

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL090821\
 Data File : VL037570.D
 Acq On : 8 Sep 2021 13:41
 Operator : SY/AP
 Sample : M3663-07DL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV-4DL

Quant Time: Sep 09 09:11:27 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

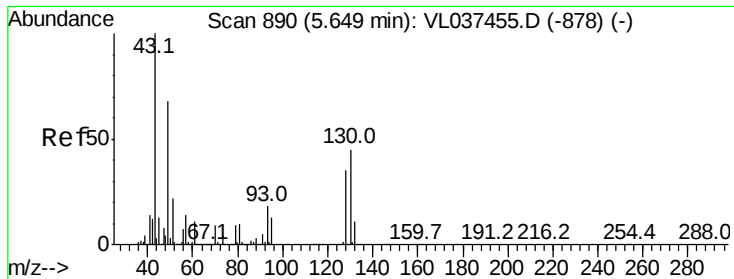
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1706485	10.00	ppbv	0.03
33) 1,4-Difluorobenzene	7.18	114	5018577	10.00	ppbv	0.03
55) Chlorobenzene-d5	12.10	117	4533260	10.00	ppbv	0.04

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	3347038	10.39	ppbv	0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.06	85	12151	0.044	ppbv	94
3) Chlorodifluoromethane	2.97	51	176922	0.541	ppbv #	62
4) Chloromethane	3.15	50	4511	0.039	ppbv #	76
9) Propene	3.43	41	7005	0.060	ppbv	91
10) Heptane	8.14	43	30045	0.112	ppbv #	14
13) Ethanol	3.62	45	21916	1.926	ppbv #	1
15) Acetone	3.86	43	1225728	7.058	ppbv	92
16) 1,3-Butadiene	3.32	39	45577	0.409	ppbv #	23
19) Isopropyl Alcohol	4.00	45	47071	0.473	ppbv #	95
20) Methylene Chloride	4.35	84	103137	1.186	ppbv #	86
23) Vinyl Acetate	5.09	43	7855	0.031	ppbv #	79
25) Ethyl Acetate	5.70	43	207134	0.470	ppbv #	78
26) Hexane	5.69	57	155361	0.721	ppbv #	1
29) Chloroform	5.76	83	677491	2.218	ppbv	92
31) cis-1,2-Dichloroethene	5.56	61	959530	4.918	ppbv	98
34) 2-Butanone	5.26	43	204680	0.999	ppbv #	82
36) Benzene	6.90	78	27523	0.065	ppbv #	93
38) Trichloroethene	7.84	130	833107	4.813	ppbv	98
39) 1,2-Dichloropropane	7.18	63	1164702	7.185	ppbv #	27
41) Tetrahydrofuran	5.76	42	3307	0.033	ppbv #	63
50) 4-Methyl-2-Pentanone	8.76	43	8621	0.032	ppbv #	38
51) 2-Hexanone	10.16	43	58576	0.476	ppbv #	82
52) Tetrachloroethene	11.24	164	8249898	47.720	ppbv	97
53) Toluene	9.82	91	374930	0.778	ppbv	99
58) Ethyl Benzene	12.72	91	119560	0.190	ppbv #	86
59) m/p-Xylene	13.01	91	105757	0.194	ppbv #	30
60) o-Xylene	13.71	91	48692	0.096	ppbv #	29
72) 4-Ethyltoluene	15.85	105	54266	0.090	ppbv #	55
73) 1,3,5-Trimethylbenzene	16.01	105	23995	0.043	ppbv	88
74) 1,2,4-Trimethylbenzene	16.77	105	292660	0.489	ppbv #	62

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.03 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampled :

SV-4DL

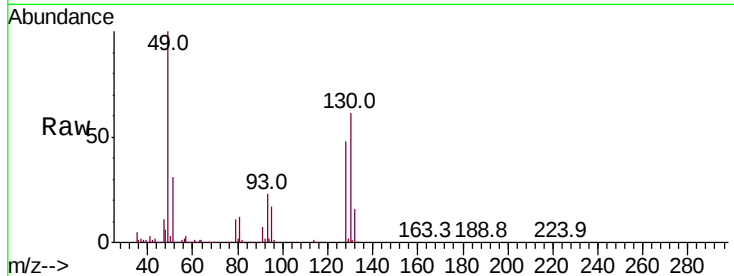
Tot Ion: 49 Resp: 1706485

Ion Ratio Lower Upper

49 100

128 53.2 27.5 82.4

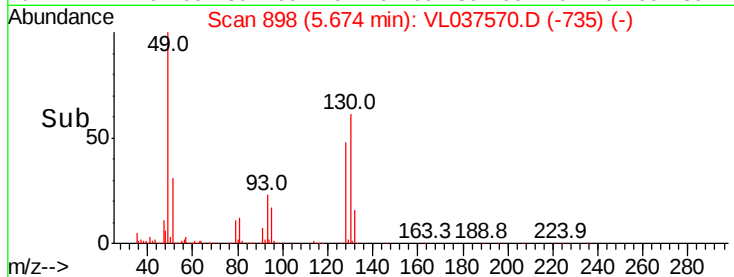
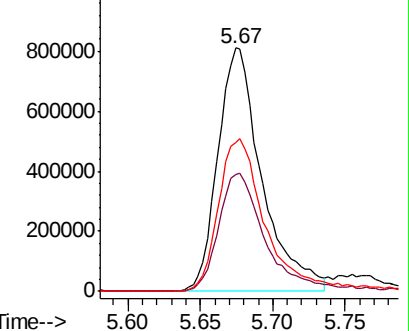
130 68.1 34.0 101.8



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



#2

Dichlorodifluoromethane

Concen: 0.044 ppbv

RT: 3.06 min Scan# 84

Delta R.T. 0.02 min

Lab File: VL037570.D

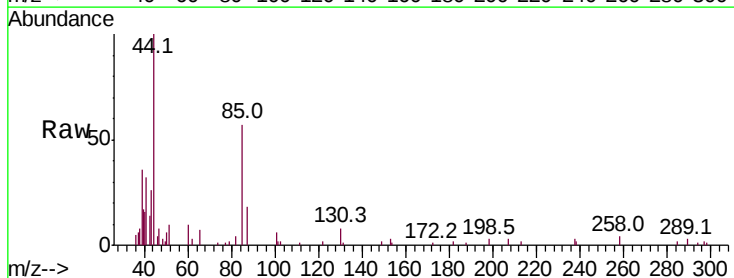
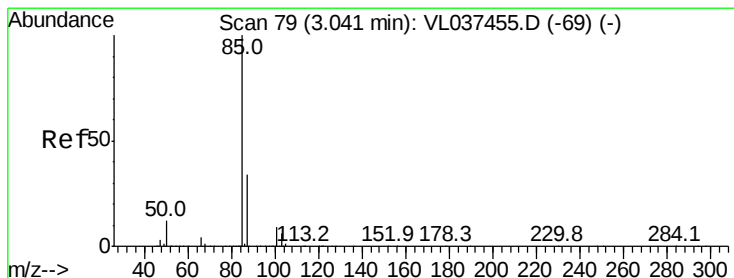
Acq: 8 Sep 2021 13:41

Tgt Ion: 85 Resp: 12151

Ion Ratio Lower Upper

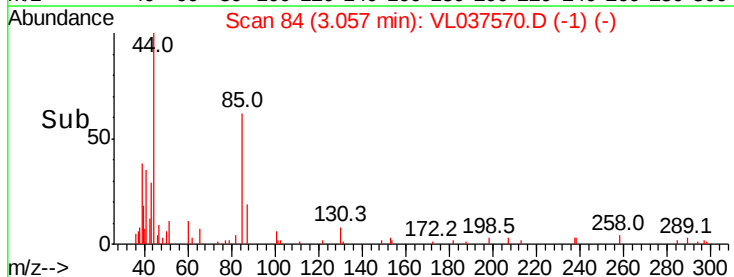
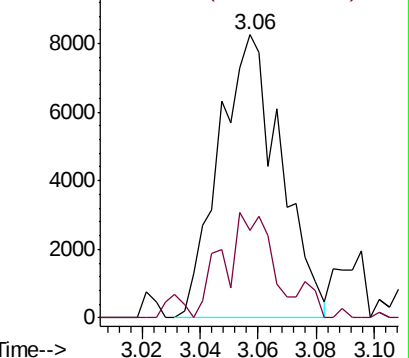
85 100

