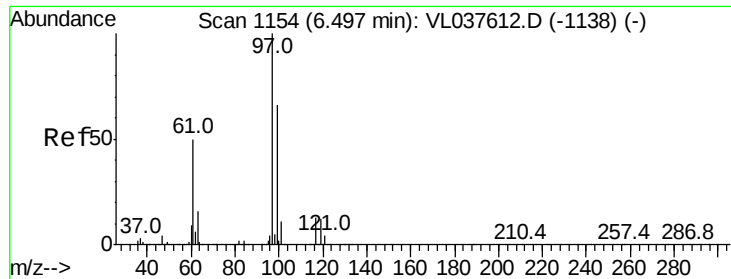
Tot Ion: 83 Resp: 48753
Ion Ratio Lower Upper
83 100
85 54.9 52.6 79.0



#30
Cyclohexane
Concen: 3.079 ppbv
RT: 7.00 min Scan# 1310
Delta R.T. -0.12 min
Lab File: VL037622.D
Acq: 16 Sep 2021 19:27

Tgt Ion: 84 Resp: 526291
Ion Ratio Lower Upper
84 100
56 21.8 113.6 170.4#
41 0.0 67.9 101.9#





#32

1,1,1-Trichloroethane

Concen: 0.049 ppbv

RT: 6.50 min Scan# 1154

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

ClientSampleId :

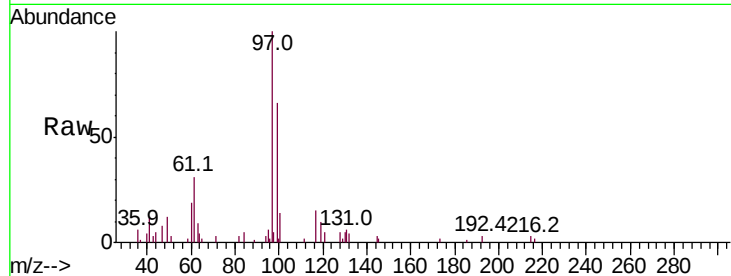
Tot Ion: 97 Resp: 13208

Ion Ratio Lower Upper

97 100

99 126.5 52.3 78.5#

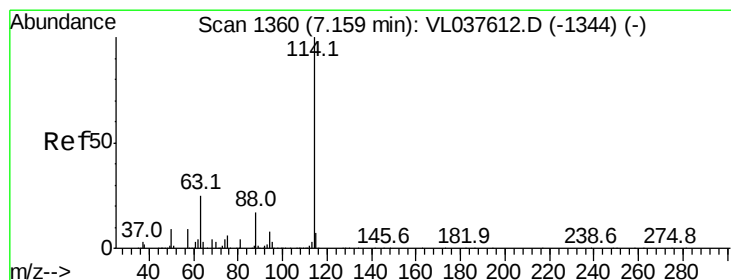
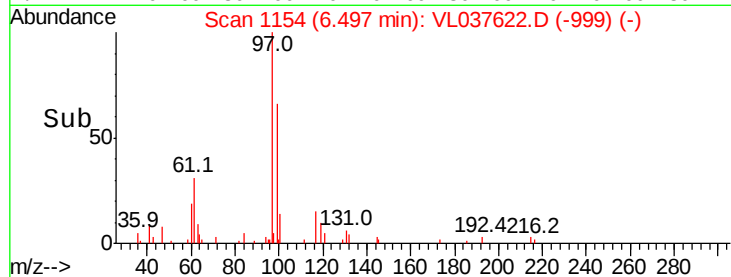
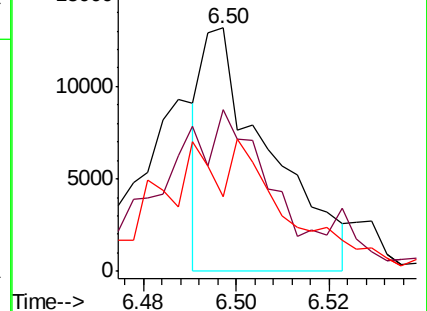
61 107.1 39.5 59.3#



Abundance Ion 97.00 (96.70 to 97.70): VL0

Ion 99.00 (98.70 to 99.70): VL0

Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

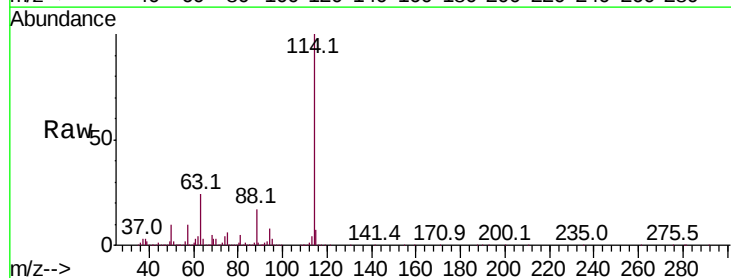
Tgt Ion: 114 Resp: 4969438

Ion Ratio Lower Upper

114 100

63 24.0 19.6 29.4

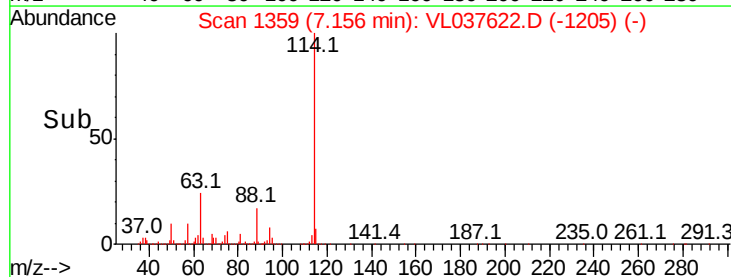
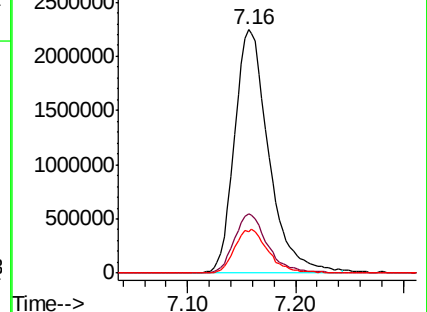
88 17.9 14.2 21.4

