

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091621\
 Data File : VL037624.D
 Acq On : 16 Sep 2021 20:46
 Operator : SY/AP
 Sample : M3780-01 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Sep 17 05:28:41 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	1577285	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4483981	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.06	117	3962762	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.39	95	2855783	9.97	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.70%

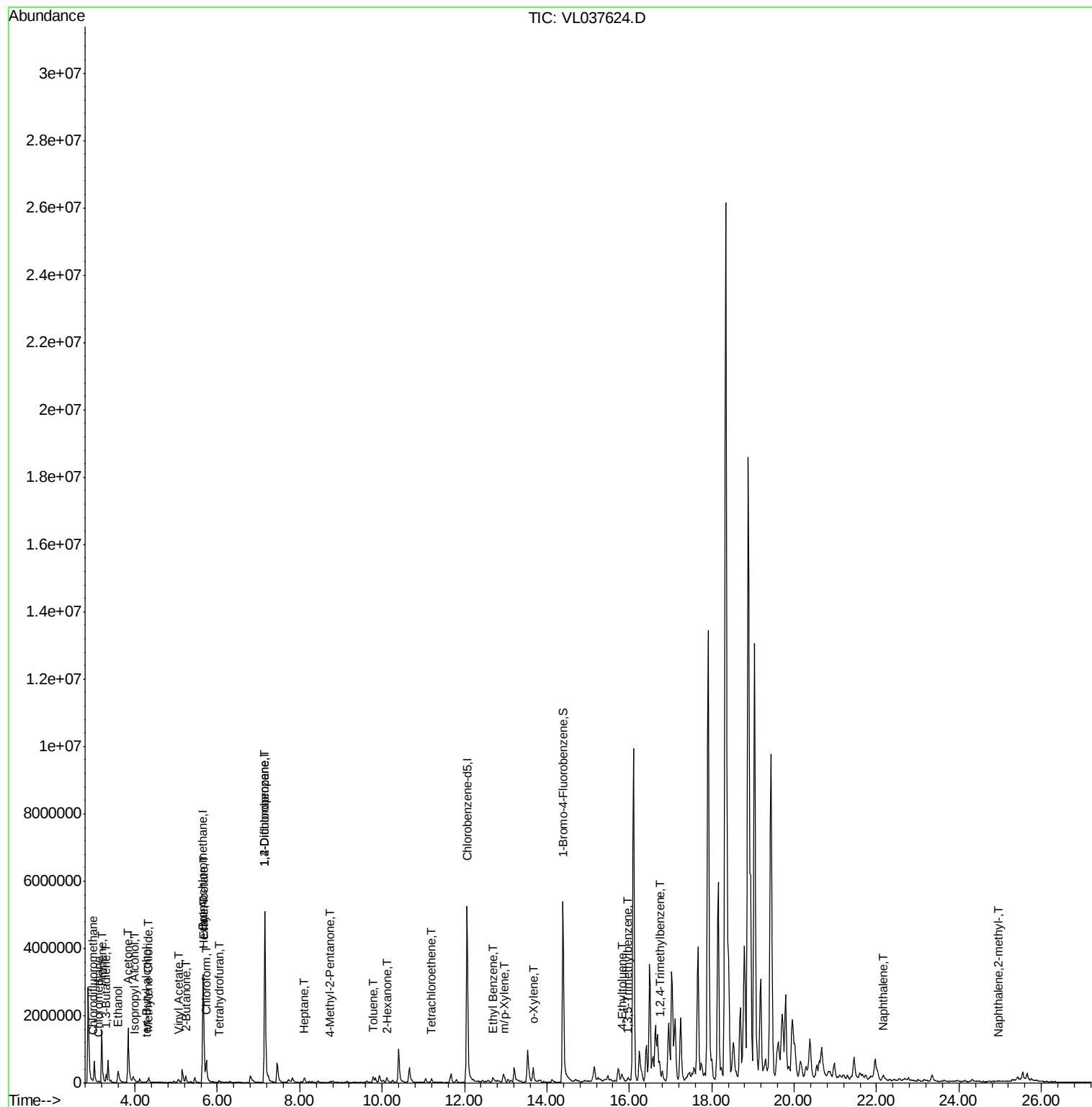
Target Compounds					Ovalue
3) Chlorodifluoromethane	2.98	51	111951	0.376 ppbv	# 75
4) Chloromethane	3.13	50	4485	0.041 ppbv	# 55
9) Propene	3.20	41	512028	4.879 ppbv	98
10) Heptane	8.10	43	26236	0.107 ppbv	# 38
13) Ethanol	3.59	45	527109	51.350 ppbv	99
15) Acetone	3.83	43	2075110	12.663 ppbv	97
16) 1,3-Butadiene	3.30	39	73351	0.716 ppbv	# 25
17) tert-Butyl alcohol	4.28	59	8479	0.061 ppbv	# 72
19) Isopropyl Alcohol	3.99	45	9595	0.108 ppbv	# 89
20) Methylene Chloride	4.33	84	53540	0.684 ppbv	# 95
23) Vinyl Acetate	5.06	43	118407	0.522 ppbv	# 92
25) Ethyl Acetate	5.67	43	273030	0.688 ppbv	# 80
26) Hexane	5.67	57	361168	1.916 ppbv	# 38
29) Chloroform	5.74	83	433452	1.574 ppbv	99
34) 2-Butanone	5.23	43	233442	1.281 ppbv	92
39) 1,2-Dichloropropane	7.16	63	1045847	7.303 ppbv	# 27
41) Tetrahydrofuran	6.05	42	16263	0.190 ppbv	# 58
50) 4-Methyl-2-Pentanone	8.73	43	7662	0.033 ppbv	# 38
51) 2-Hexanone	10.12	43	70787	0.694 ppbv	# 47
52) Tetrachloroethene	11.20	164	26128	0.182 ppbv	# 72
53) Toluene	9.78	91	125516	0.302 ppbv	95
58) Ethyl Benzene	12.68	91	37976	0.072 ppbv	97
59) m/p-Xylene	12.98	91	31406	0.069 ppbv	# 31
60) o-Xylene	13.67	91	152701	0.350 ppbv	99
72) 4-Ethyltoluene	15.82	105	48054	0.096 ppbv	# 51
73) 1,3,5-Trimethylbenzene	15.97	105	76018	0.163 ppbv	97
74) 1,2,4-Trimethylbenzene	16.74	105	413211	0.840 ppbv	# 72
79) Naphthalene	22.15	128	11353	0.038 ppbv	# 85
80) Naphthalene,2-methyl-	24.94	142	2818	0.041 ppbv	# 56

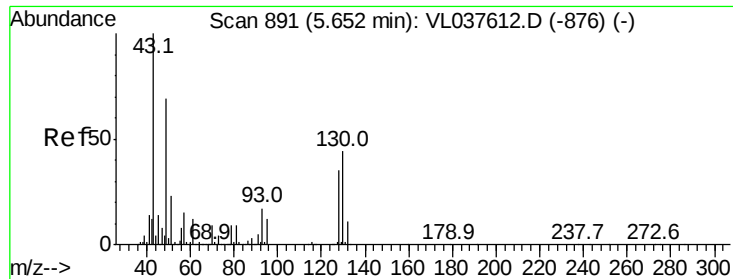
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Thu Sep 16 13:42:46 2021
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

ClientSampleId :

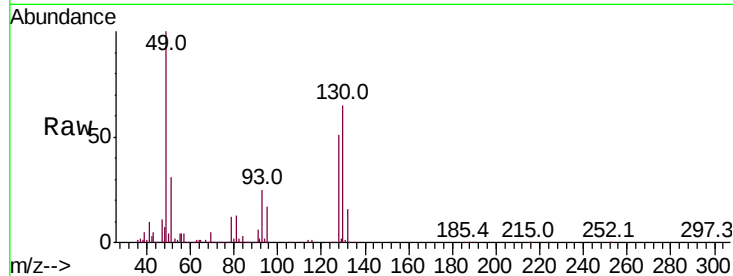
Tot Ion: 49 Resp: 1577285

Ion Ratio Lower Upper

49 100

128 53.5 27.9 83.6

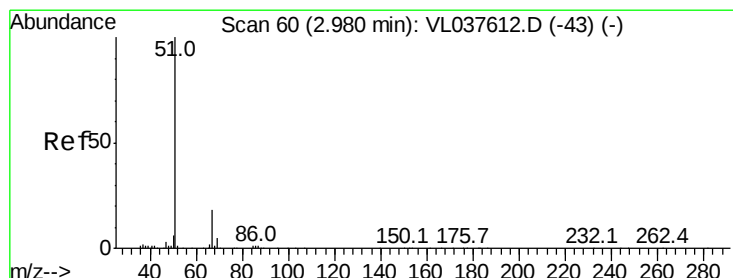
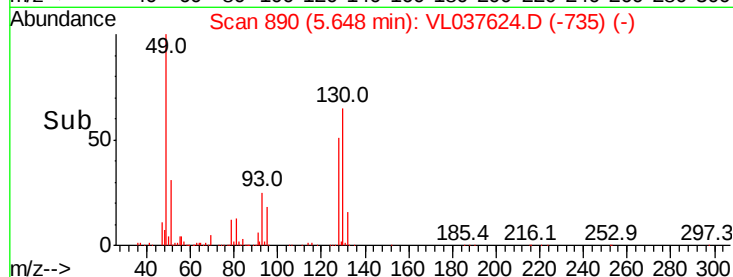
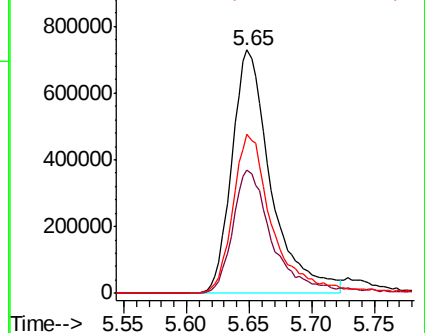
130 67.9 33.9 101.7



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: 0.376 ppbv

RT: 2.98 min Scan# 59

Delta R.T. -0.00 min

Lab File: VL037624.D

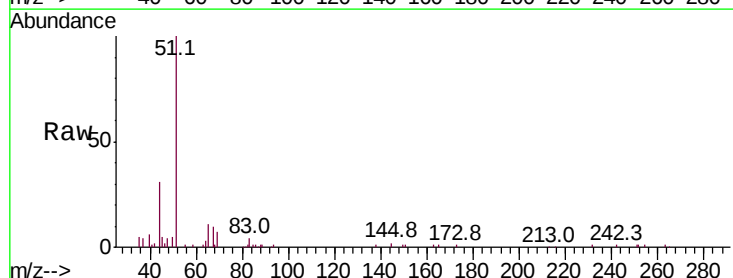
Acq: 16 Sep 2021 20:46

Tgt Ion: 51 Resp: 111951

Ion Ratio Lower Upper

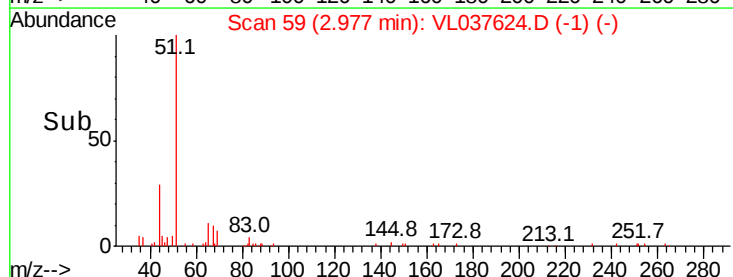
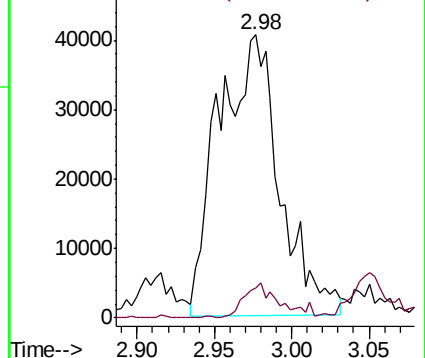
51 100

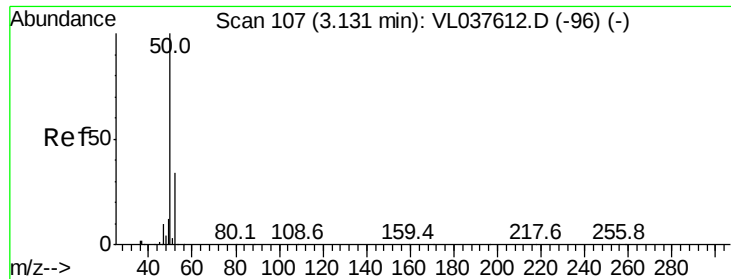
67 6.4 14.0 21.0#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.041 ppbv