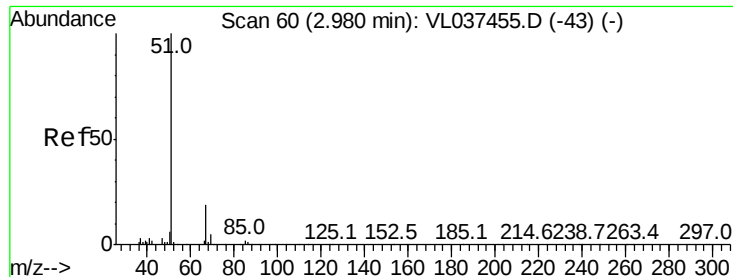
87 30.9 27.6 41.4



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.541 ppbv

RT: 2.97 min Scan# 57

Delta R.T. -0.01 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampleId :

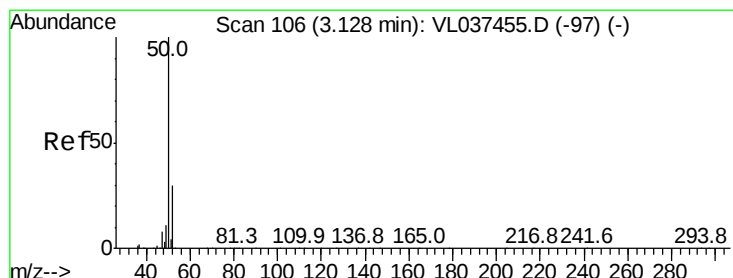
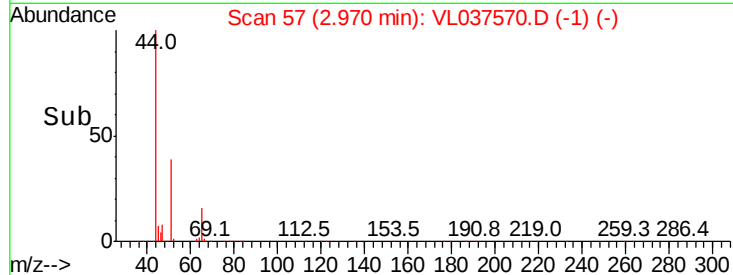
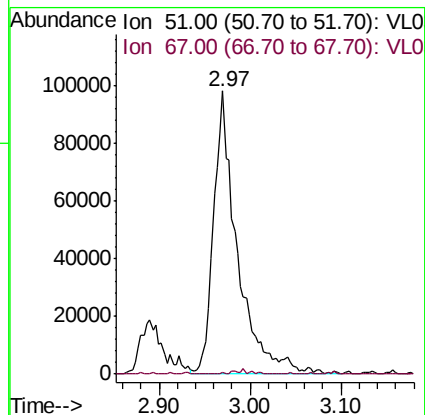
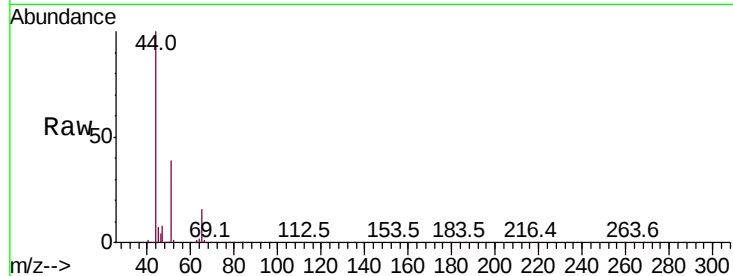
SV-4DL

Tot Ion: 51 Resp: 176922

Ion Ratio Lower Upper

51 100

67 1.1 14.2 21.2#



#4

Chloromethane

Concen: 0.039 ppbv

RT: 3.15 min Scan# 112

Delta R.T. 0.02 min

Lab File: VL037570.D

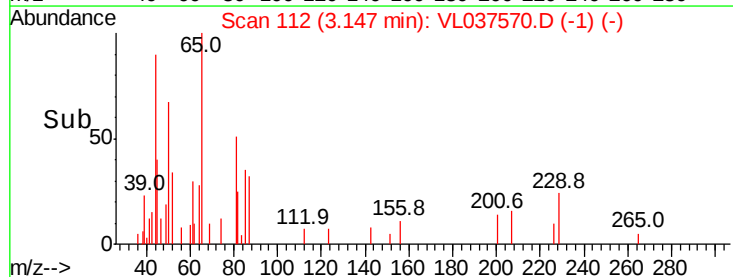
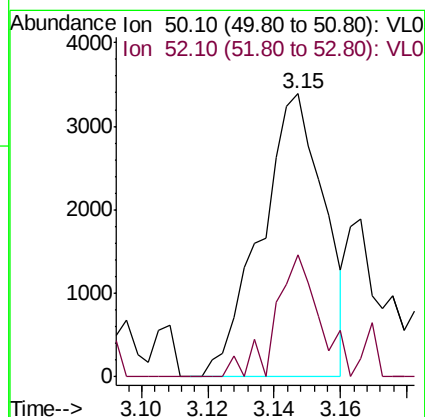
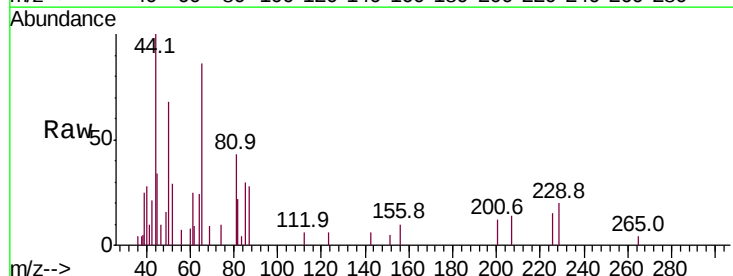
Acq: 8 Sep 2021 13:41

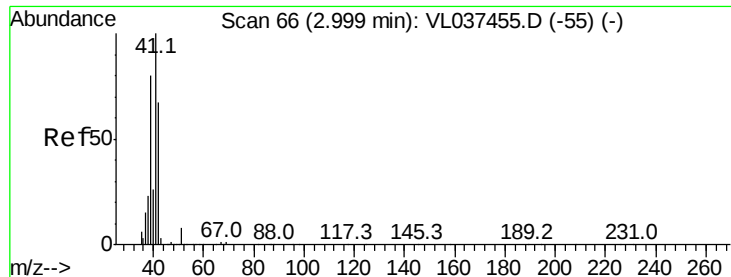
Tgt Ion: 50 Resp: 4511

Ion Ratio Lower Upper

50 100

52 43.1 24.0 36.0#





#9

Propene

Concen: 0.060 ppbv

RT: 3.43 min Scan# 200

Delta R.T. 0.43 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampleId :

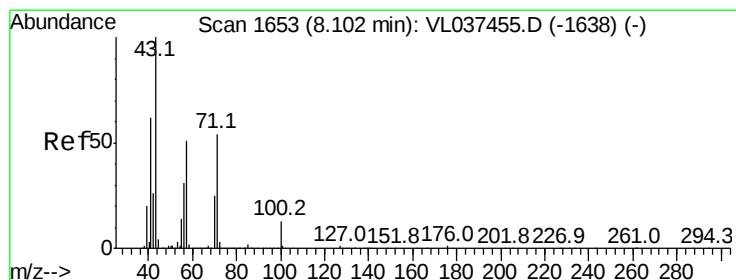
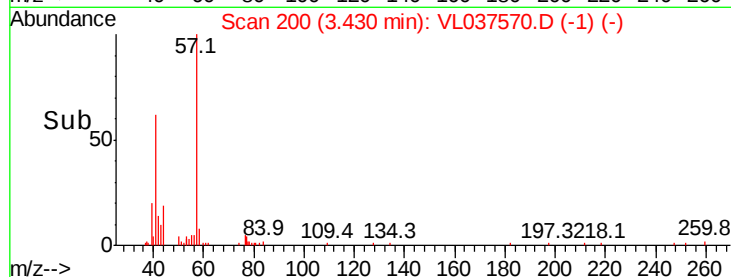
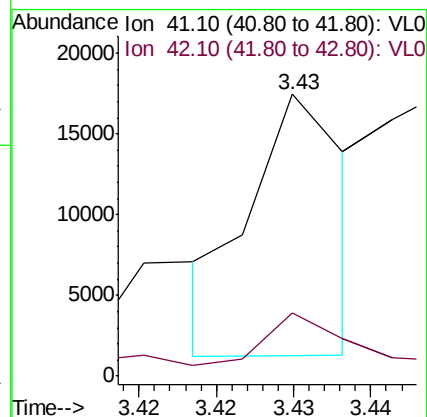
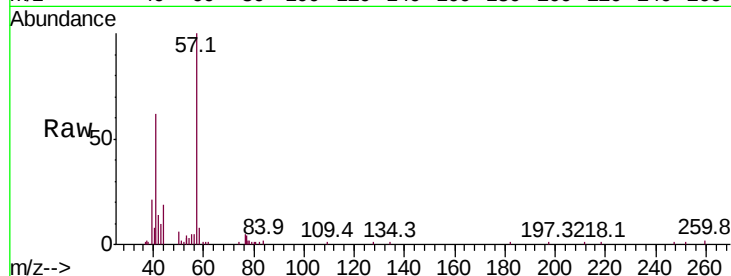
SV-4DL