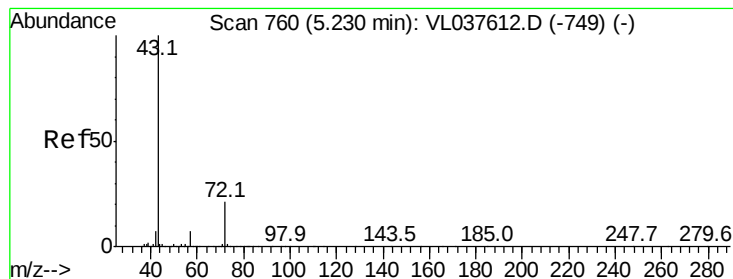


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





#34

2-Butanone

Concen: 15.320 ppbv

RT: 5.67 min Scan# 897

Delta R.T. 0.44 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

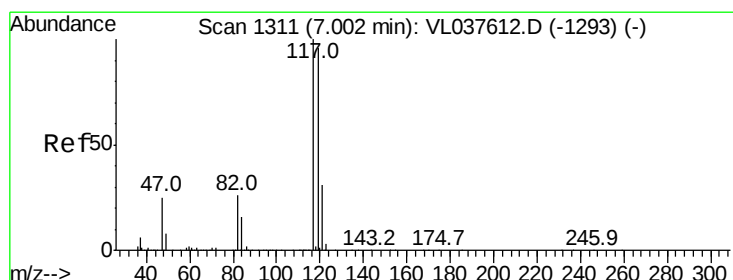
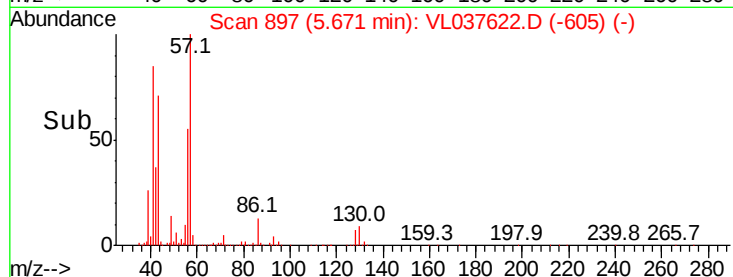
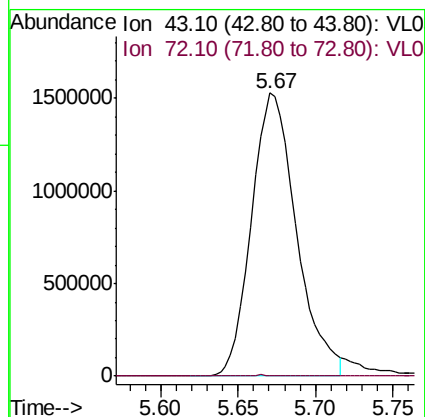
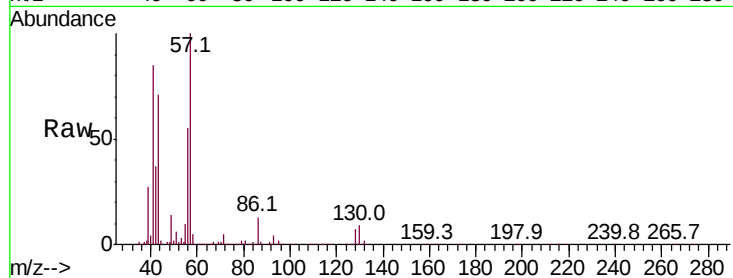
ClientSampleId :

Tot Ion: 43 Resp: 3093780

Ion Ratio Lower Upper

43 100

72 0.0 18.4 27.6#



#35

Carbon Tetrachloride

Concen: 11.668 ppbv

RT: 7.00 min Scan# 1310

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

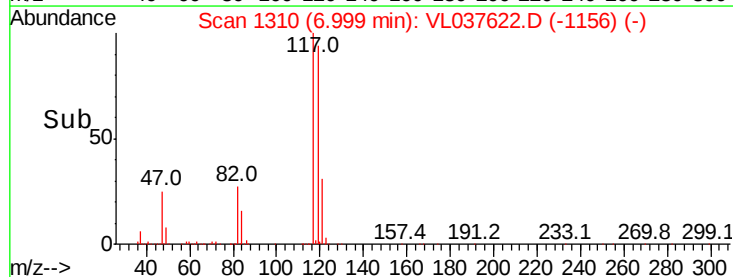
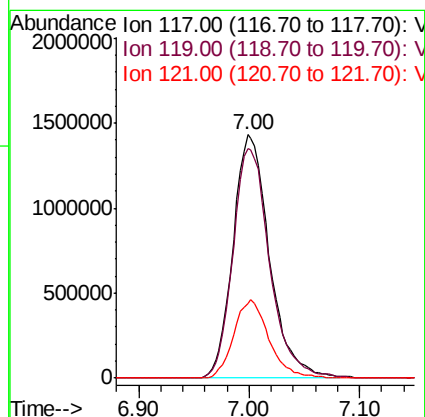
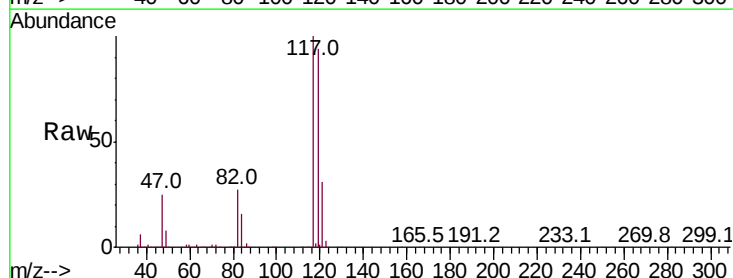
Tgt Ion: 117 Resp: 3279868