RT: 3.13 min Scan# 106

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

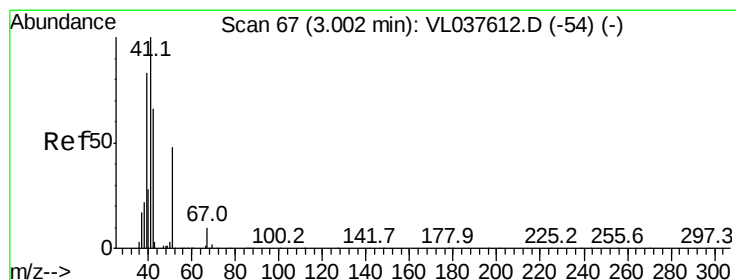
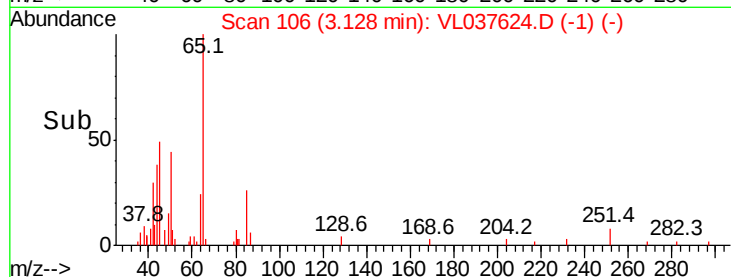
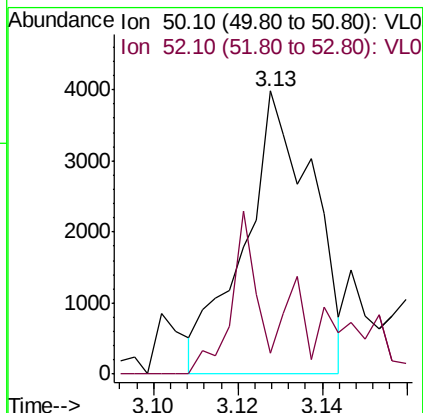
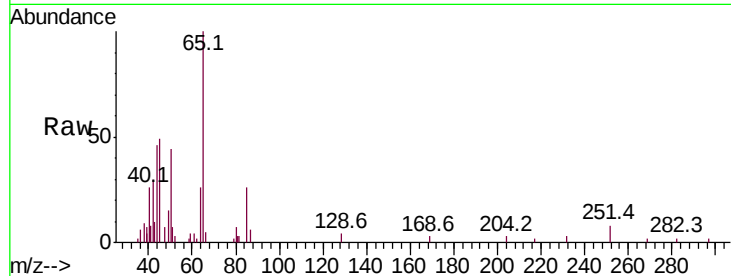
ClientSampleId :

Tot Ion: 50 Resp: 4485

Ion Ratio Lower Upper

50 100

52 8.3 27.1 40.7#



#9

Propene

Concen: 4.879 ppbv

RT: 3.20 min Scan# 127

Delta R.T. 0.19 min

Lab File: VL037624.D

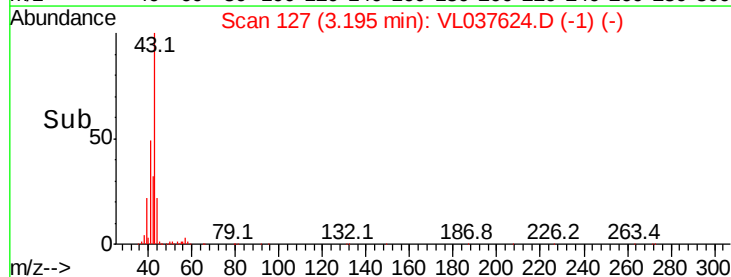
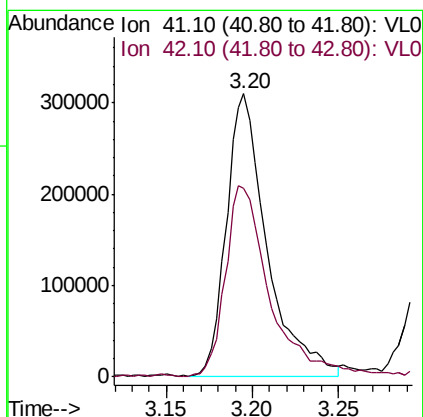
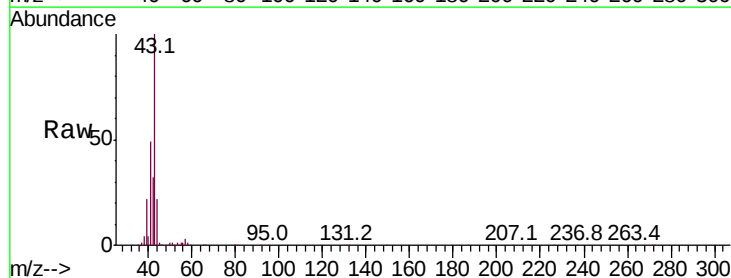
Acq: 16 Sep 2021 20:46

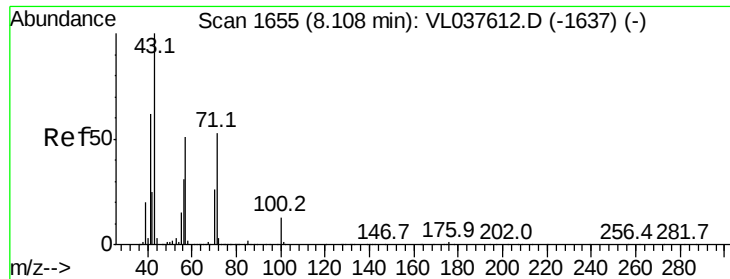
Tgt Ion: 41 Resp: 512028

Ion Ratio Lower Upper

41 100

42 72.8 57.2 85.8

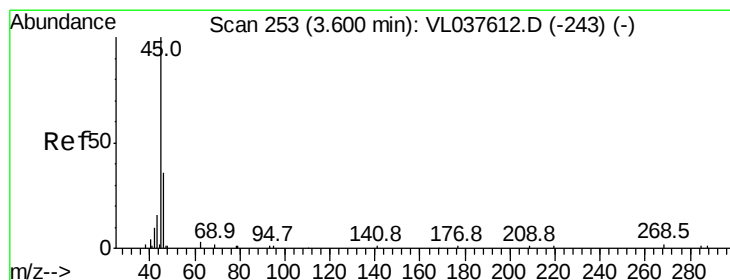
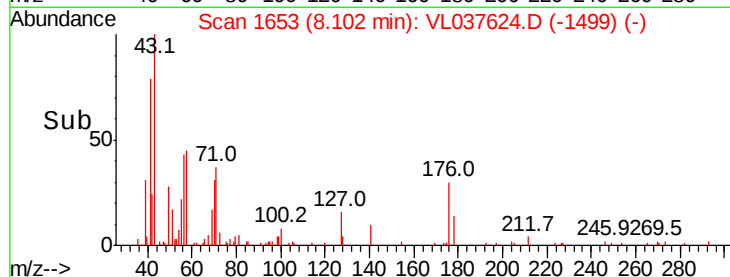
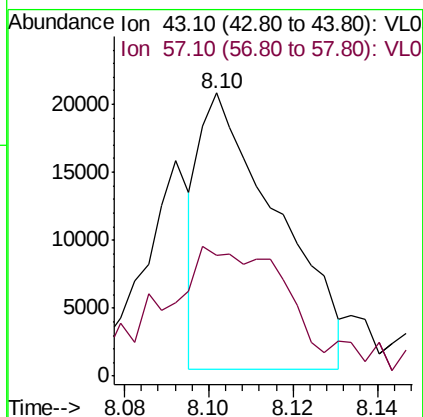
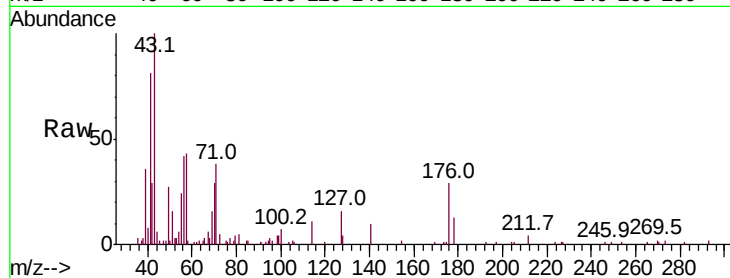




#10
Heptane
Concen: 0.107 ppbv
RT: 8.10 min Scan# 1653
Delta R.T. -0.01 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

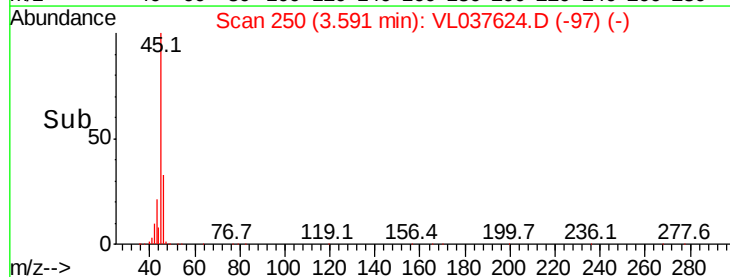
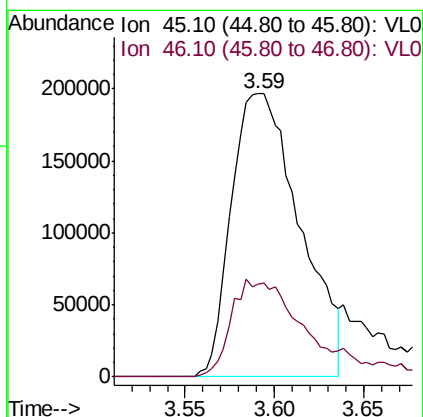
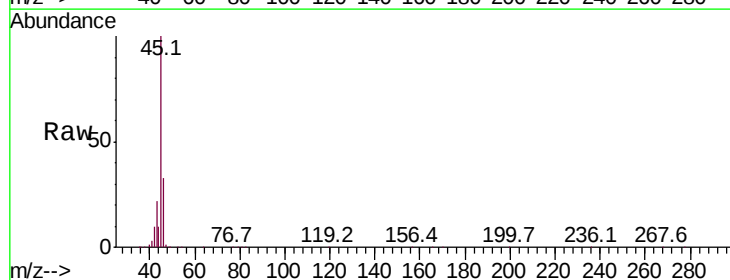
Instrument :
MSVOA_L
ClientSampleId :

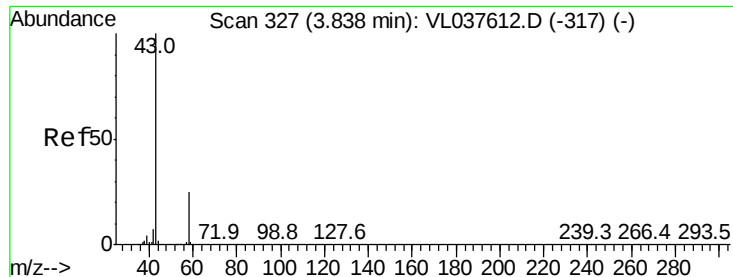
Tot Ion: 43 Resp: 26236
Ion Ratio Lower Upper
43 100
57 92.7 40.1 60.1#



#13
Ethanol
Concen: 51.350 ppbv
RT: 3.59 min Scan# 250
Delta R.T. -0.01 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