Tot Ion: 41 Resp: 7005

Ion Ratio Lower Upper

41 100

42 59.9 53.7 80.5



#10

Heptane

Concen: 0.112 ppbv

RT: 8.14 min Scan# 1664

Delta R.T. 0.04 min

Lab File: VL037570.D

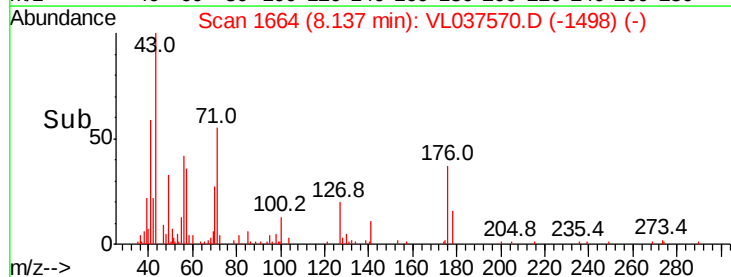
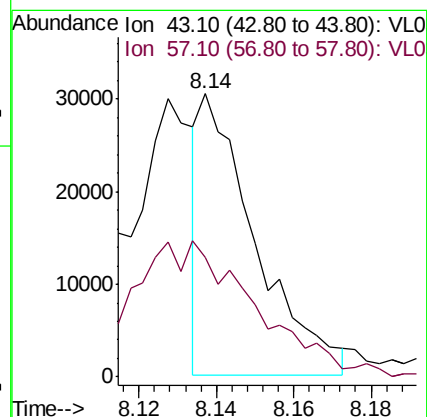
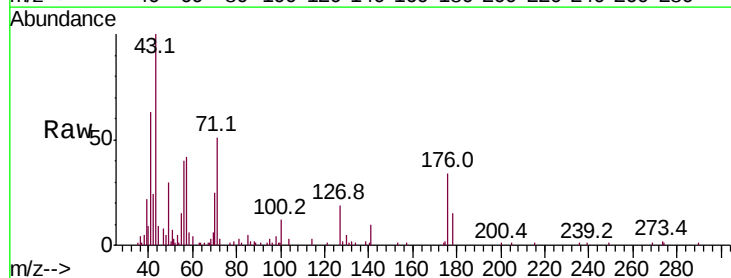
Acq: 8 Sep 2021 13:41

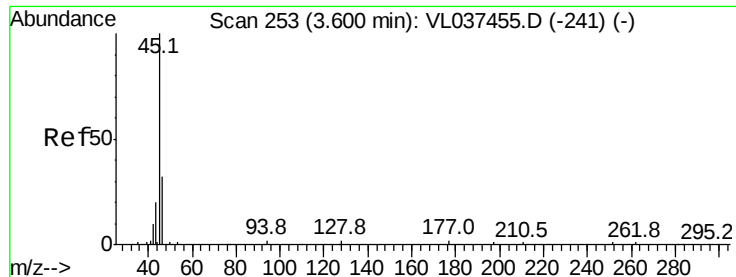
Tgt Ion: 43 Resp: 30045

Ion Ratio Lower Upper

43 100

57 111.2 41.0 61.6#

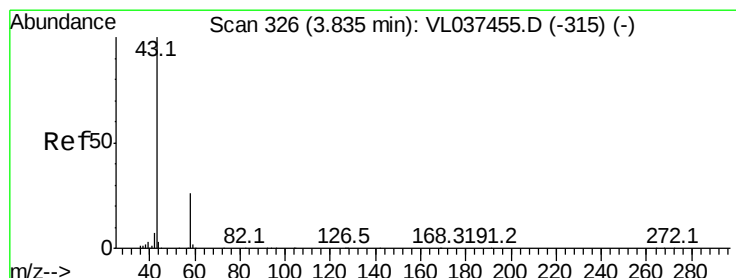
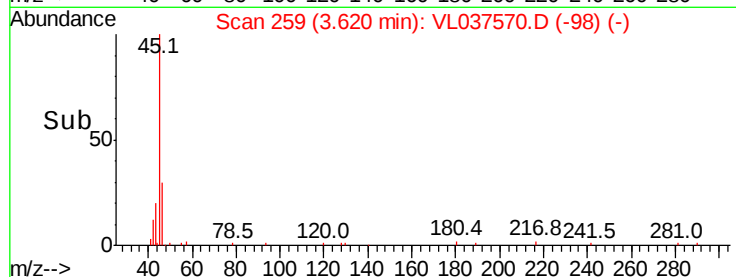
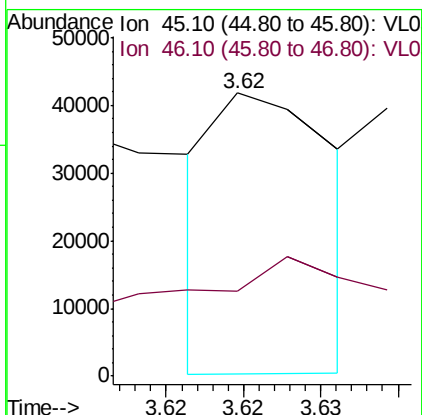
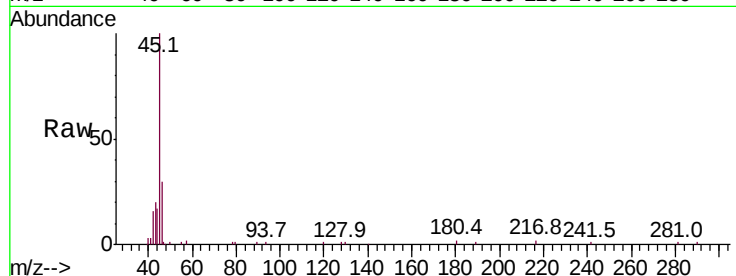




#13
Ethanol
Concen: 1.926 ppbv
RT: 3.62 min Scan# 259
Delta R.T. 0.02 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

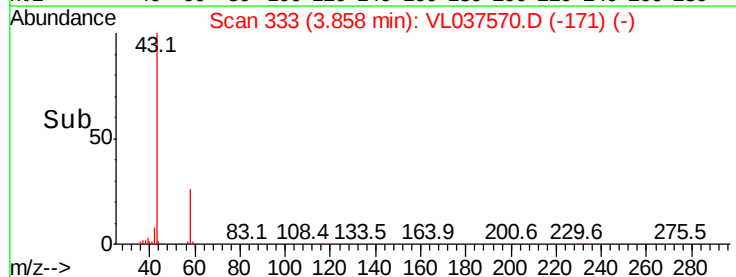
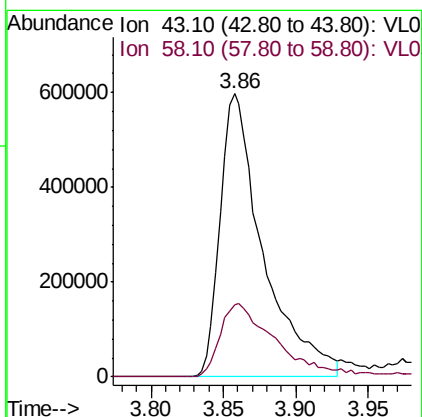
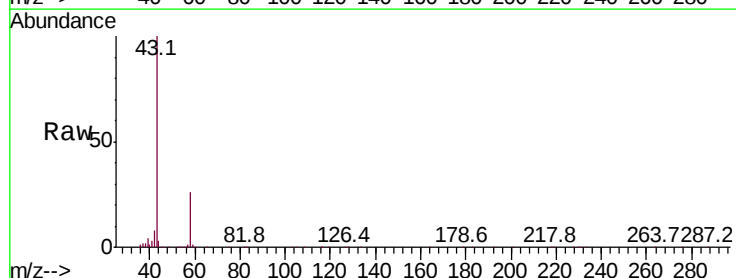
Instrument :
MSVOA_L
ClientSampleId :
SV-4DL