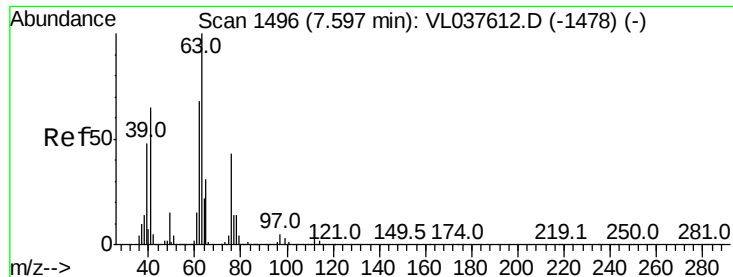
Ion Ratio Lower Upper

117 100

119 94.2 77.0 115.6

121 30.7 24.5 36.7

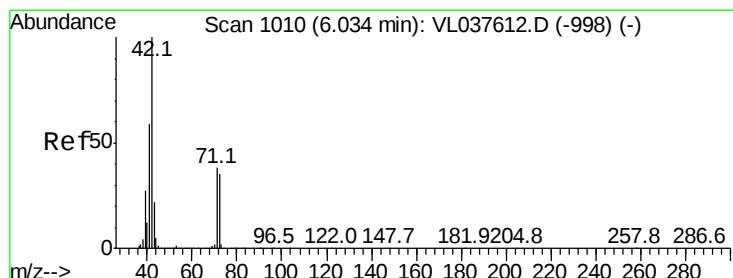
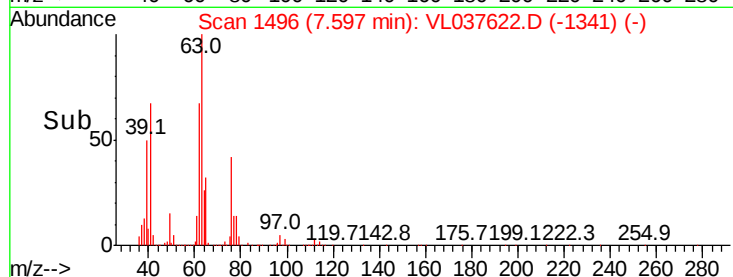
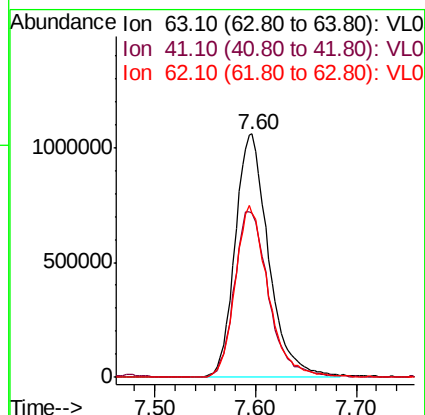
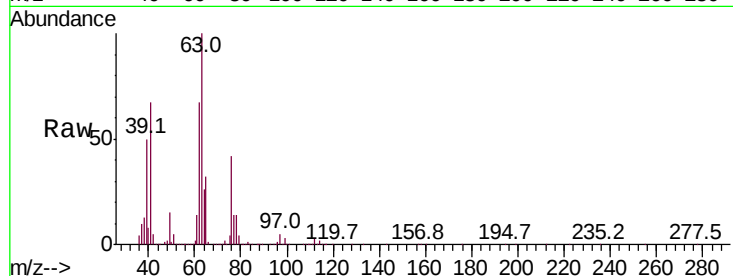




#39
 1,2-Dichloropropane
 Concen: 15.384 ppbv
 RT: 7.60 min Scan# 1496
 Delta R.T. -0.00 min
 Lab File: VL037622.D
 Acq: 16 Sep 2021 19:27

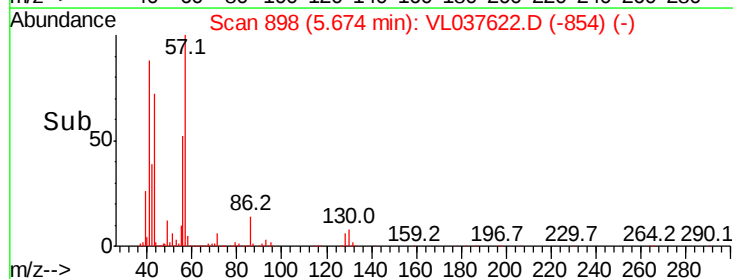
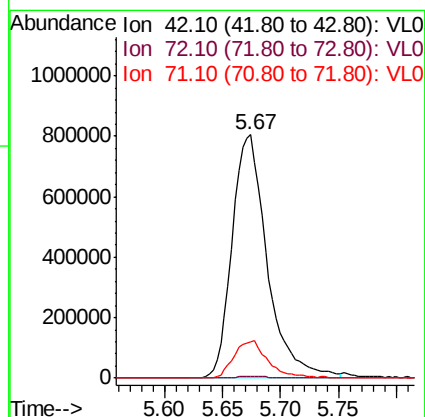
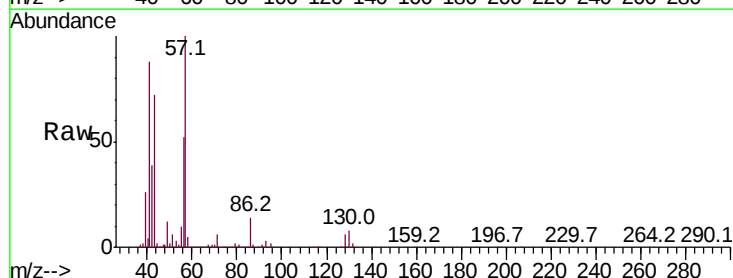
Instrument :
 MSVOA_L
 ClientSampled :

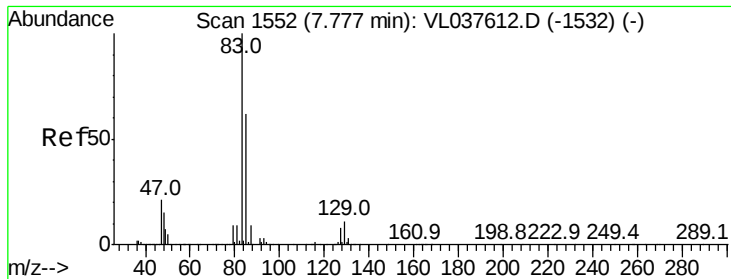
Tot Ion: 63 Resp: 2441750
 Ion Ratio Lower Upper
 63 100
 41 67.3 51.6 77.4
 62 67.1 54.6 81.8



#41
 Tetrahydrofuran
 Concen: 17.778 ppbv
 RT: 5.67 min Scan# 898
 Delta R.T. -0.36 min
 Lab File: VL037622.D
 Acq: 16 Sep 2021 19:27

Tgt Ion: 42 Resp: 1687726
 Ion Ratio Lower Upper
 42 100
 72 0.8 31.4 47.2#
 71 15.1 30.6 46.0#





#42

Bromodichloromethane

Concen: 24.930 ppbv

RT: 7.77 min Scan# 1550

Delta R.T. -0.01 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

ClientSampleId :