Tgt Ion: 45 Resp: 527109
Ion Ratio Lower Upper
45 100
46 42.3 17.2 68.8





#15

Acetone

Concen: 12.663 ppbv

RT: 3.83 min Scan# 326

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

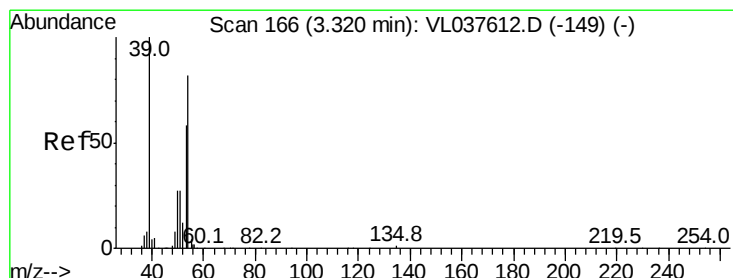
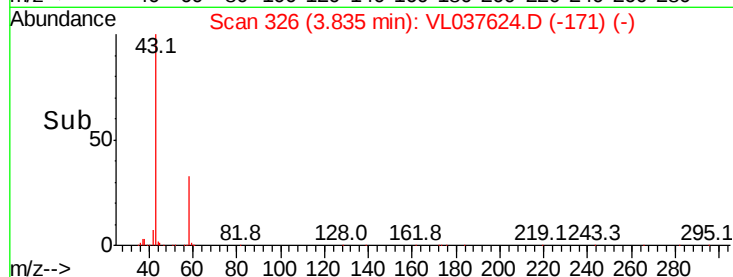
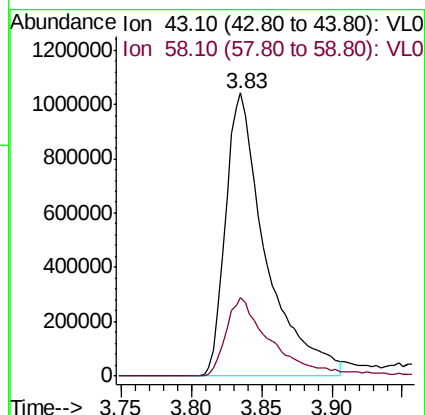
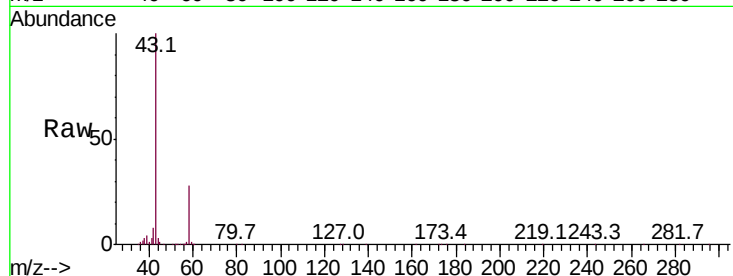
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 2075110

Ion Ratio Lower Upper

43 100

58 32.9 24.9 37.3



#16

1,3-Butadiene

Concen: 0.716 ppbv

RT: 3.30 min Scan# 159

Delta R.T. -0.02 min

Lab File: VL037624.D

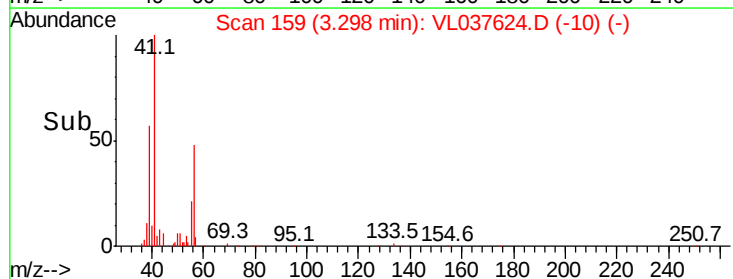
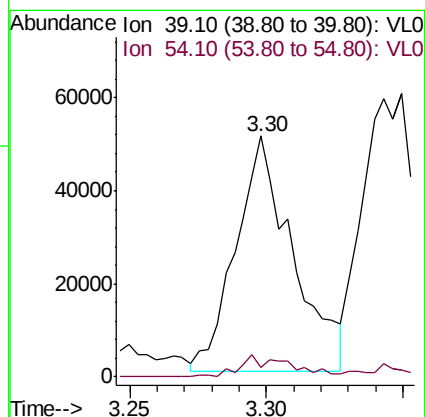
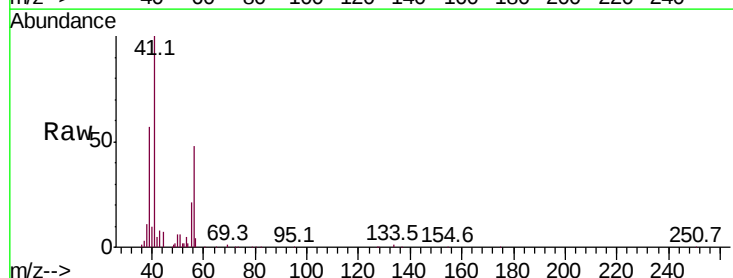
Acq: 16 Sep 2021 20:46

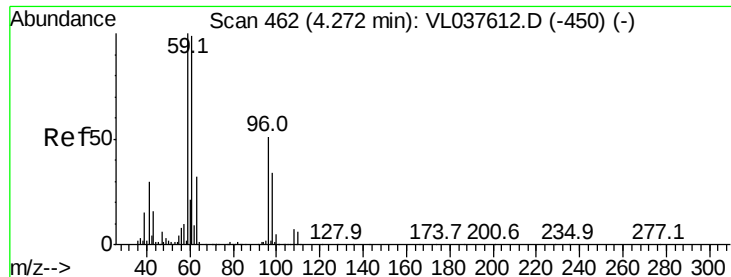
Tgt Ion: 39 Resp: 73351

Ion Ratio Lower Upper

39 100

54 12.4 62.6 93.8#



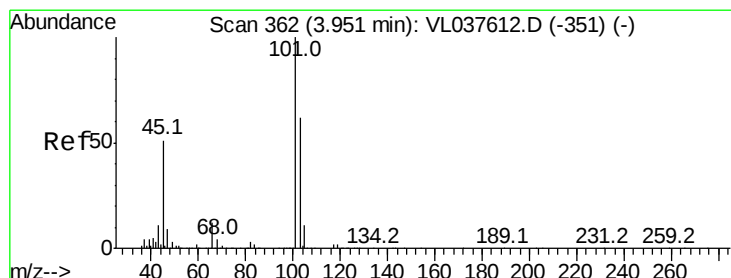
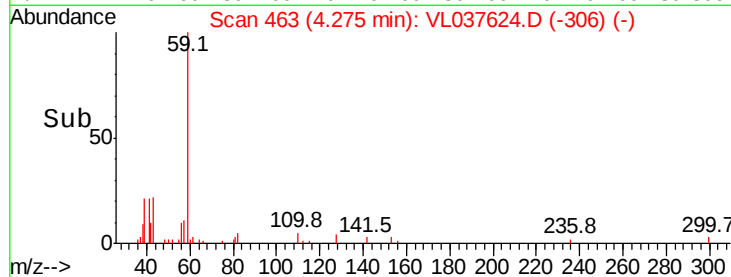
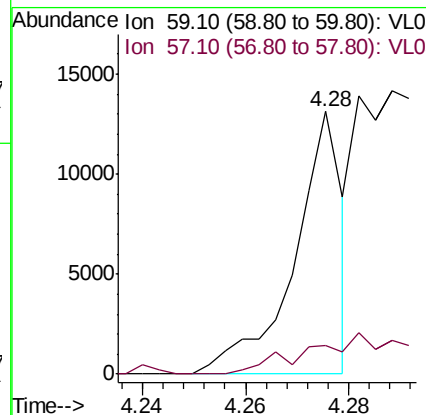
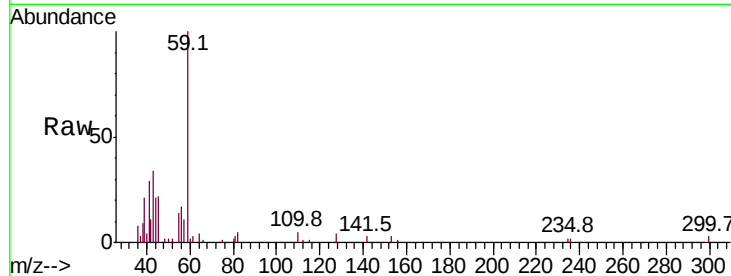


#17

tert-Butyl alcohol
Concen: 0.061 ppbv
RT: 4.28 min Scan# 463
Delta R.T. 0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

Instrument :
MSVOA_L
ClientSampleId :

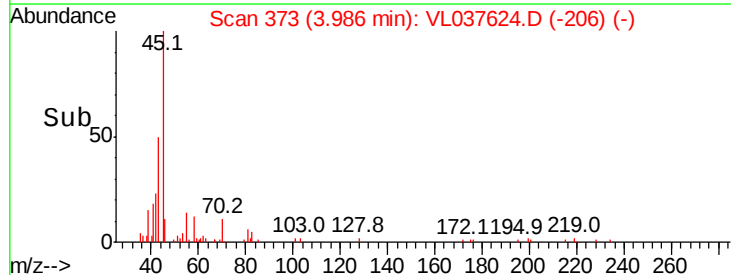
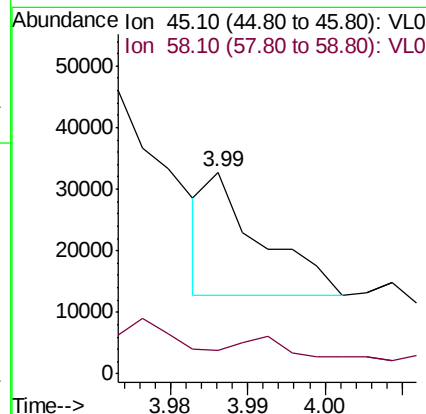
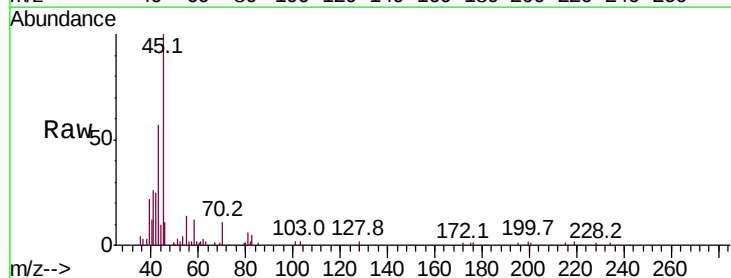
Tot Ion: 59 Resp: 8479
Ion Ratio Lower Upper
59 100
57 0.0 8.4 12.6#

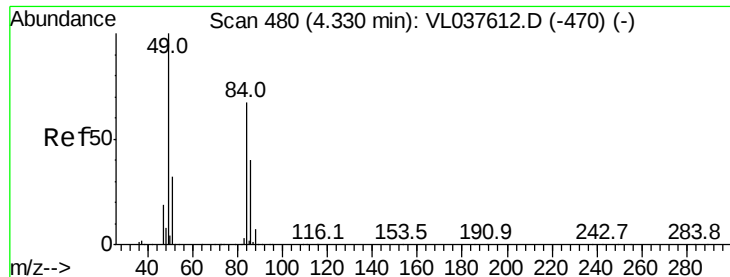


#19

Isopropyl Alcohol
Concen: 0.108 ppbv
RT: 3.99 min Scan# 373
Delta R.T. 0.04 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

Tgt Ion: 45 Resp: 9595
Ion Ratio Lower Upper
45 100
58 0.0 2.9 4.3#

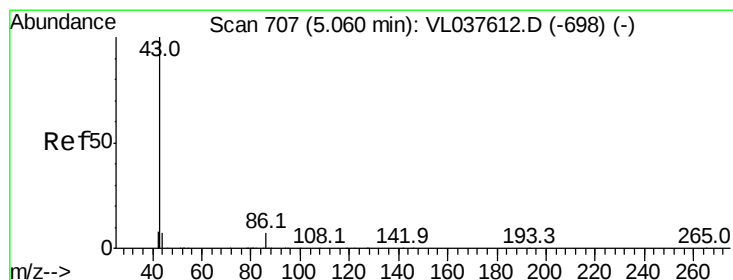
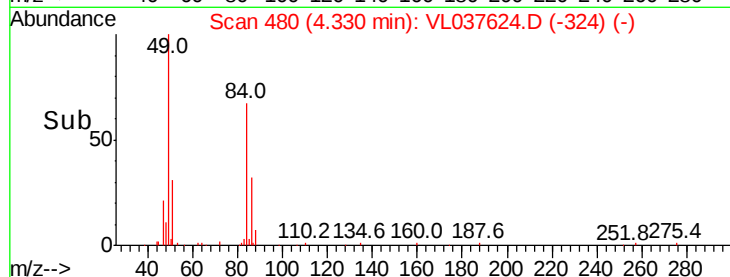
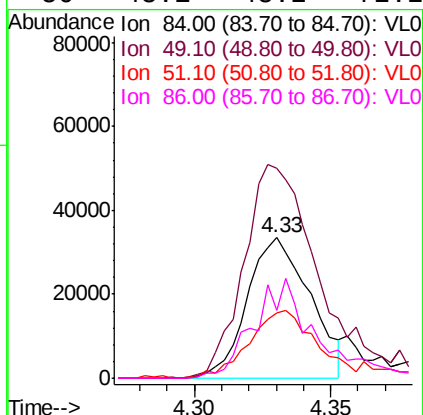
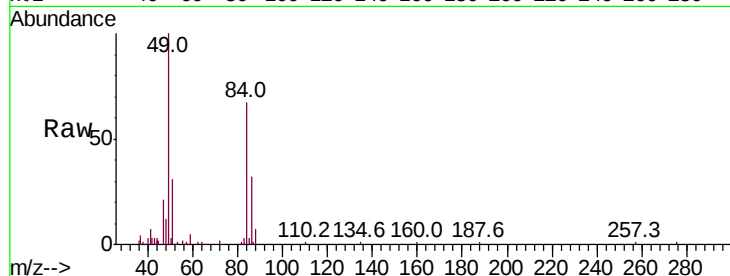