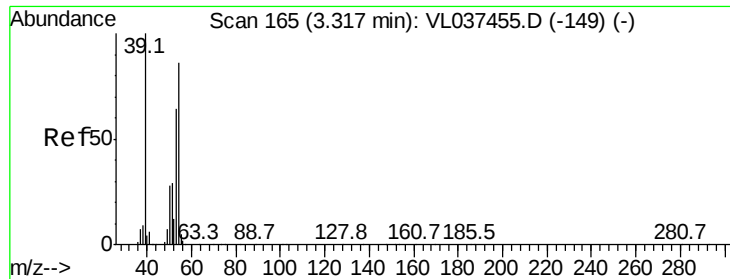
Tot Ion: 45 Resp: 21916
Ion Ratio Lower Upper
45 100
46 224.2 14.1 56.5#



#15
Acetone
Concen: 7.058 ppbv
RT: 3.86 min Scan# 333
Delta R.T. 0.02 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

Tgt Ion: 43 Resp: 1225728
Ion Ratio Lower Upper
43 100
58 35.6 24.8 37.2

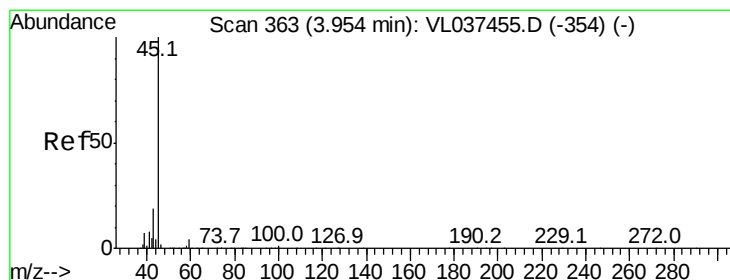
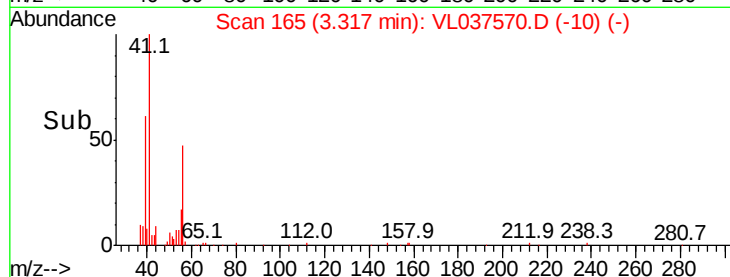
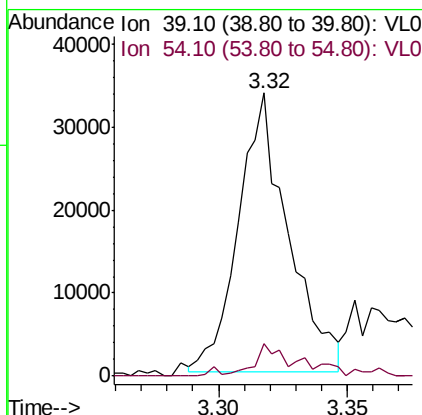
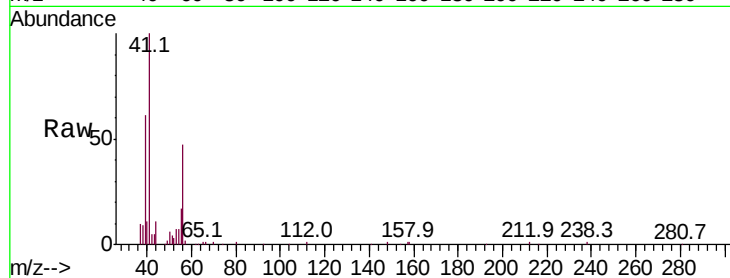




#16
 1,3-Butadiene
 Concen: 0.409 ppbv
 RT: 3.32 min Scan# 165
 Delta R.T. -0.00 min
 Lab File: VL037570.D
 Acq: 8 Sep 2021 13:41

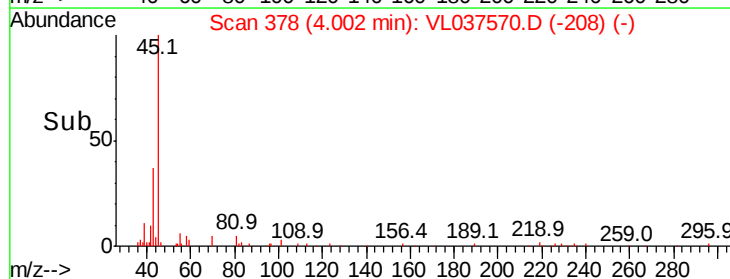
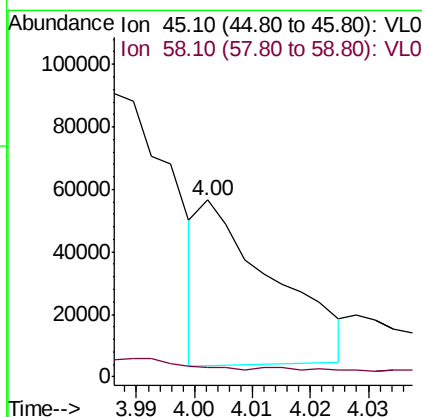
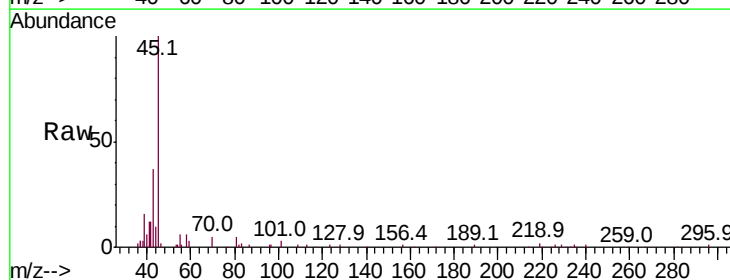
Instrument :
 MSVOA_L
 ClientSampleId :
 SV-4DL

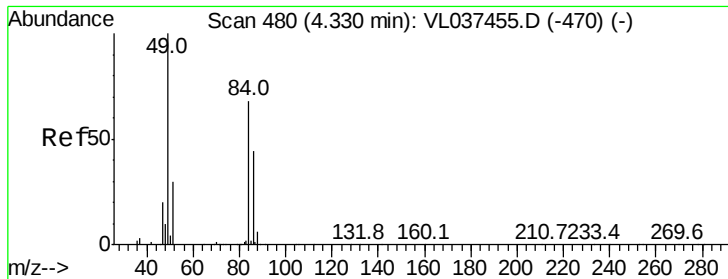
Tot Ion: 39 Resp: 45577
 Ion Ratio Lower Upper
 39 100
 54 11.8 63.7 95.5#



#19
 Isopropyl Alcohol
 Concen: 0.473 ppbv
 RT: 4.00 min Scan# 378
 Delta R.T. 0.05 min
 Lab File: VL037570.D
 Acq: 8 Sep 2021 13:41