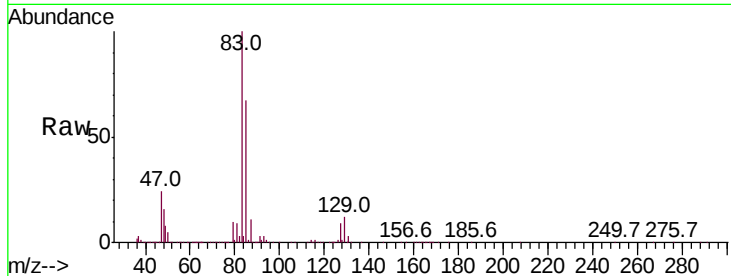
Tot Ion: 83 Resp: 7282256

Ion Ratio Lower Upper

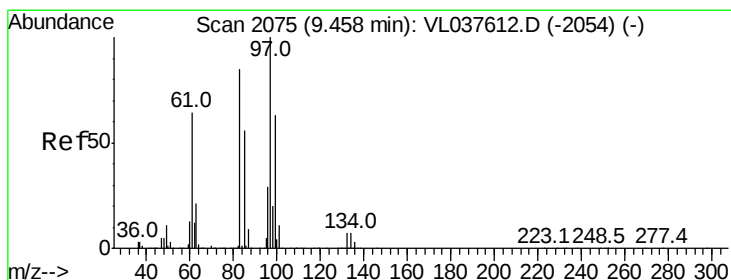
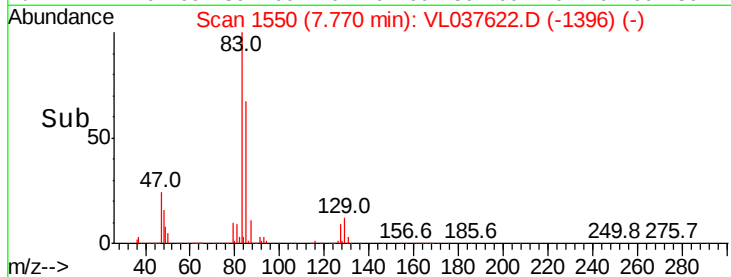
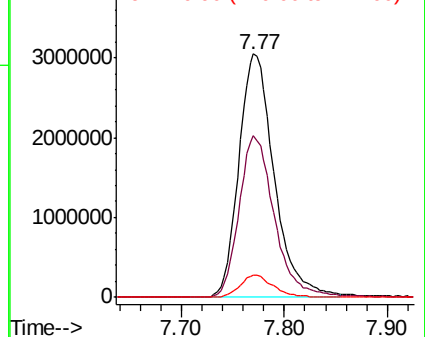
83 100

85 66.7 49.8 74.6

127 8.9 6.4 9.6



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



#47

1,1,2-Trichloroethane

Concen: 0.053 ppbv

RT: 9.46 min Scan# 2074

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Tgt Ion: 97 Resp: 9345

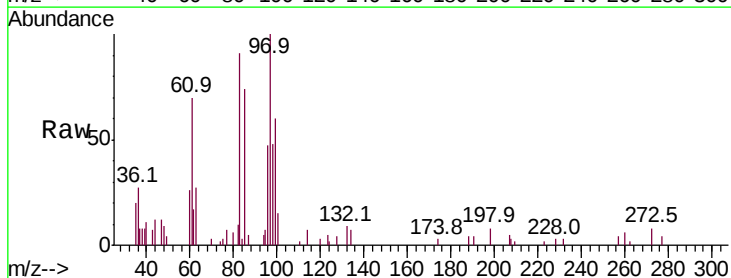
Ion Ratio Lower Upper

97 100

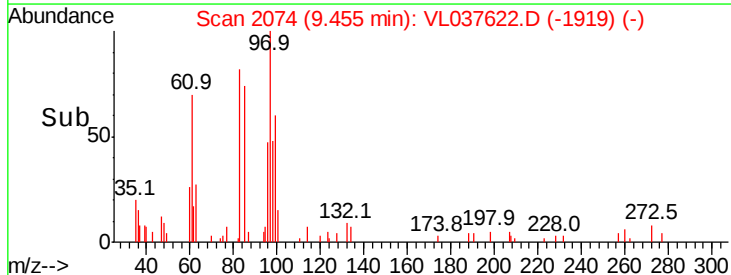
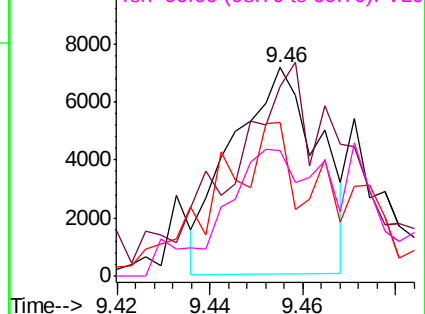
83 75.3 67.9 101.9

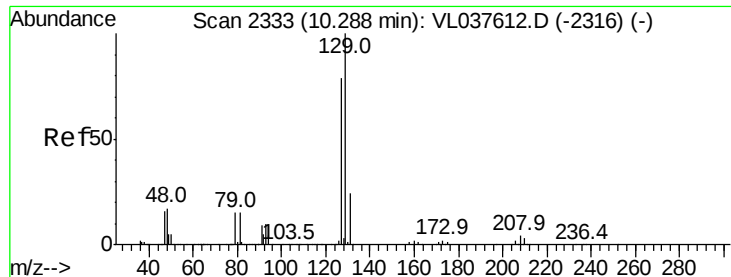
85 61.3 44.8 67.2

99 59.7 50.1 75.1



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





#48

Dibromochloromethane

Concen: 0.062 ppbv

RT: 10.28 min Scan# 2331

Delta R.T. -0.01 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

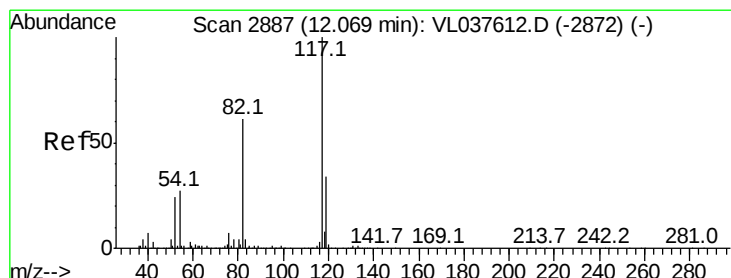
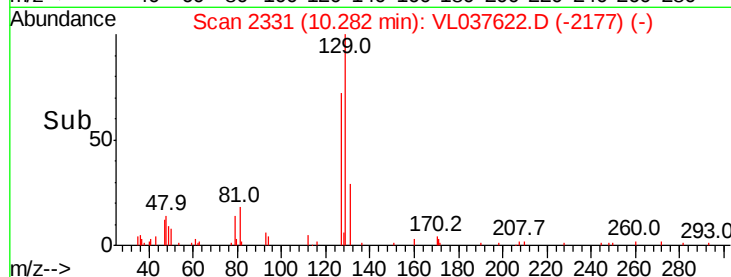
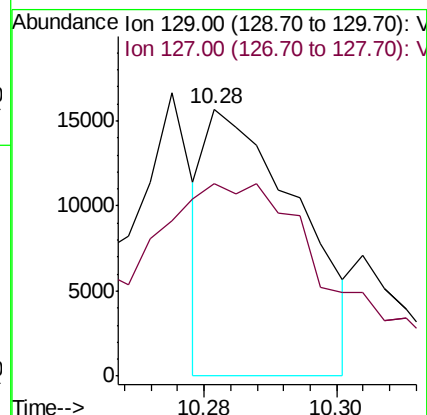
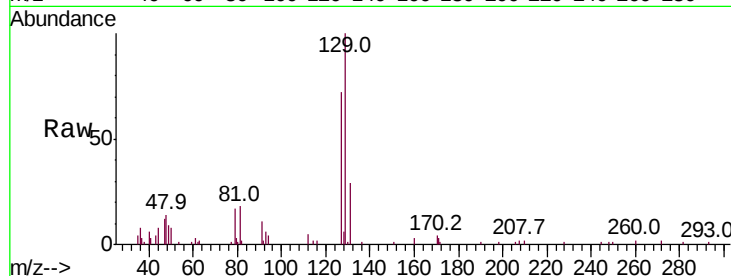
ClientSampled :