#20
Methvlene Chloride
Concen: 0.684 ppbv
RT: 4.33 min Scan# 480
Delta R.T. 0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

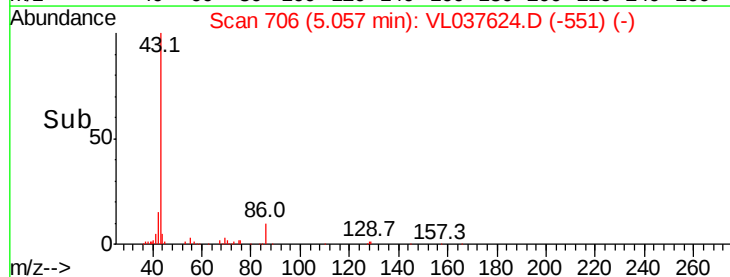
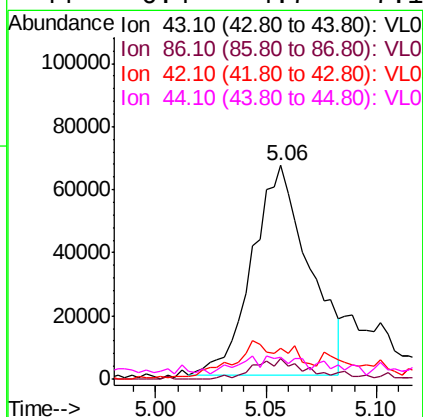
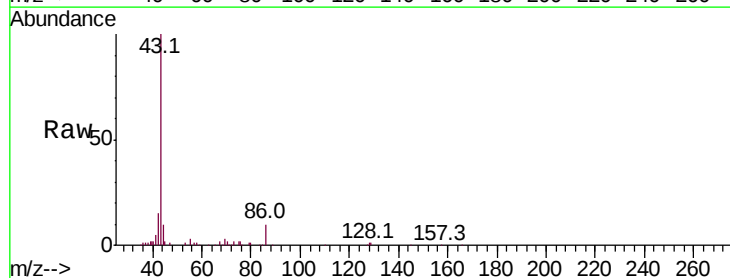
Instrument :
MSVOA_L
ClientSampleId :

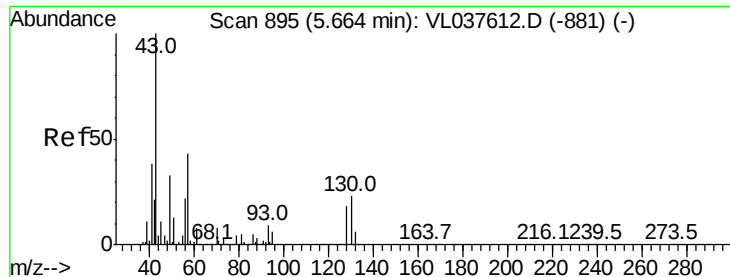
Tot Ion: 84 Resp: 53540
Ion Ratio Lower Upper
84 100
49 148.7 120.0 180.0
51 45.7 38.0 57.0
86 48.1 48.2 72.2#



#23
Vinyl Acetate
Concen: 0.522 ppbv
RT: 5.06 min Scan# 706
Delta R.T. -0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

Tgt Ion: 43 Resp: 118407
Ion Ratio Lower Upper
43 100
86 9.8 5.0 7.6#
42 13.3 7.5 11.3#
44 6.4 4.7 7.1

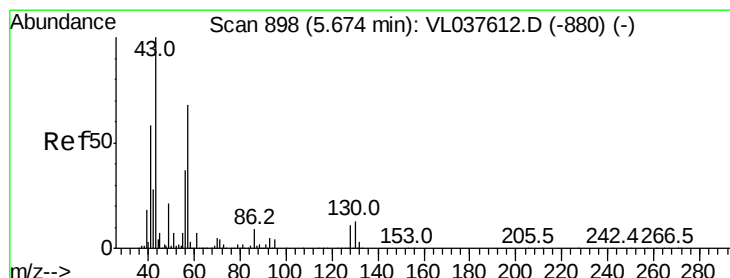
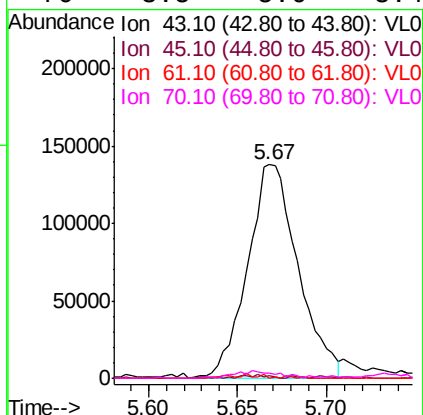
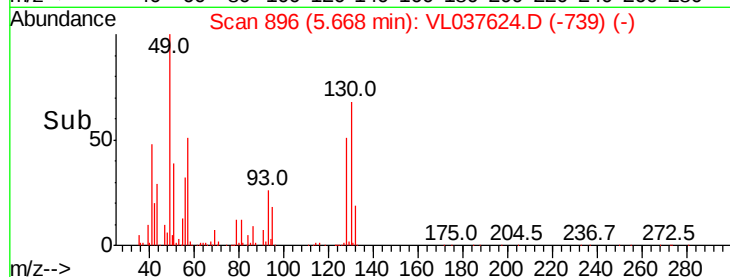
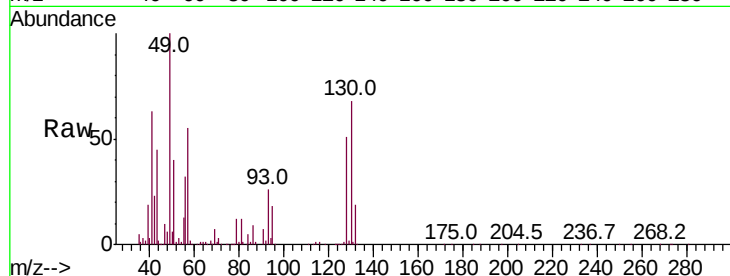




#25
Ethyl Acetate
Concen: 0.688 ppbv
RT: 5.67 min Scan# 896
Delta R.T. 0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

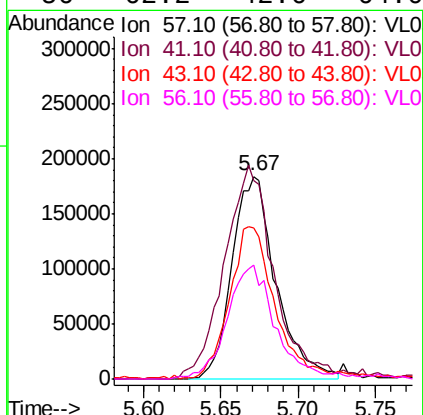
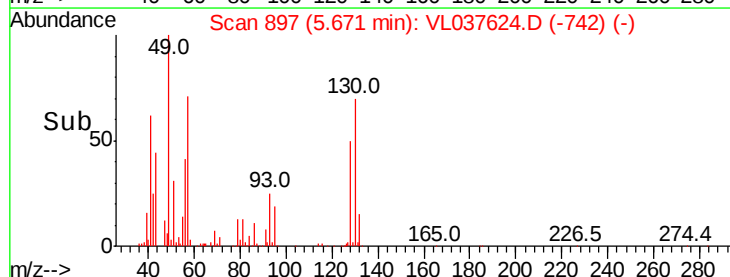
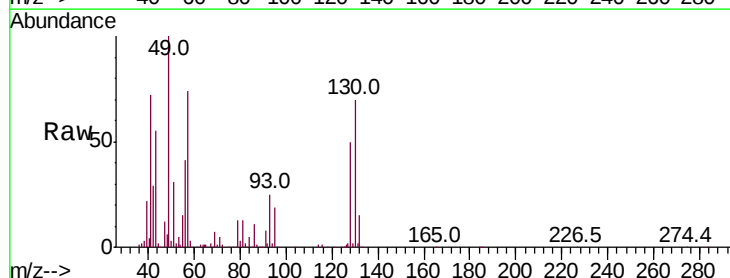
Instrument :
MSVOA_L
ClientSampled :

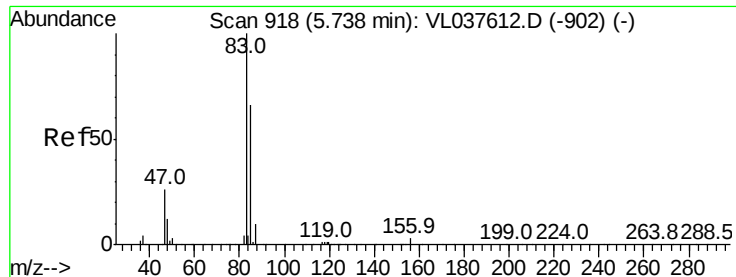
Tot Ion:	43	Resp:	273030
Ion	Ratio	Lower	Upper
43	100		
45	1.0	8.0	12.0#
61	1.2	7.5	11.3#
70	3.5	5.6	8.4#



#26
Hexane
Concen: 1.916 ppbv
RT: 5.67 min Scan# 897
Delta R.T. -0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

Tgt Ion:	57	Resp:	361168
Ion	Ratio	Lower	Upper
57	100		
41	122.8	70.9	106.3#
43	79.0	170.4	255.6#
56	62.2	42.6	64.0





#29

Chloroform

Concen: 1.574 ppbv

RT: 5.74 min Scan# 917

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

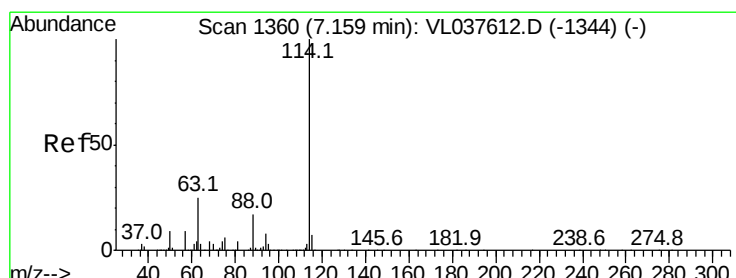
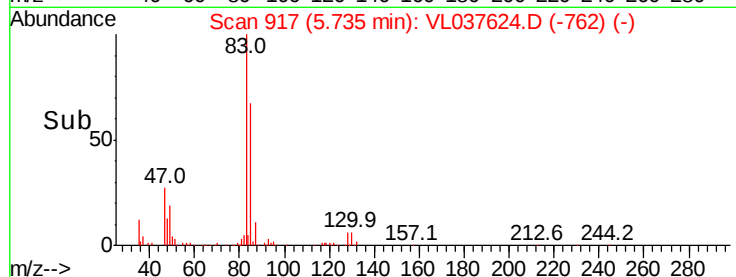
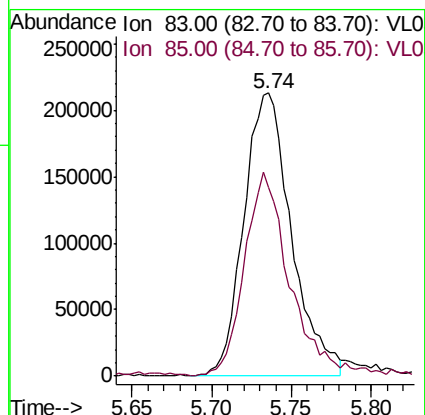
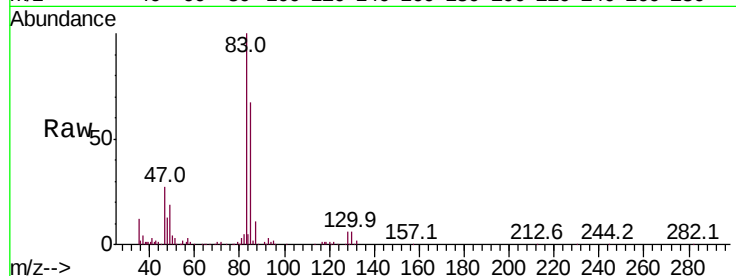
ClientSampleId :