Tgt Ion: 45 Resp: 47071
 Ion Ratio Lower Upper
 45 100
 58 0.0 1.4 2.2#

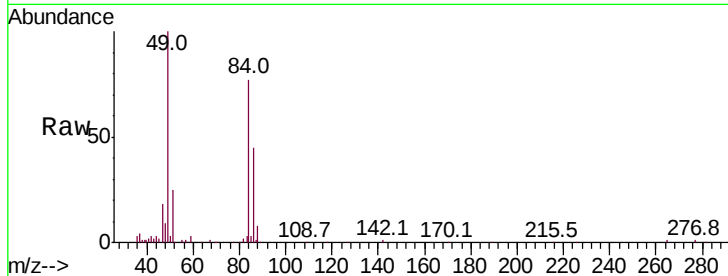




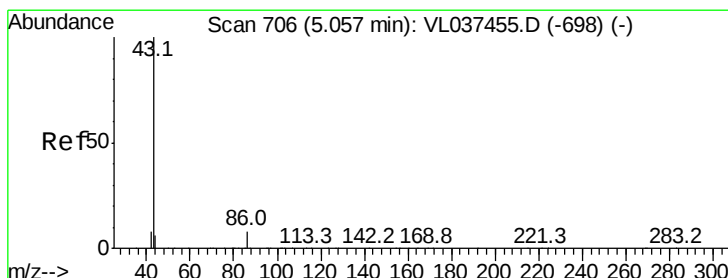
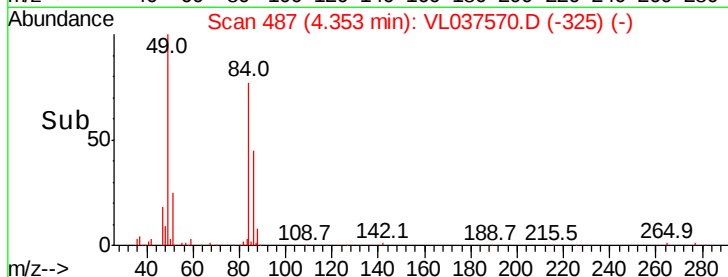
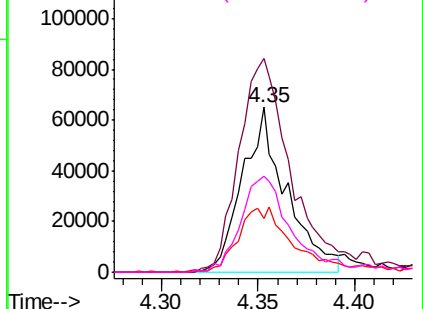
#20
Methylene Chloride
Concen: 1.186 ppbv
RT: 4.35 min Scan# 487
Delta R.T. 0.02 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

Instrument :
MSVOA_L
ClientSampleId :
SV-4DL

Tot Ion: 84 Resp: 103137
Ion Ratio Lower Upper
84 100
49 129.5 118.2 177.2
51 32.9 36.6 55.0#
86 58.1 51.8 77.6

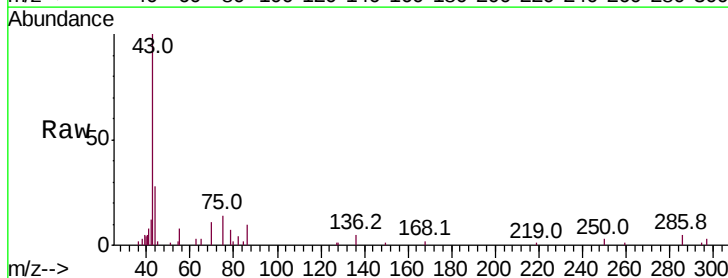


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

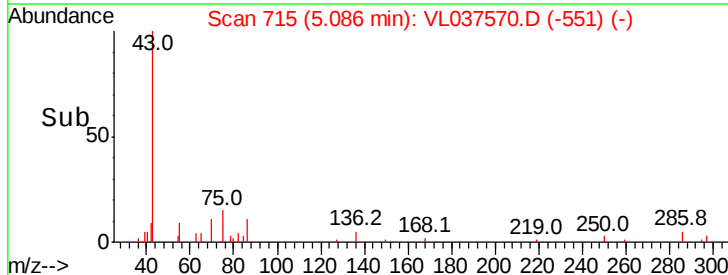
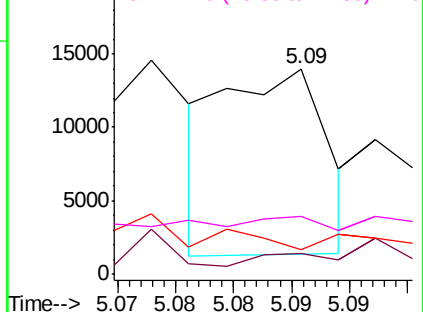


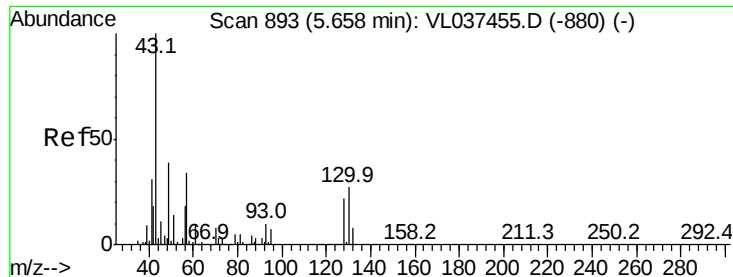
#23
Vinyl Acetate
Concen: 0.031 ppbv
RT: 5.09 min Scan# 715
Delta R.T. 0.03 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

Tgt Ion: 43 Resp: 7855
Ion Ratio Lower Upper
43 100
86 11.2 5.7 8.5#
42 0.0 7.4 11.2#
44 13.2 4.3 6.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0





#25

Ethyl Acetate

Concen: 0.470 ppbv

RT: 5.70 min Scan# 905

Delta R.T. 0.04 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL

Tot Ion: 43 Resp: 207134

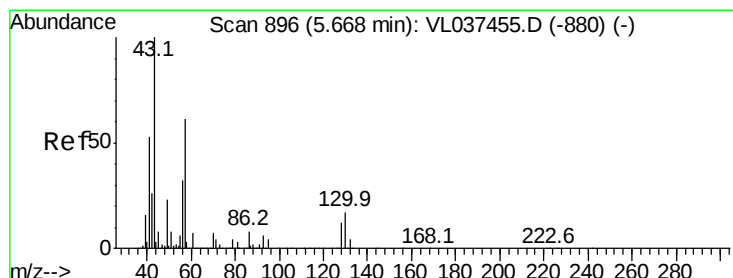
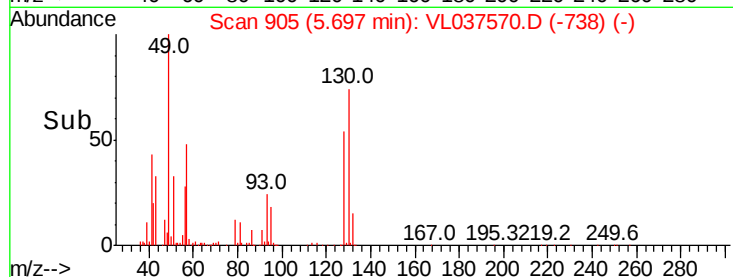
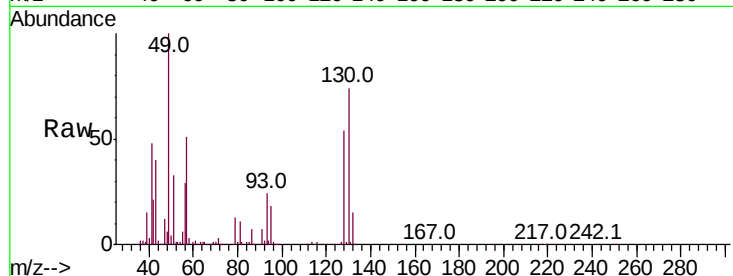
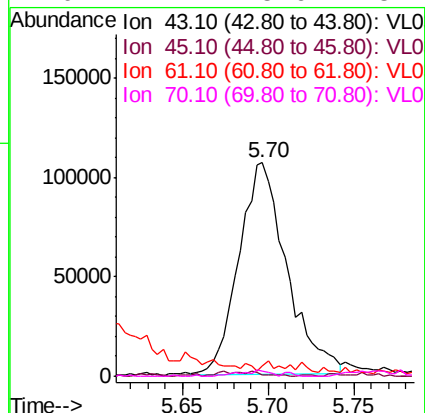
Ion Ratio Lower Upper

43 100

45 2.1 8.0 12.0#

61 0.0 8.0 12.0#

70 2.1 5.6 8.4#



#26

Hexane

Concen: 0.721 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.03 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Tgt Ion: 57 Resp: 155361