Tot Ion:129 Resp: 15204

Ion Ratio Lower Upper

129 100

127 185.0 39.3 117.8#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2886

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

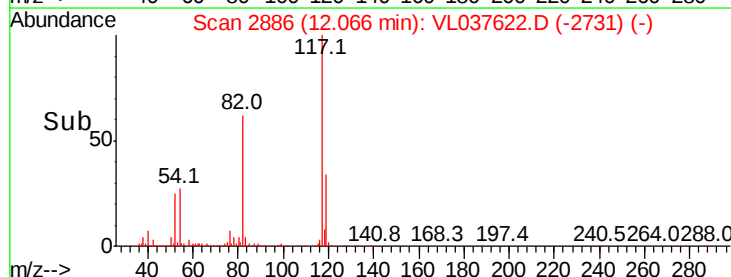
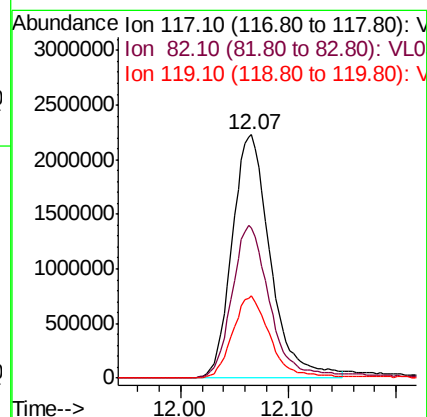
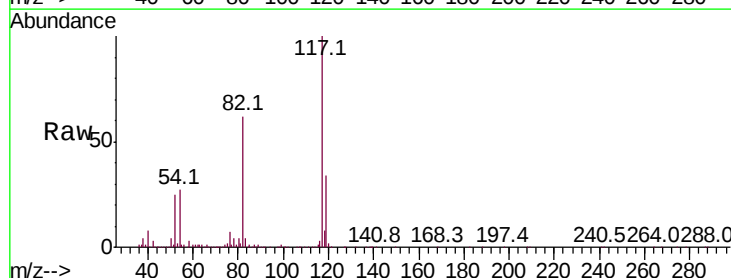
Tgt Ion:117 Resp: 5499856

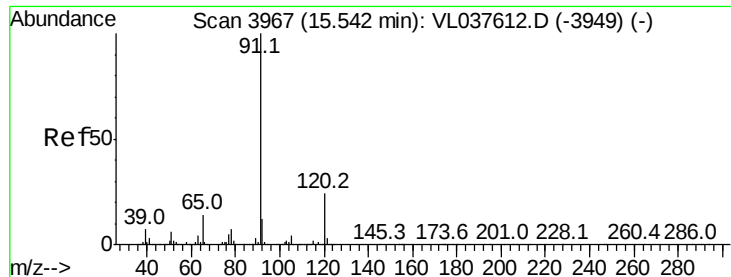
Ion Ratio Lower Upper

117 100

82 64.3 50.6 75.8

119 34.9 26.2 39.2





#64

n-propylbenzene

Concen: 29.260 ppbv

RT: 15.82 min Scan# 4053

Delta R.T. 0.28 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

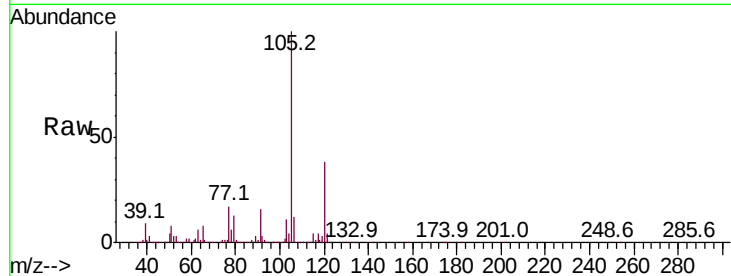
ClientSampleId :

Tot Ion:120 Resp: 6387427

Ion Ratio Lower Upper

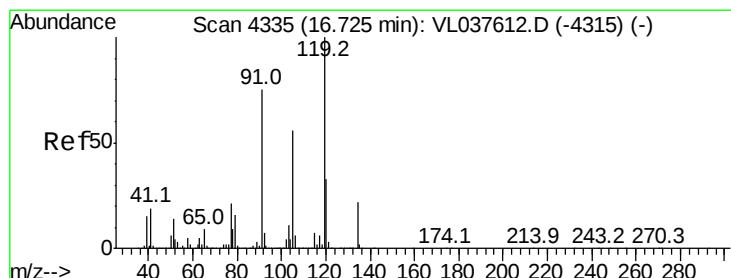
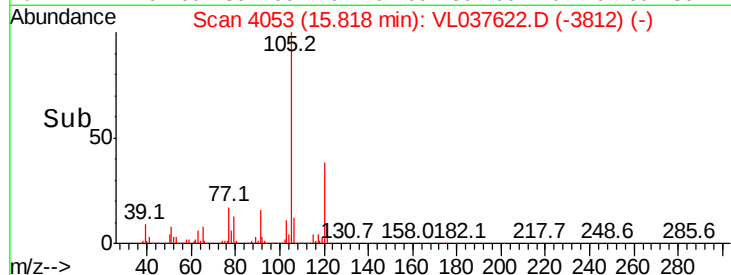
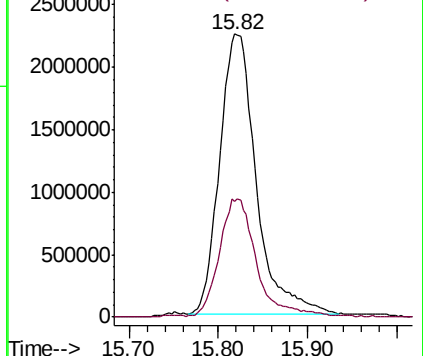
120 100