Tot Ion: 83 Resp: 433452

Ion Ratio Lower Upper

83 100

85 66.3 52.6 79.0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

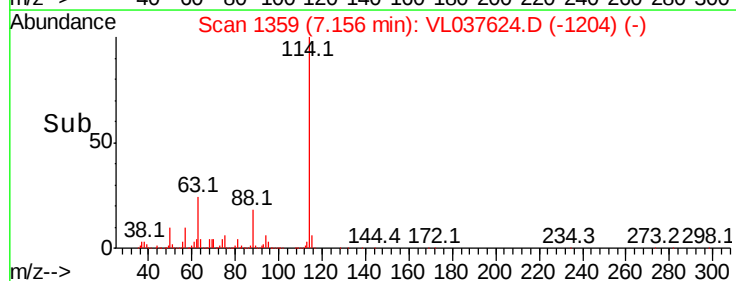
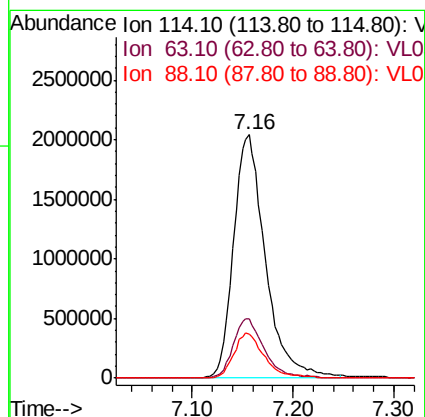
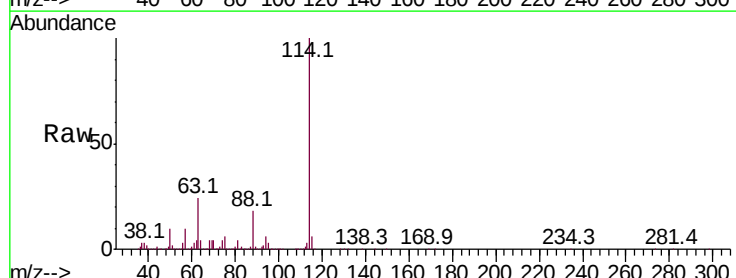
Tgt Ion: 114 Resp: 4483981

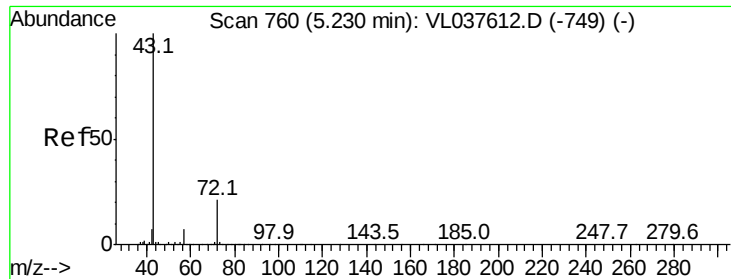
Ion Ratio Lower Upper

114 100

63 24.0 19.6 29.4

88 18.1 14.2 21.4

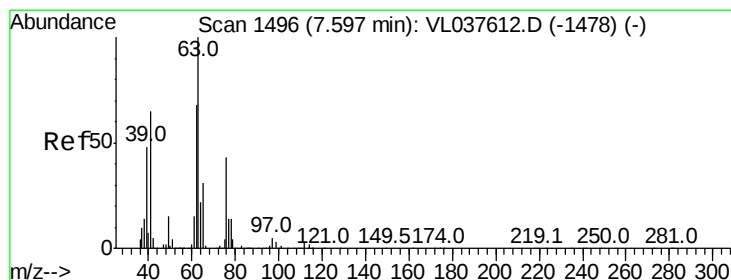
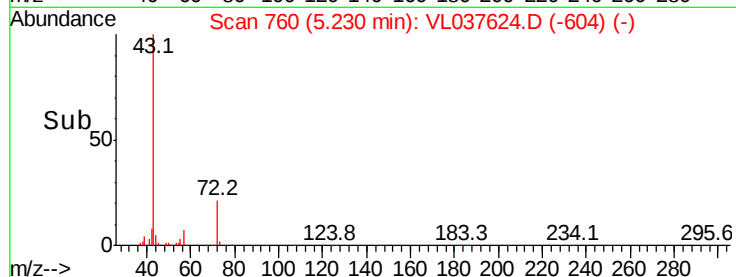
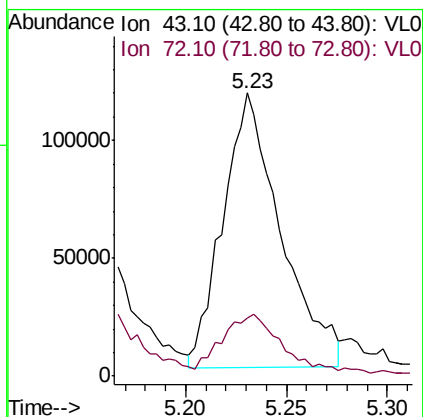
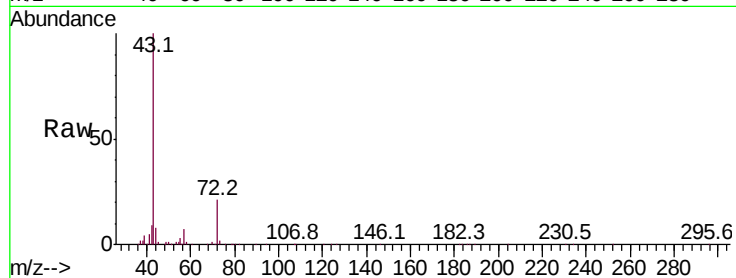




#34
2-Butanone
Concen: 1.281 ppbv
RT: 5.23 min Scan# 760
Delta R.T. 0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

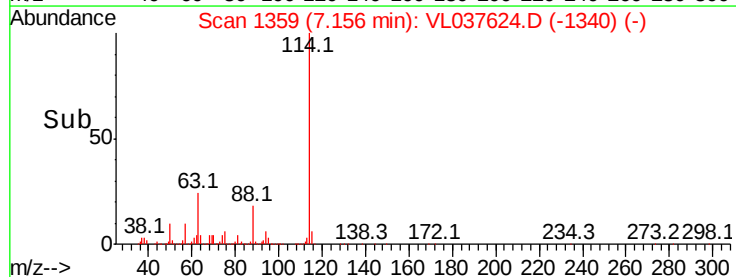
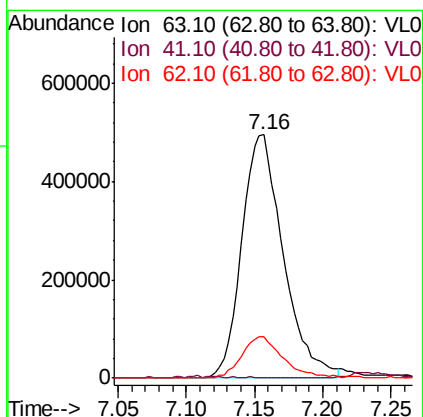
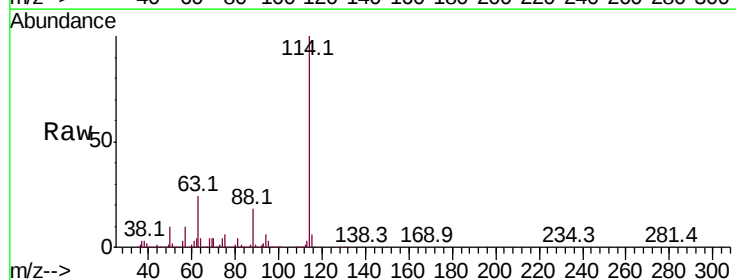
Instrument :
MSVOA_L
ClientSampleId :

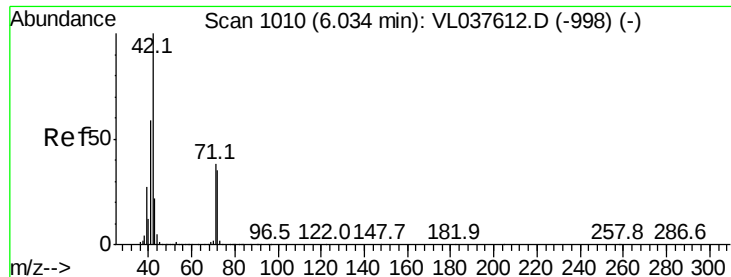
Tot Ion: 43 Resp: 233442
Ion Ratio Lower Upper
43 100
72 26.9 18.4 27.6



#39
1,2-Dichloropropane
Concen: 7.303 ppbv
RT: 7.16 min Scan# 1359
Delta R.T. -0.44 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

Tgt Ion: 63 Resp: 1045847
Ion Ratio Lower Upper
63 100
41 0.0 51.6 77.4#
62 16.9 54.6 81.8#





#41

Tetrahydrofuran

Concen: 0.190 ppbv

RT: 6.05 min Scan# 1014

Delta R.T. 0.01 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

ClientSampleId :

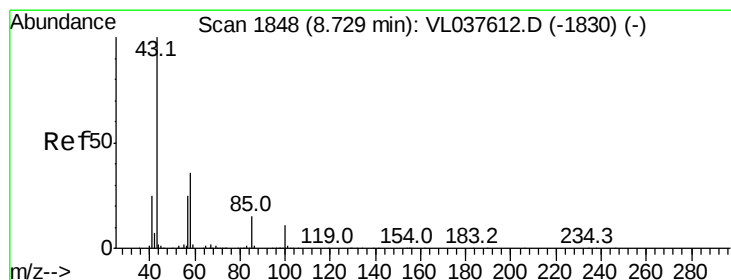
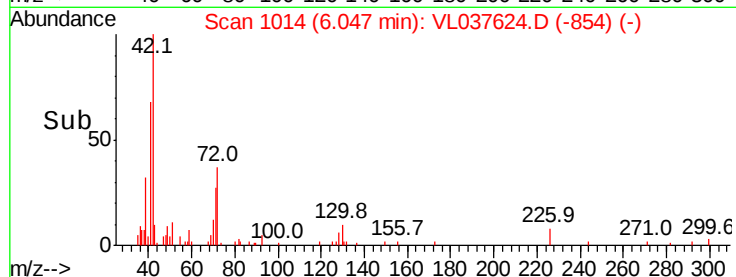
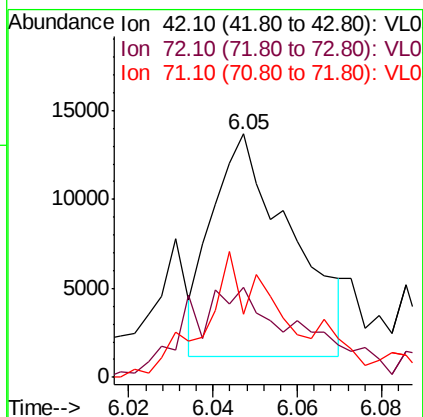
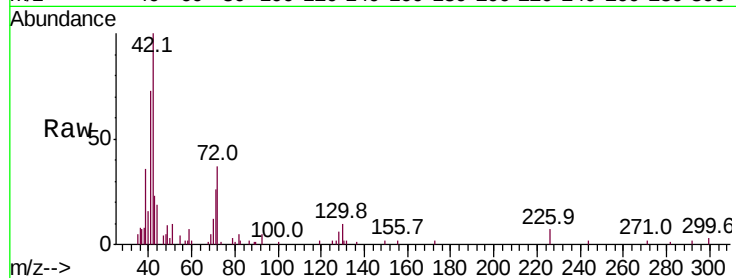
Tot Ion: 42 Resp: 16263