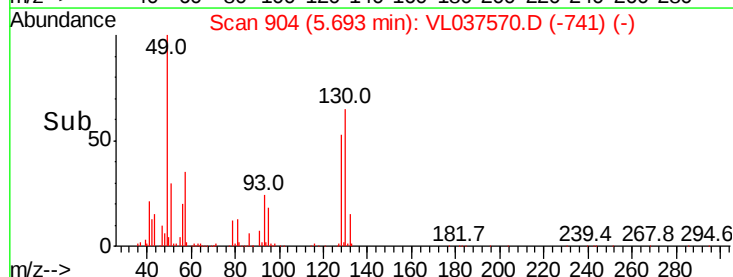
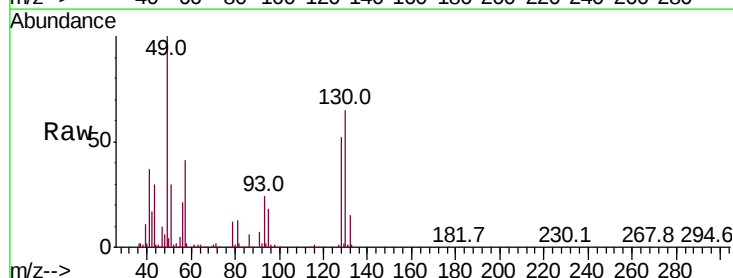
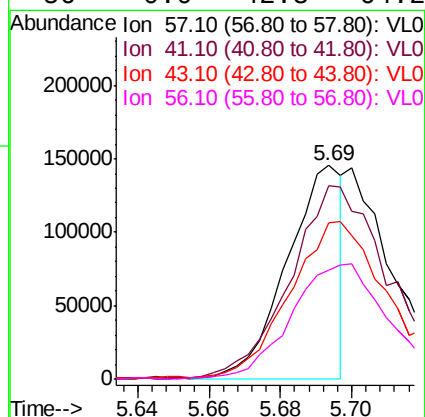
Ion Ratio Lower Upper

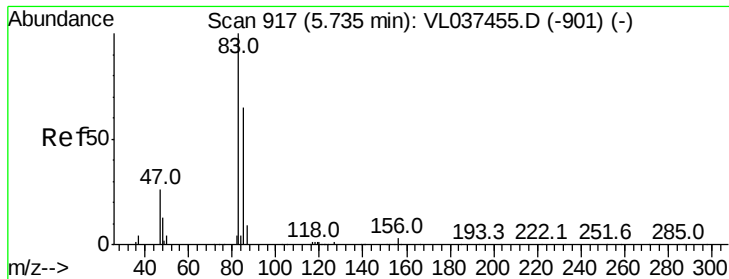
57 100

41 174.6 72.3 108.5#

43 0.0 172.3 258.5#

56 0.0 42.8 64.2#

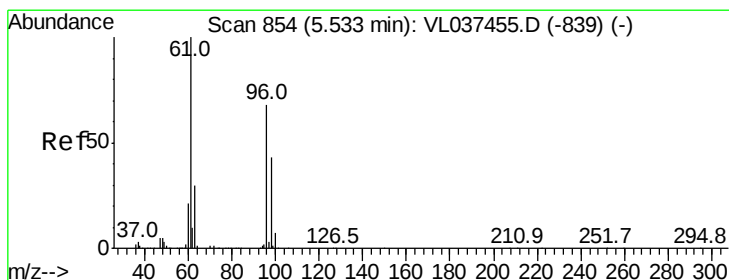
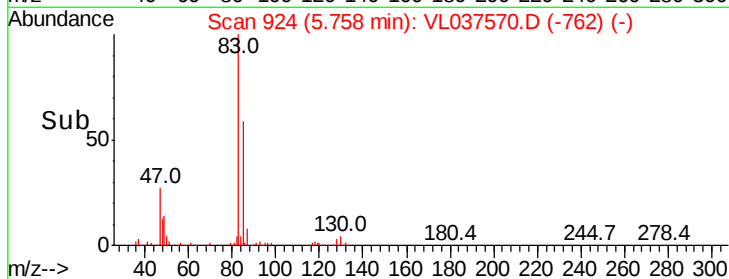
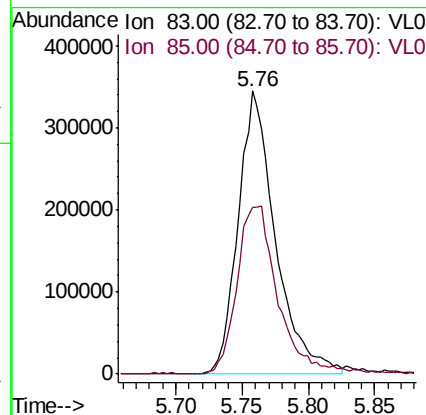
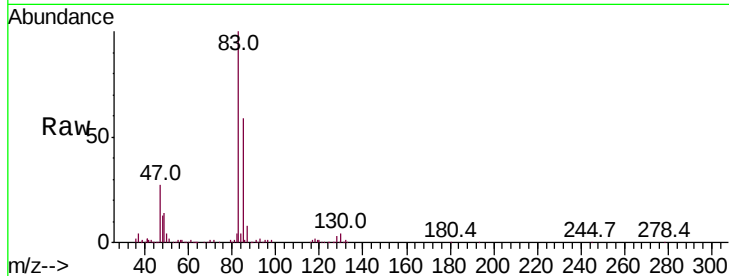




#29
Chloroform
Concen: 2.218 ppbv
RT: 5.76 min Scan# 924
Delta R.T. 0.02 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

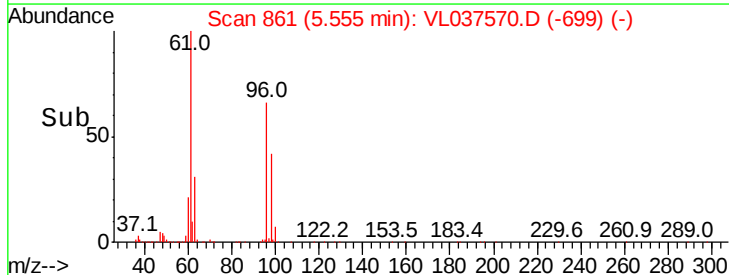
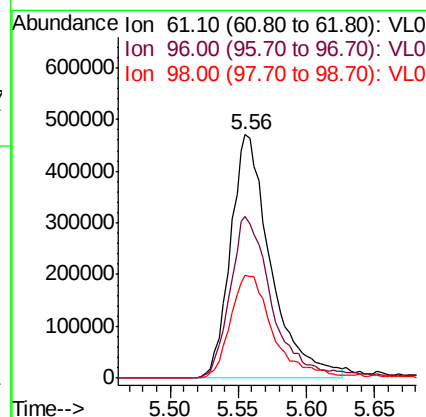
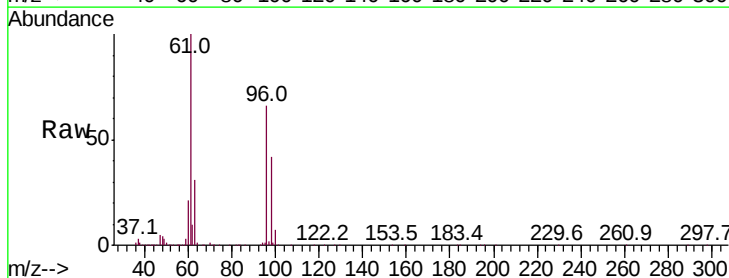
Instrument :
MSVOA_L
ClientSampleId :
SV-4DL

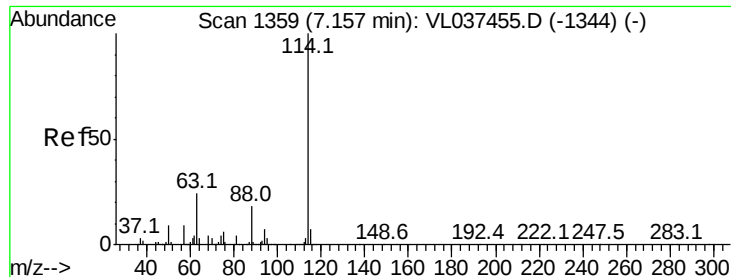
Tot Ion: 83 Resp: 677491
Ion Ratio Lower Upper
83 100
85 58.7 52.3 78.5



#31
cis-1,2-Dichloroethene
Concen: 4.918 ppbv
RT: 5.56 min Scan# 861
Delta R.T. 0.02 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

Tgt Ion: 61 Resp: 959530
Ion Ratio Lower Upper
61 100
96 66.3 54.8 82.2
98 42.2 34.2 51.2