91 0.0 345.0 517.4#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#65

tert-Butylbenzene

Concen: 2.988 ppbv

RT: 16.74 min Scan# 4341

Delta R.T. 0.02 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

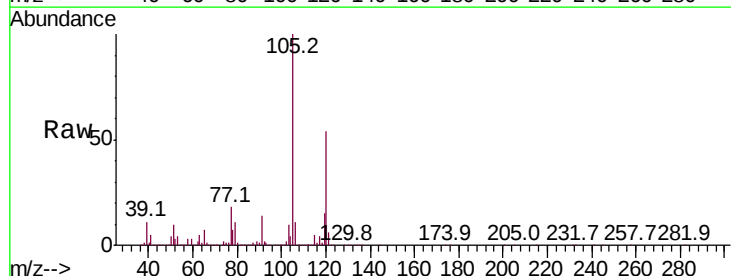
Tgt Ion:119 Resp: 2279401

Ion Ratio Lower Upper

119 100

91 95.1 61.9 92.9#

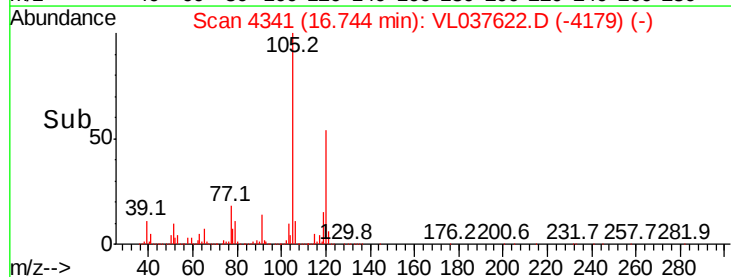
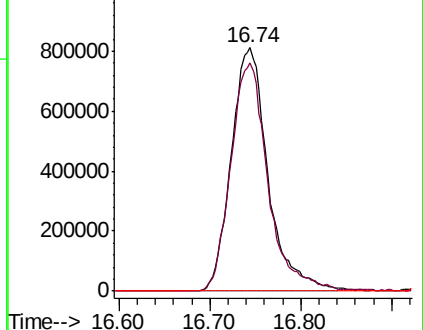
134 0.1 16.5 24.7#

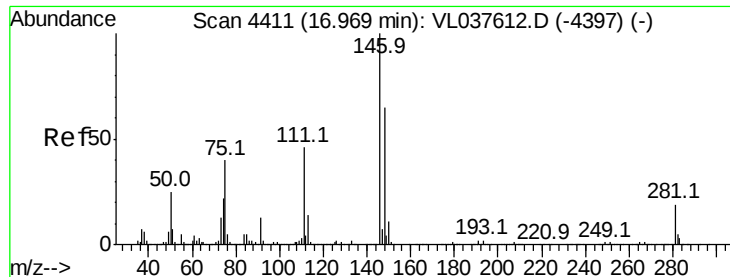


Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V





#66

Benzvl Chloride

Concen: 51.661 ppbv

RT: 16.74 min Scan# 4341

Delta R.T. -0.23 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

ClientSampleId :

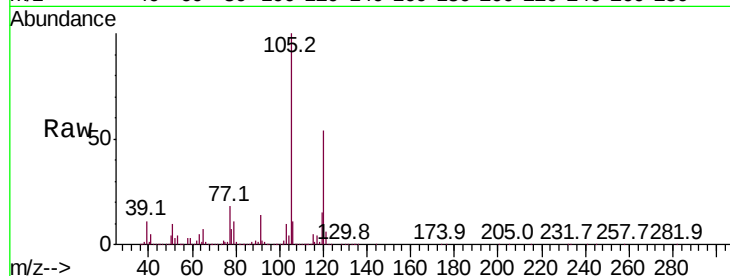
Tot Ion: 91 Resp: 2153315

Ion Ratio Lower Upper

91 100

126 0.0 14.4 21.6#

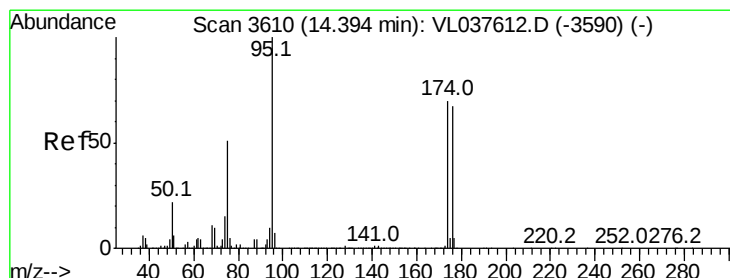
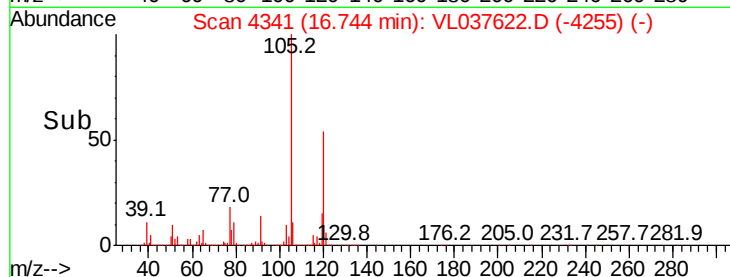
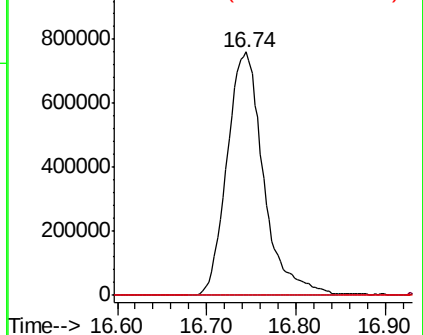
128 0.0 5.7 8.5#



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: 13.427 ppbv

RT: 14.39 min Scan# 3610

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

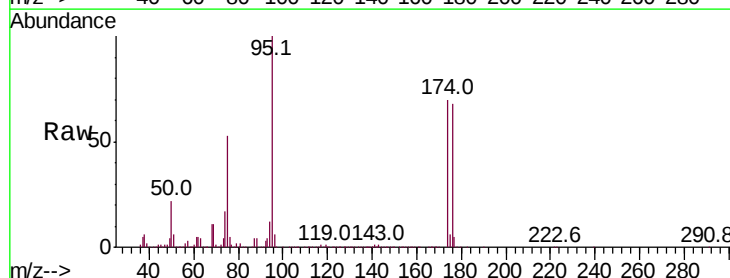
Tgt Ion: 95 Resp: 5336719

Ion Ratio Lower Upper

95 100

174 74.7 56.3 84.5

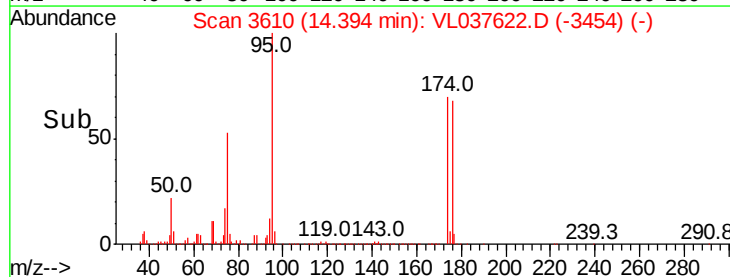
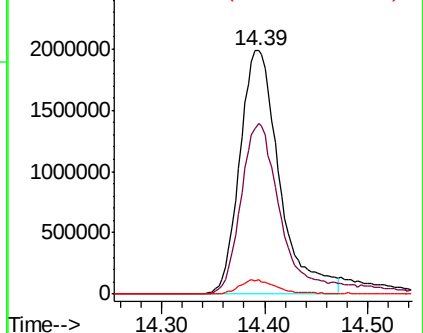
175 5.9 4.4 6.6