Ion Ratio Lower Upper

42 100

72 63.2 31.4 47.2#

71 65.7 30.6 46.0#



#50

4-Methyl-2-Pentanone

Concen: 0.033 ppbv

RT: 8.73 min Scan# 1849

Delta R.T. 0.00 min

Lab File: VL037624.D

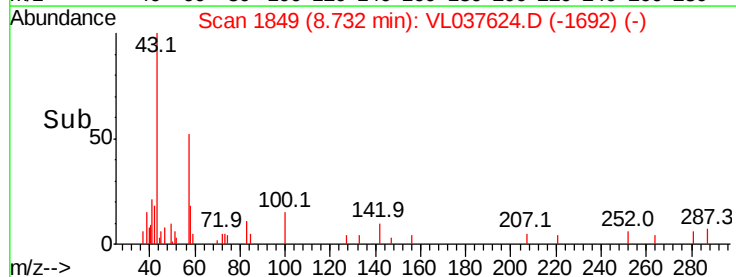
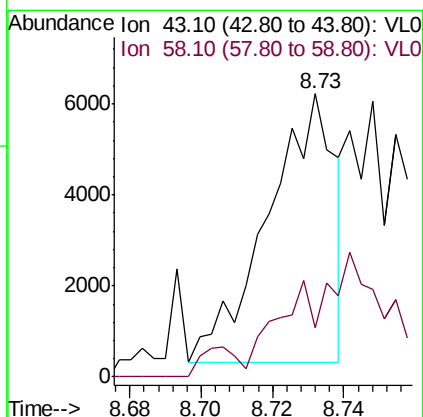
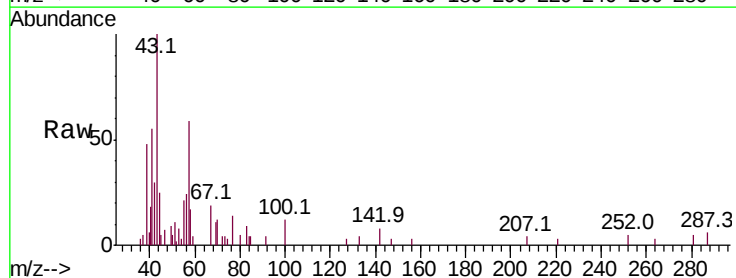
Acq: 16 Sep 2021 20:46

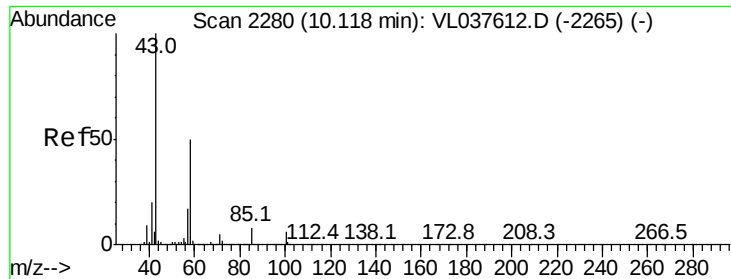
Tgt Ion: 43 Resp: 7662

Ion Ratio Lower Upper

43 100

58 0.0 29.4 44.2#

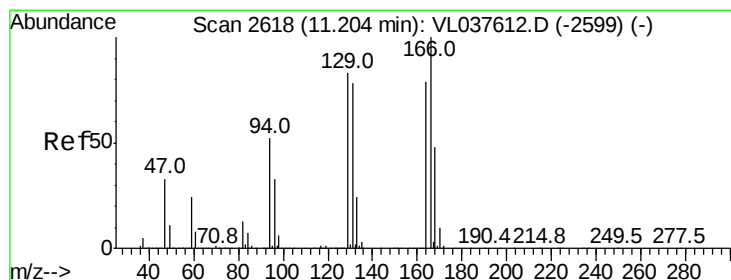
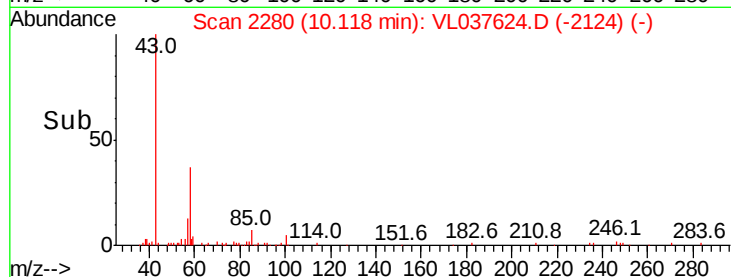
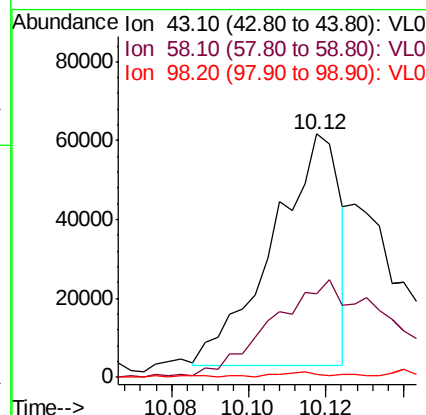
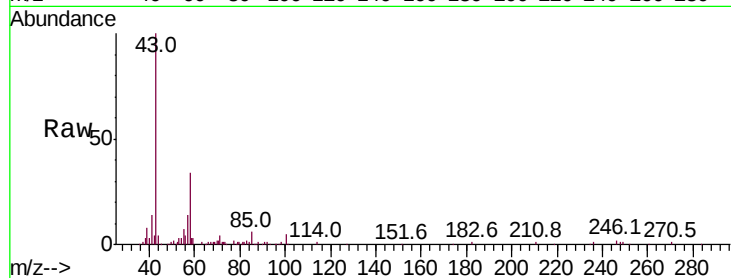




#51
2-Hexanone
Concen: 0.694 ppbv
RT: 10.12 min Scan# 2280
Delta R.T. 0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

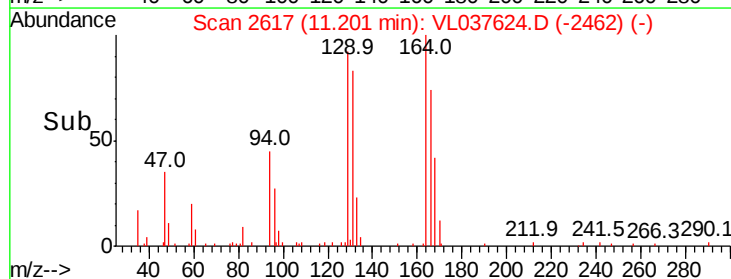
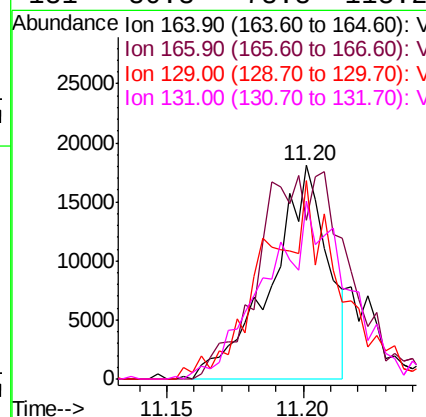
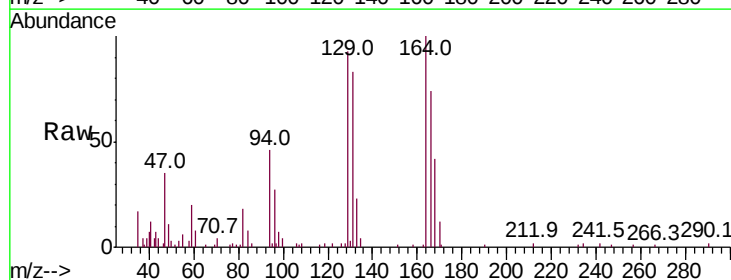
Instrument :
MSVOA_L
ClientSampleId :

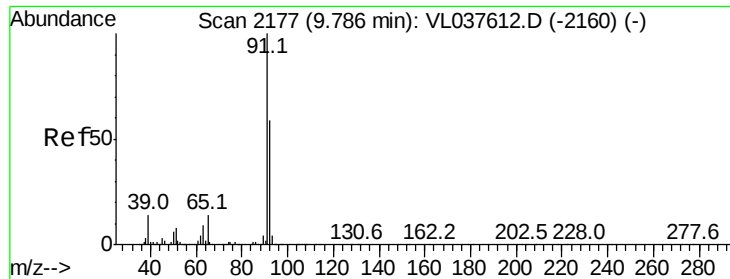
Tot Ion: 43 Resp: 70787
Ion Ratio Lower Upper
43 100
58 86.0 39.3 58.9#
98 0.0 0.4 0.6#



#52
Tetrachloroethene
Concen: 0.182 ppbv
RT: 11.20 min Scan# 2617
Delta R.T. -0.00 min
Lab File: VL037624.D
Acq: 16 Sep 2021 20:46

Tgt Ion: 164 Resp: 26128
Ion Ratio Lower Upper
164 100
166 74.4 101.2 151.8#
129 90.1 84.0 126.0
131 80.3 78.8 118.2





#53

Toluene

Concen: 0.302 ppbv

RT: 9.78 min Scan# 2176

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

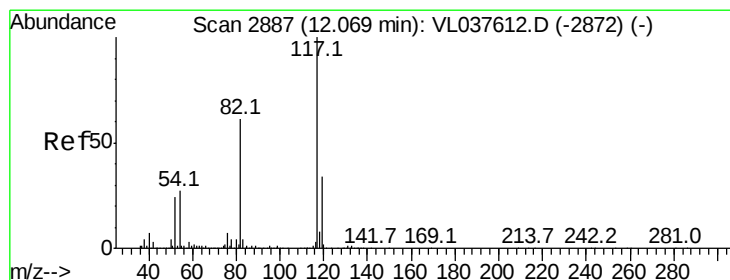
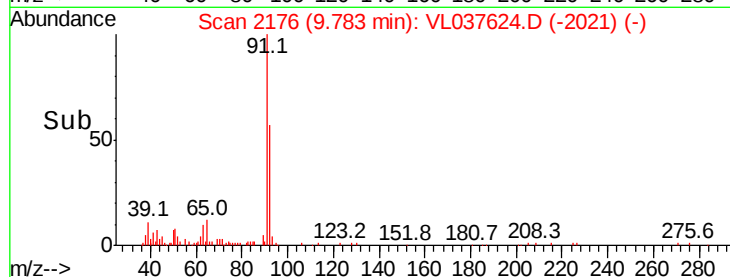
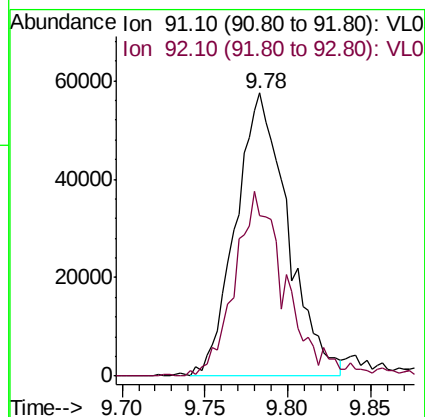
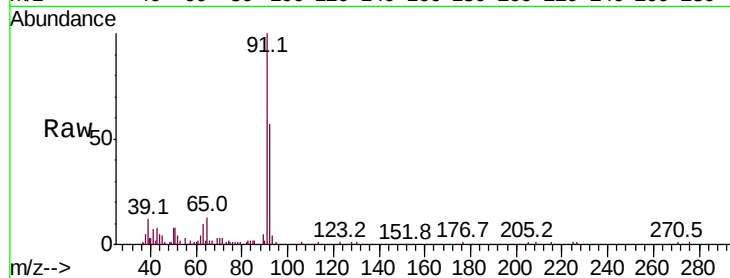
ClientSampleId :

Tot Ion: 91 Resp: 125516

Ion Ratio Lower Upper

91 100

92 65.2 48.9 73.3



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2884

Delta R.T. -0.01 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

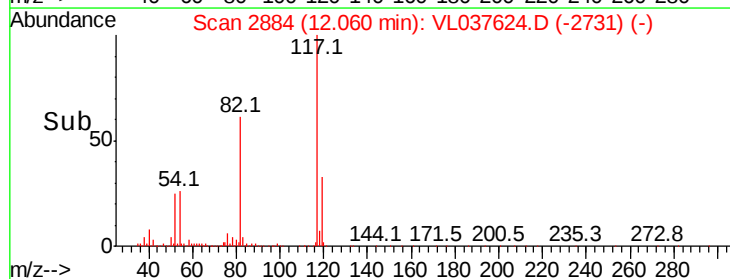
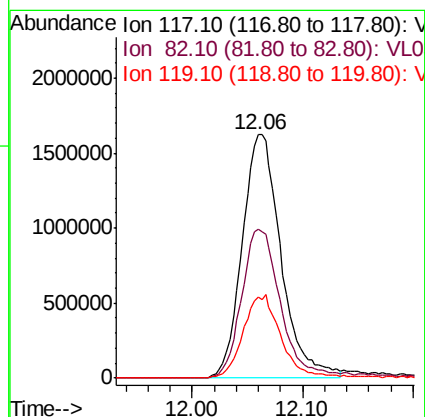
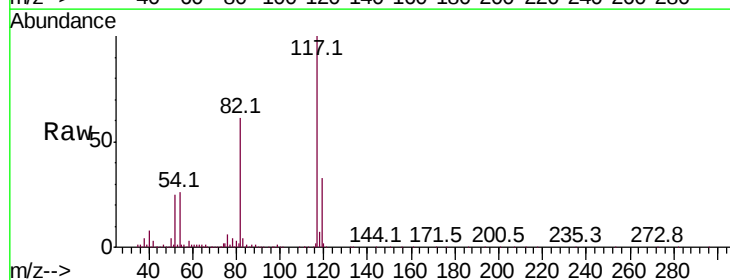
Tgt Ion: 117 Resp: 3962762