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1367

Delta R.T. 0.03 min

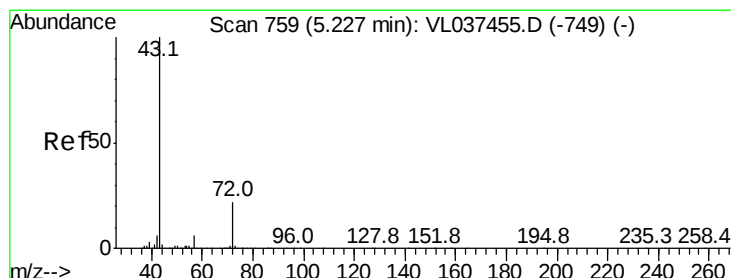
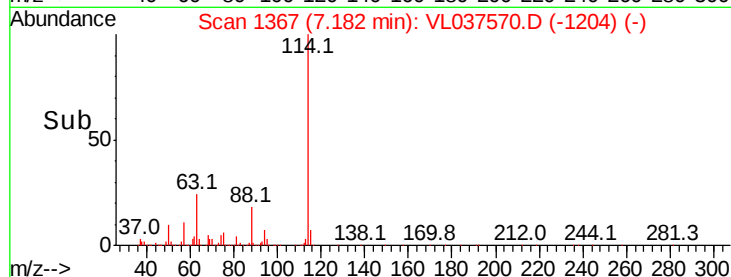
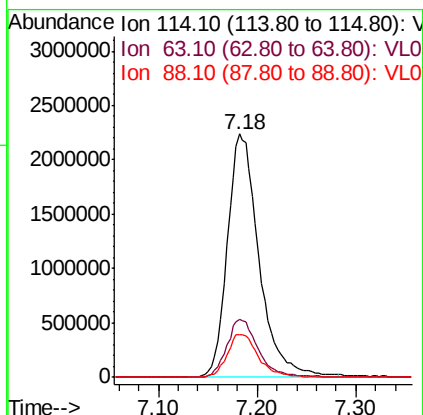
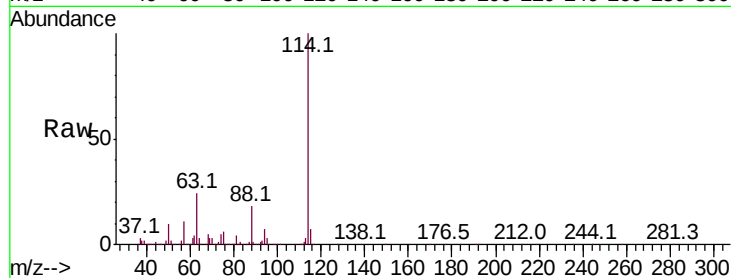
Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :
MSVOA_L
ClientSampleId :
SV-4DL

Tot Ion:114 Resp: 5018577

Ion	Ratio	Lower	Upper
114	100		
63	23.8	19.3	28.9
88	17.9	14.2	21.4



#34

2-Butanone

Concen: 0.999 ppbv

RT: 5.26 min Scan# 769

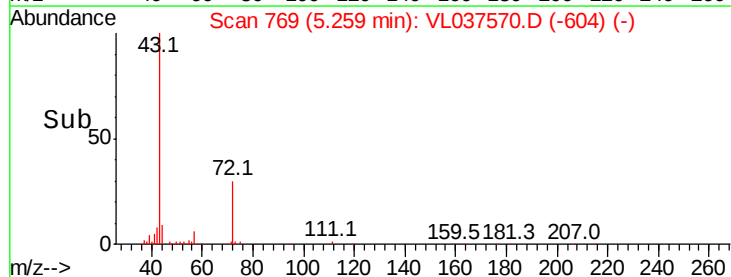
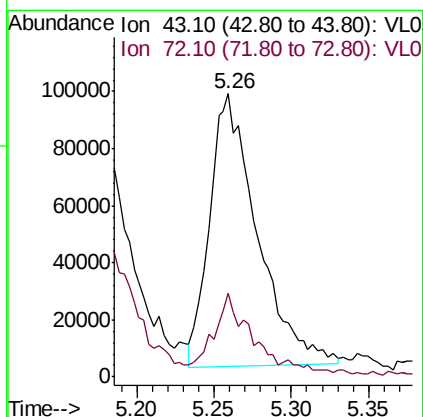
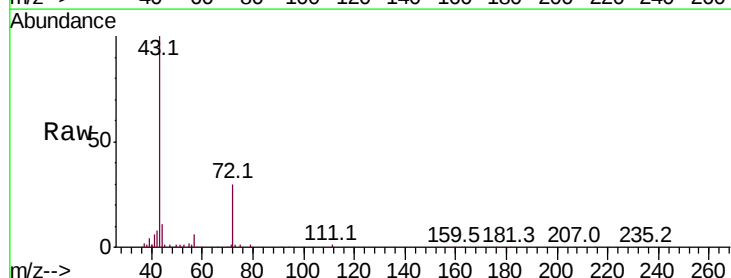
Delta R.T. 0.03 min

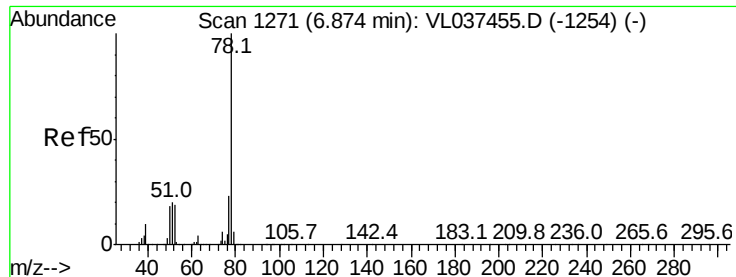
Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Tgt Ion: 43 Resp: 204680

Ion	Ratio	Lower	Upper
43	100		
72	30.2	17.4	26.0





#36

Benzene

Concen: 0.065 ppbv

RT: 6.90 min Scan# 1280

Delta R.T. 0.03 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL

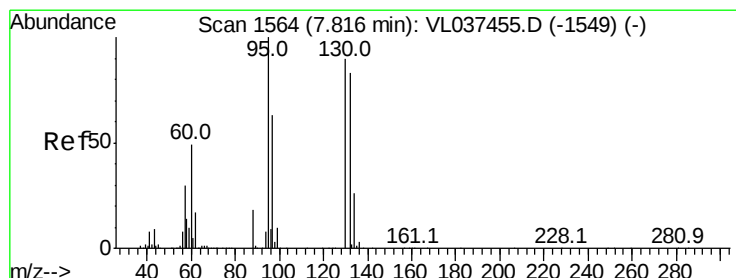
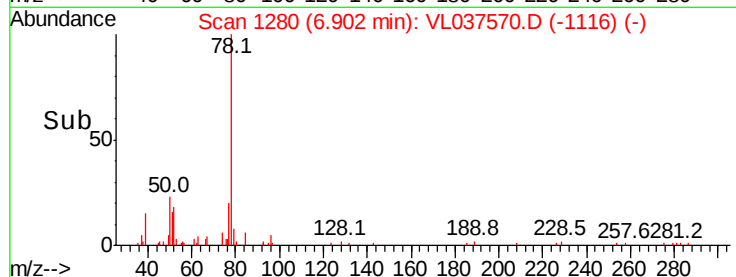
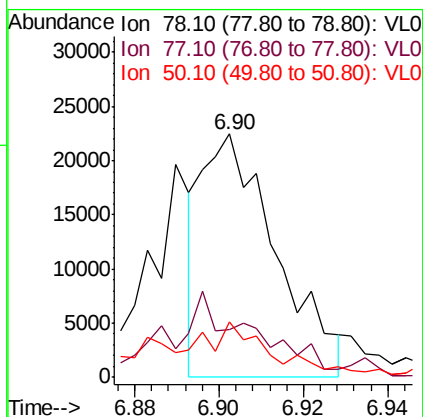
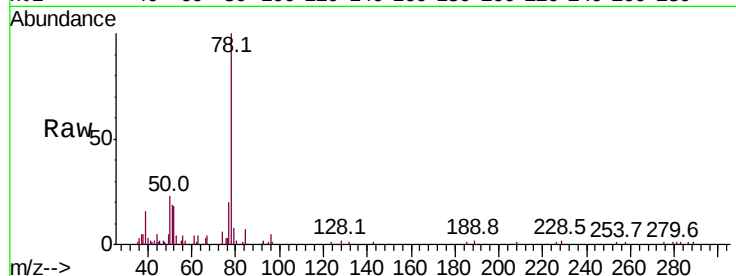
Tot Ion: 78 Resp: 27523