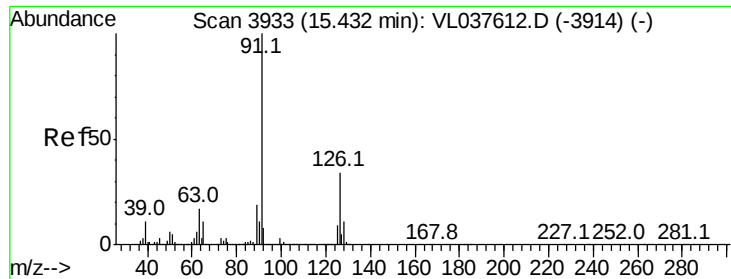


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

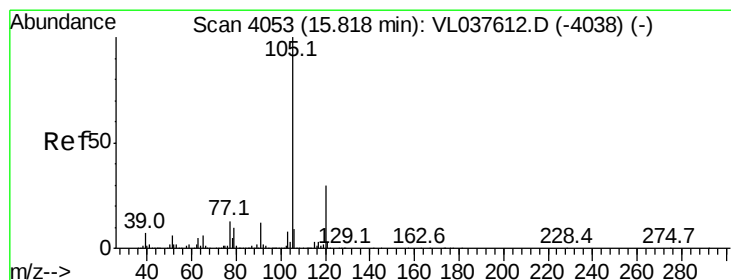
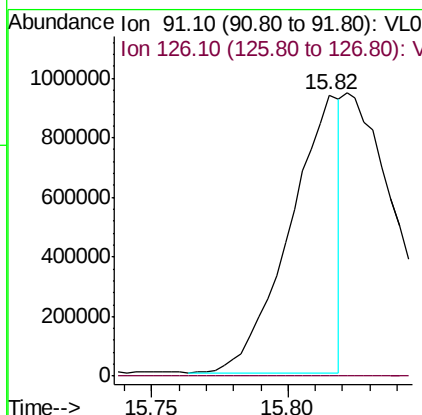
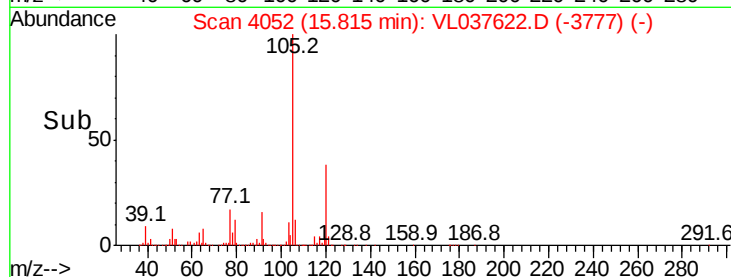
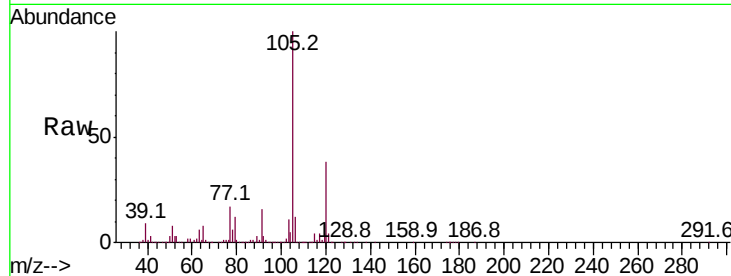




#71
 2-Chlorotoluene
 Concen: 1.967 ppbv
 RT: 15.82 min Scan# 4052
 Delta R.T. 0.38 min
 Lab File: VL037622.D
 Acq: 16 Sep 2021 19:27

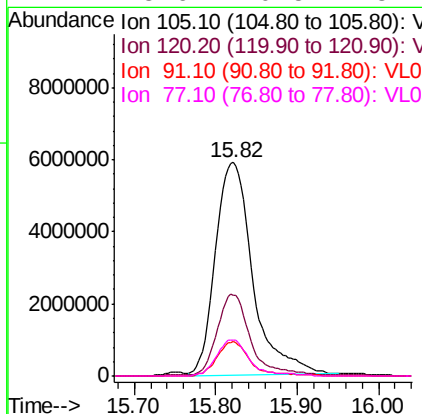
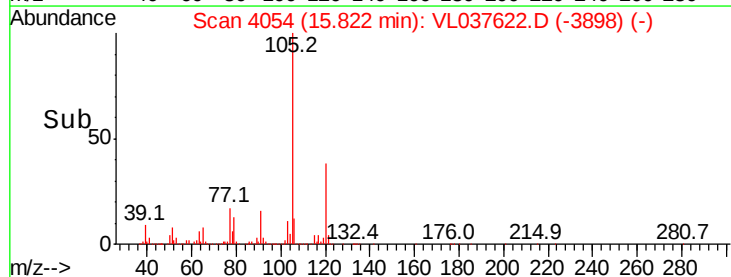
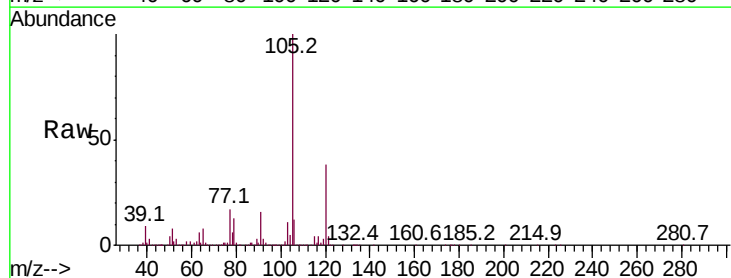
Instrument :
 MSVOA_L
 ClientSampleId :

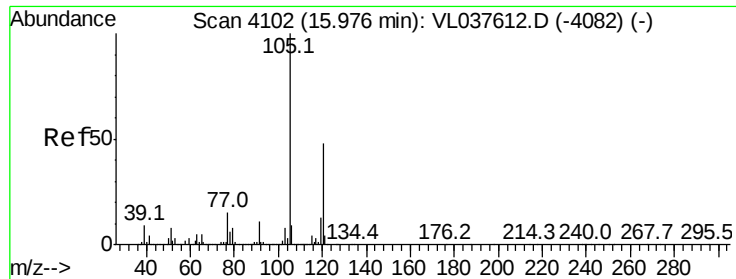
Tot Ion: 91 Resp: 1192527
 Ion Ratio Lower Upper
 91 100
 126 0.0 13.2 52.8#