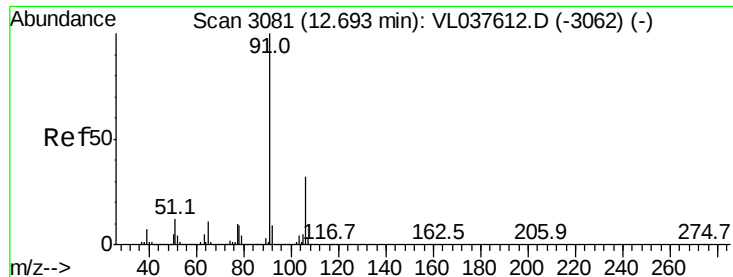
Ion Ratio Lower Upper

117 100

82 64.5 50.6 75.8

119 34.4 26.2 39.2





#58

Ethyl Benzene

Concen: 0.072 ppbv

RT: 12.68 min Scan# 3078

Delta R.T. -0.01 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

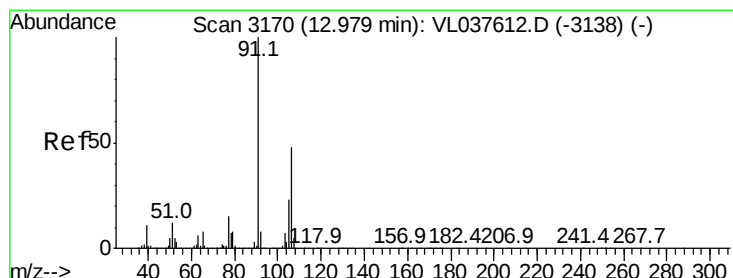
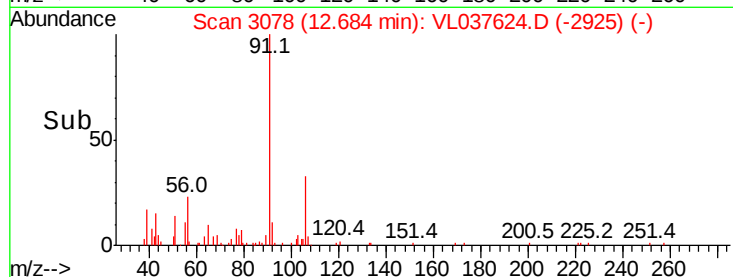
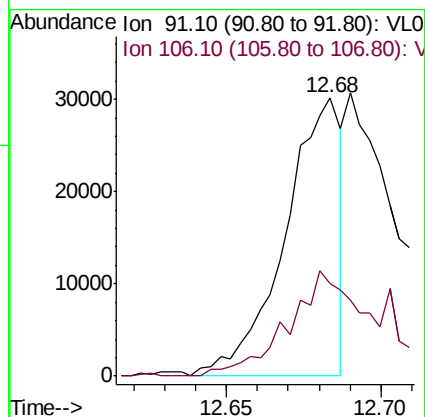
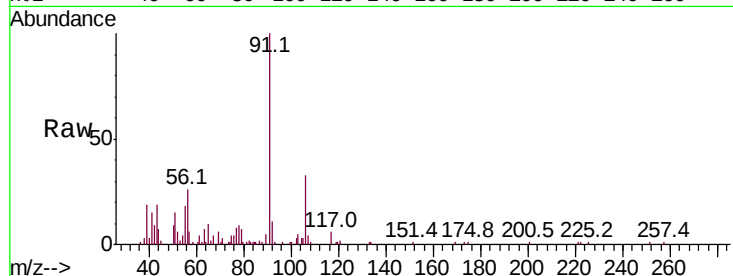
ClientSampleId :

Tot Ion: 91 Resp: 37976

Ion Ratio Lower Upper

91 100

106 33.4 25.3 37.9



#59

m/p-Xylene

Concen: 0.069 ppbv

RT: 12.98 min Scan# 3171

Delta R.T. 0.00 min

Lab File: VL037624.D

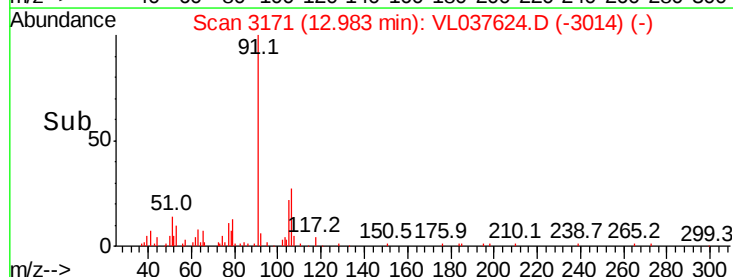
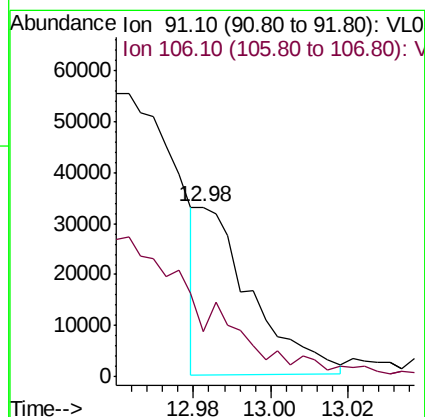
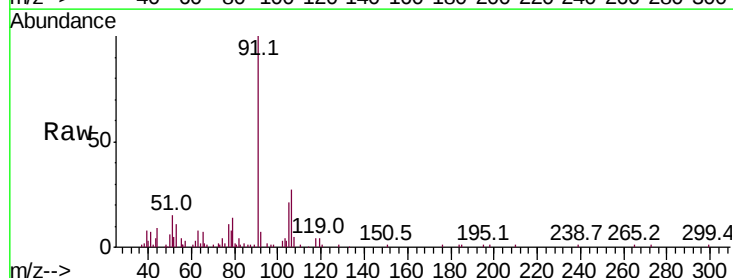
Acq: 16 Sep 2021 20:46

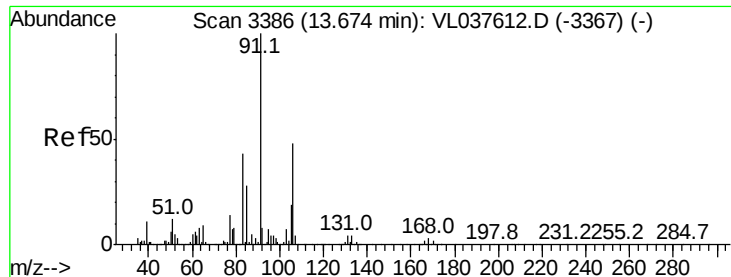
Tgt Ion: 91 Resp: 31406

Ion Ratio Lower Upper

91 100

106 0.0 36.6 55.0#





#60

o-Xylene

Concen: 0.350 ppbv

RT: 13.67 min Scan# 3384

Delta R.T. -0.01 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

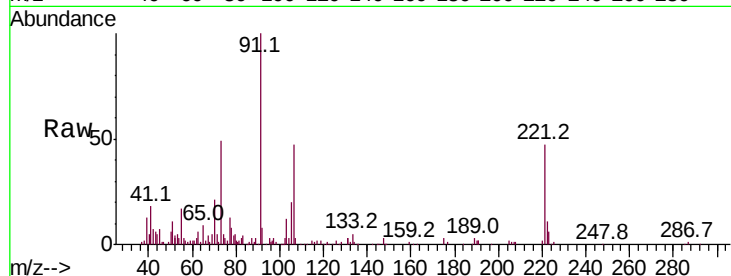
ClientSampleId :

Tot Ion: 91 Resp: 152701

Ion Ratio Lower Upper

91 100

106 45.4 23.0 69.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

13.67

80000

60000

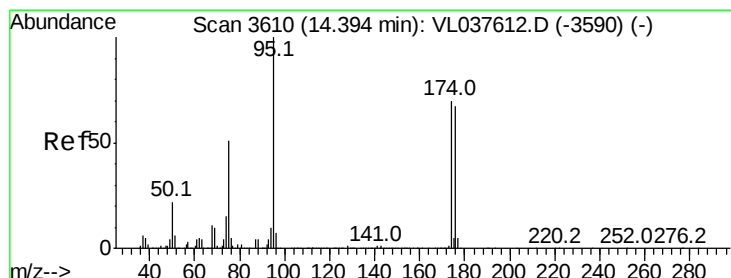
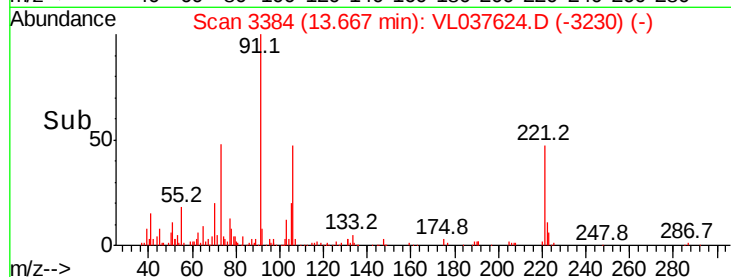
40000

20000

0

13.60 13.65 13.70 13.75

Time-->



#68

1-Bromo-4-Fluorobenzene

Concen: 9.972 ppbv

RT: 14.39 min Scan# 3609

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

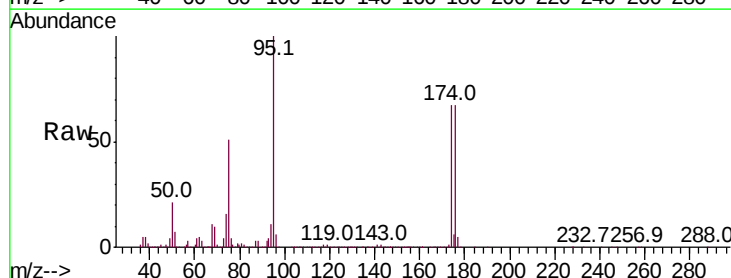
Tgt Ion: 95 Resp: 2855783

Ion Ratio Lower Upper

95 100

174 75.0 56.3 84.5

175 5.6 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

1500000

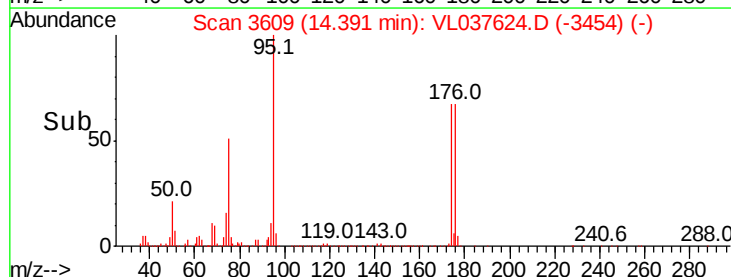
1000000

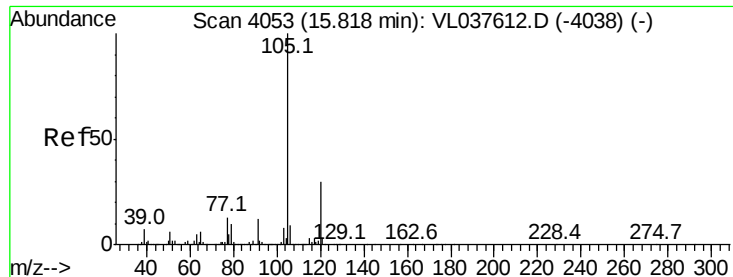
500000

0

14.30 14.40

Time-->





#72

4-Ethyltoluene

Concen: 0.096 ppbv

RT: 15.82 min Scan# 4052

Delta R.T. -0.00 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 48054

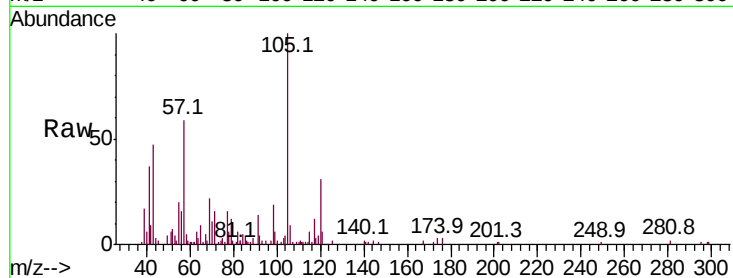
Ion Ratio Lower Upper

105 100

120 64.5 24.7 37.1#

91 26.7 9.9 14.9#

77 0.0 10.5 15.7#

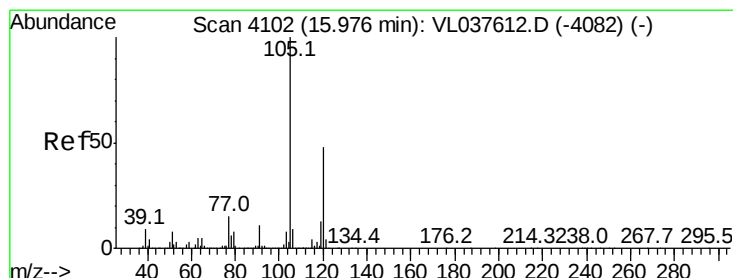
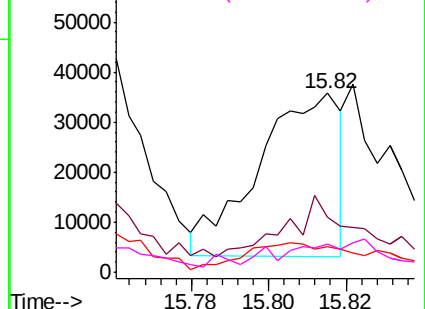
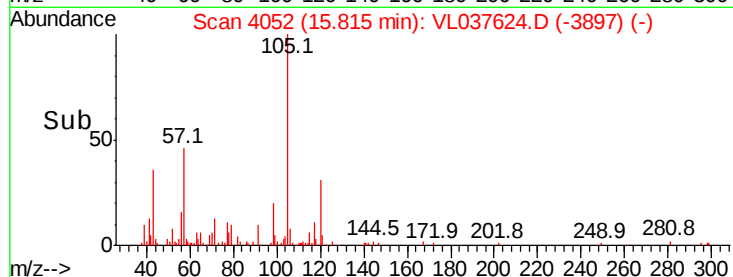


Abundance Ion 105.10 (104.80 to 105.80): V

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: 0.163 ppbv

RT: 15.97 min Scan# 4100

Delta R.T. -0.01 min

Lab File: VL037624.D

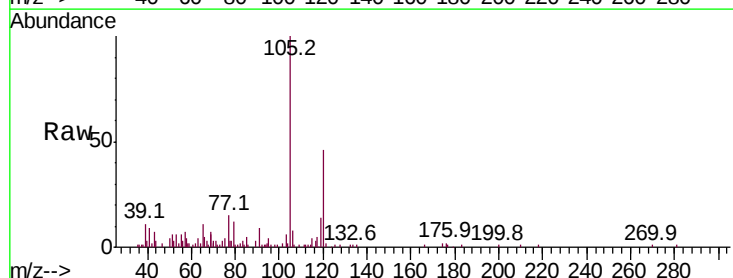
Acq: 16 Sep 2021 20:46

Tgt Ion:105 Resp: 76018

Ion Ratio Lower Upper

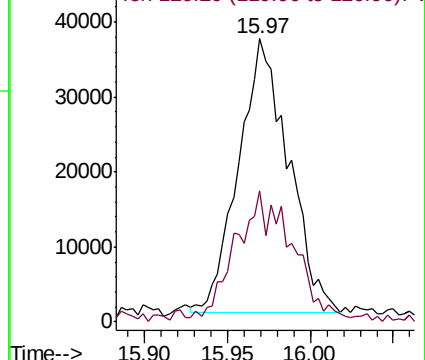
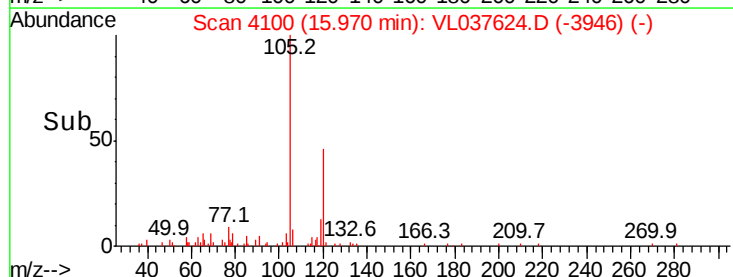
105 100

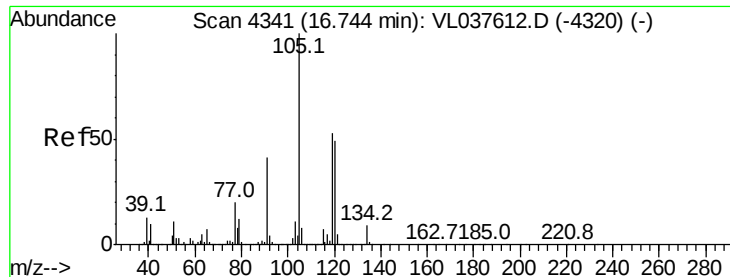
120 45.9 38.3 57.5



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: 0.840 ppbv

RT: 16.74 min Scan# 4339

Delta R.T. -0.01 min

Lab File: VL037624.D

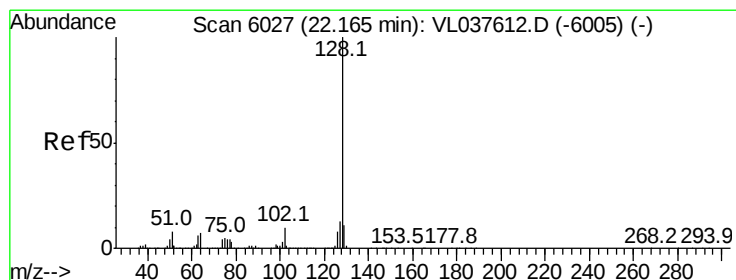
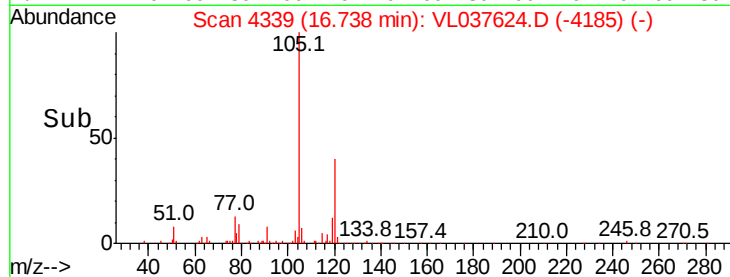
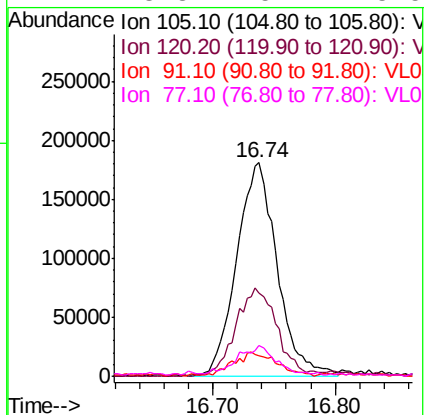
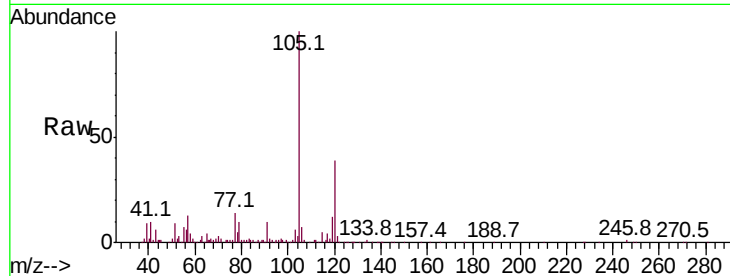
Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	105	Resp:	413211
Ion	Ratio	Lower	Upper
105	100		
120	39.0	39.4	59.0#
91	9.3	33.3	49.9#
77	13.3	15.7	23.5#



#79

Naphthalene

Concen: 0.038 ppbv

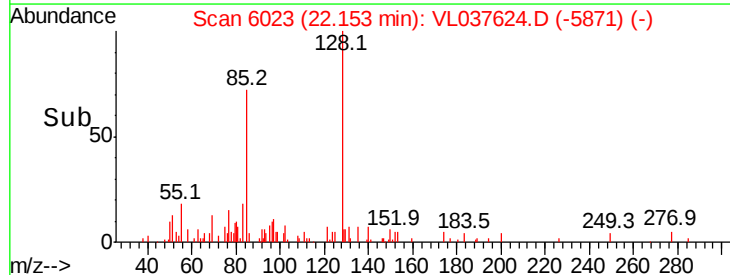
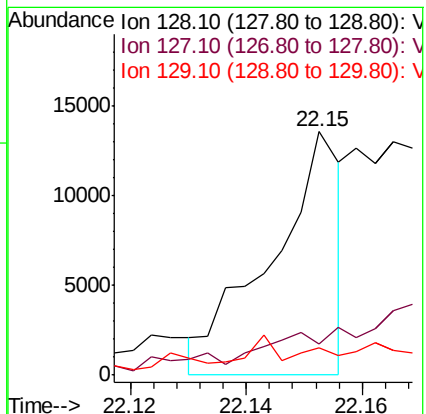
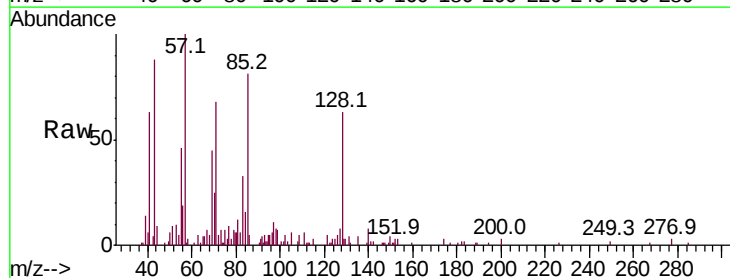
RT: 22.15 min Scan# 6023

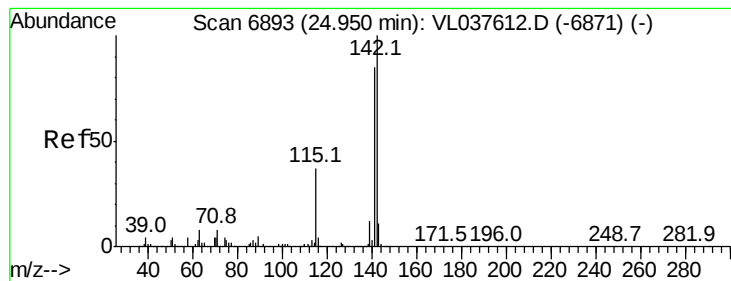
Delta R.T. -0.01 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Tgt Ion:	128	Resp:	11353
Ion	Ratio	Lower	Upper
128	100		
127	7.6	10.6	16.0#
129	4.8	8.6	12.8#





#80

Naphthalene,2-methyl-

Concen: 0.041 ppbv

RT: 24.94 min Scan# 6891

Delta R.T. -0.01 min

Lab File: VL037624.D

Acq: 16 Sep 2021 20:46

Instrument :

MSVOA_L

ClientSampleId :

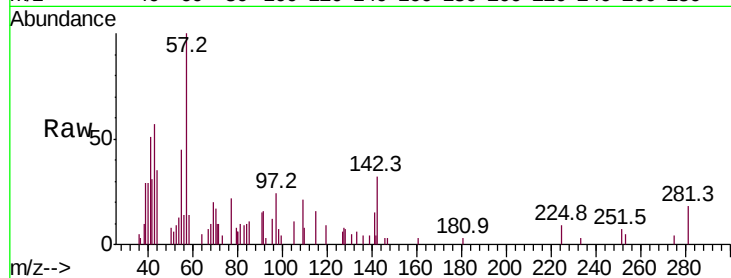
Tot Ion:142 Resp: 2818

Ion Ratio Lower Upper

142 100

141 129.8 70.9 106.3#

115 63.8 29.6 44.4#



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