#72
 4-Ethyltoluene
 Concen: 27.407 ppbv
 RT: 15.82 min Scan# 4054
 Delta R.T. 0.00 min
 Lab File: VL037622.D
 Acq: 16 Sep 2021 19:27

Tgt Ion:105 Resp:19051731
 Ion Ratio Lower Upper
 105 100
 120 35.2 24.7 37.1
 91 14.9 9.9 14.9
 77 15.6 10.5 15.7





#73

1,3,5-Trimethylbenzene

Concen: 29.404 ppbv

RT: 15.82 min Scan# 4054

Delta R.T. -0.15 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

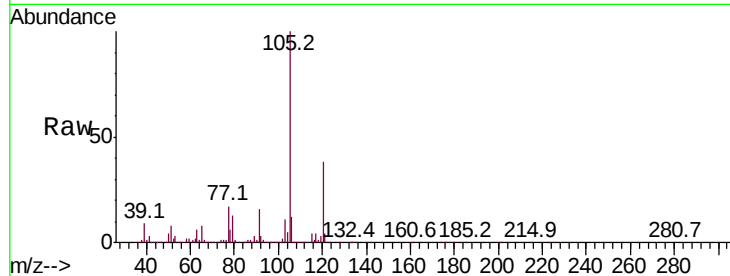
ClientSampleId :

Tot Ion:105 Resp:19051731

Ion Ratio Lower Upper

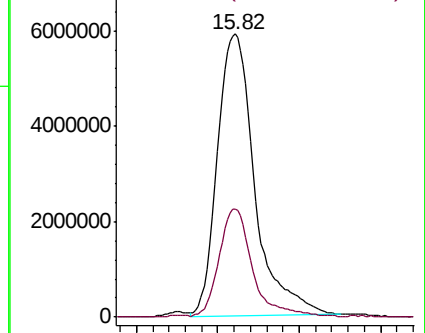
105 100

120 38.1 38.3 57.5#

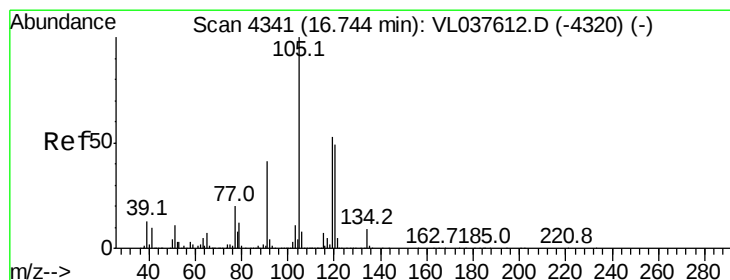
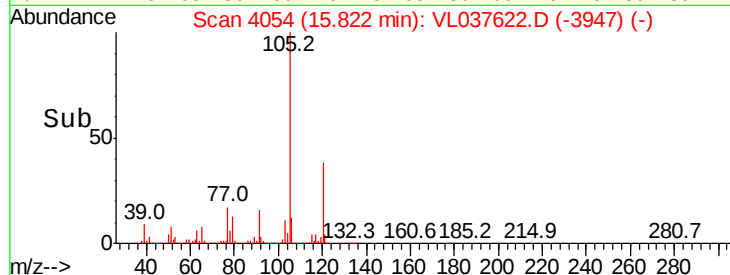


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



Time--> 15.70 15.80 15.90 16.00



#74

1,2,4-Trimethylbenzene

Concen: 24.683 ppbv

RT: 16.74 min Scan# 4340

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Tgt Ion:105 Resp:16845364

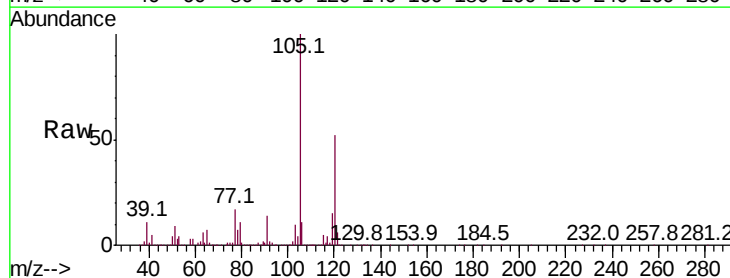
Ion Ratio Lower Upper

105 100

120 52.5 39.4 59.0

91 13.8 33.3 49.9#

77 17.3 15.7 23.5

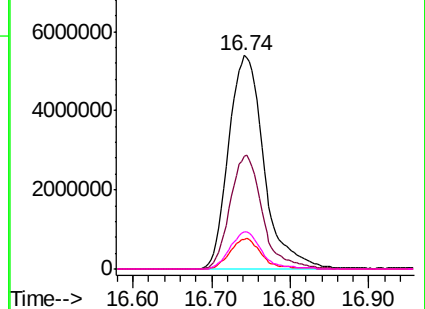


Abundance Ion 105.10 (104.80 to 105.80): V

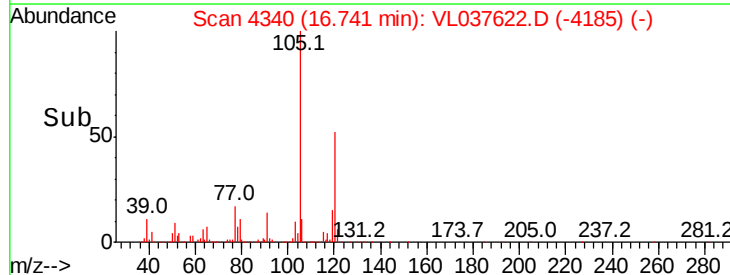
Ion 120.20 (119.90 to 120.90): V

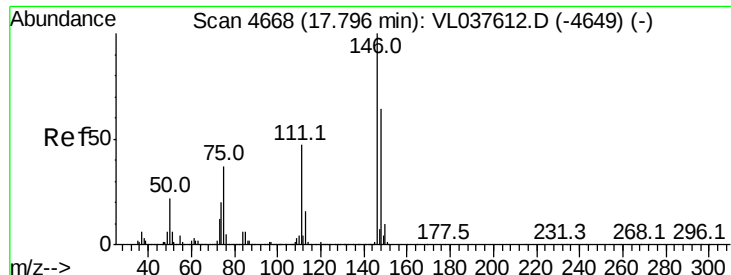
Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



Time--> 16.60 16.70 16.80 16.90





#77

1,2-Dichlorobenzene

Concen: 22.951 ppbv

RT: 17.80 min Scan# 4668

Delta R.T. -0.00 min

Lab File: VL037622.D

Acq: 16 Sep 2021 19:27

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:146 Resp: 9230206

Ion Ratio Lower Upper

146 100

111 47.9 24.0 72.0

148 65.5 32.8 98.3