Ion Ratio Lower Upper

78 100

77 20.0 18.2 27.4

50 22.3 14.6 21.8#



#38

Trichloroethene

Concen: 4.813 ppbv

RT: 7.84 min Scan# 1573

Delta R.T. 0.03 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Tgt Ion: 130 Resp: 833107

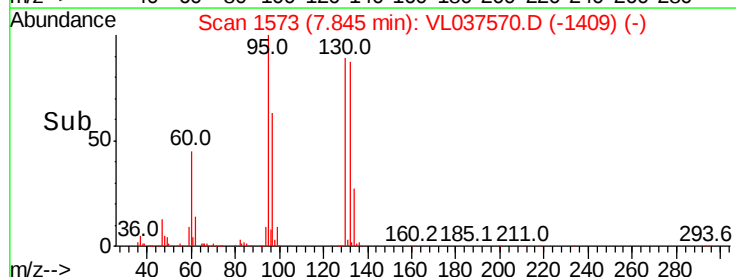
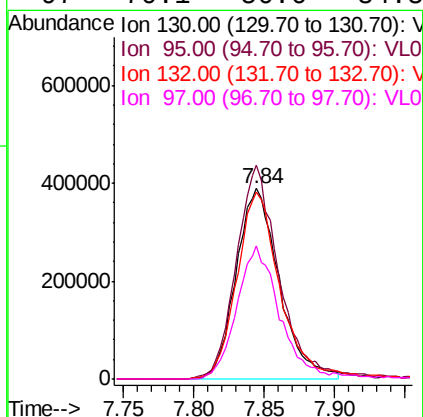
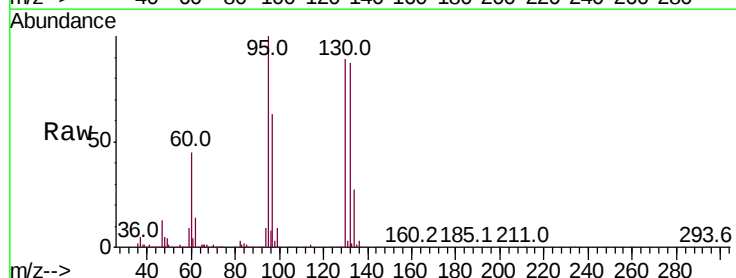
Ion Ratio Lower Upper

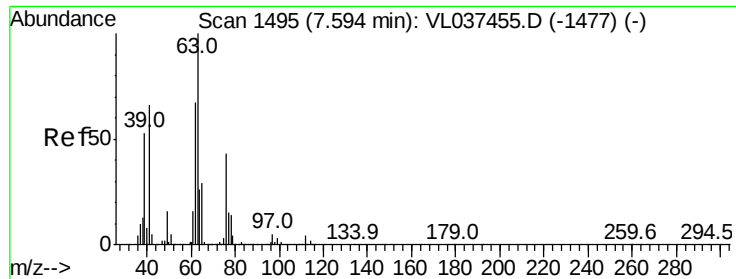
130 100

95 112.0 89.2 133.8

132 97.8 74.0 111.0

97 70.1 56.6 84.8





#39

1,2-Dichloropropane

Concen: 7.185 ppbv

RT: 7.18 min Scan# 1367

Delta R.T. -0.41 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL

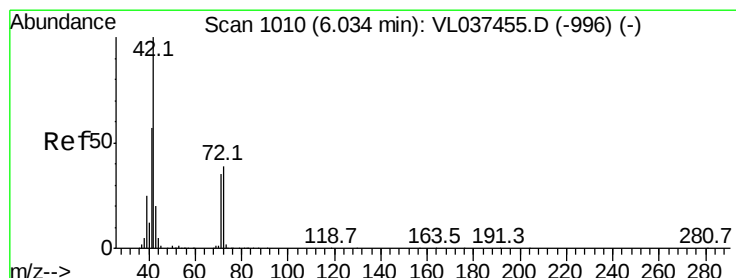
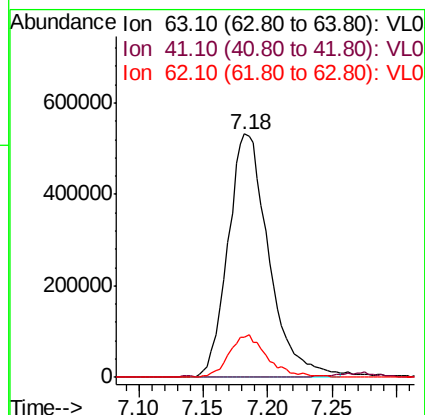
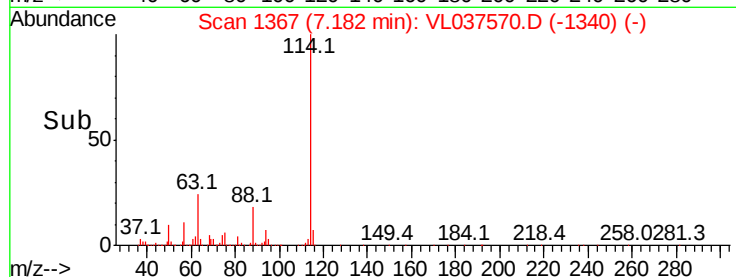
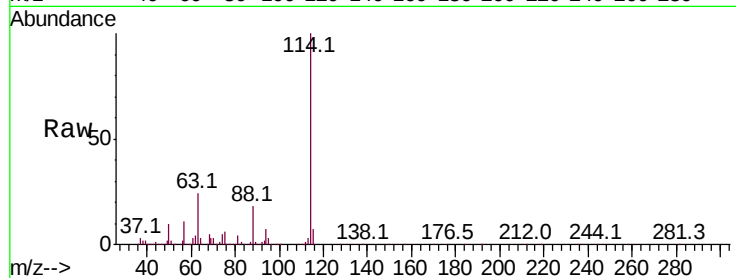
Tot Ion: 63 Resp: 1164702

Ion Ratio Lower Upper

63 100

41 0.0 52.4 78.6#

62 16.6 53.6 80.4#



#41

Tetrahydrofuran

Concen: 0.033 ppbv

RT: 5.76 min Scan# 924

Delta R.T. -0.28 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

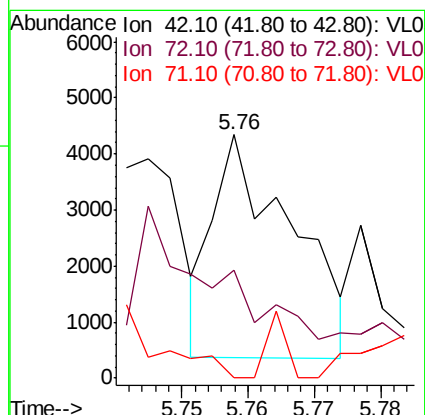
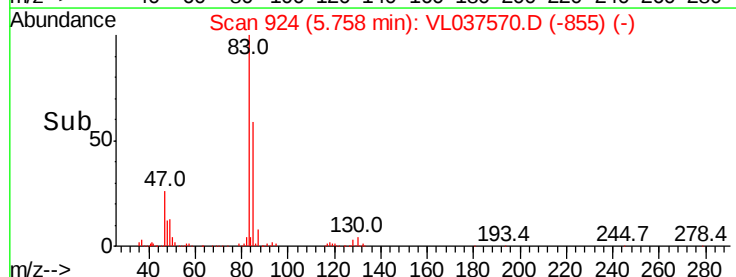
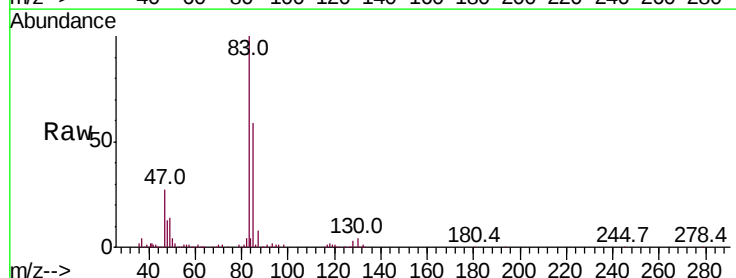
Tgt Ion: 42 Resp: 3307

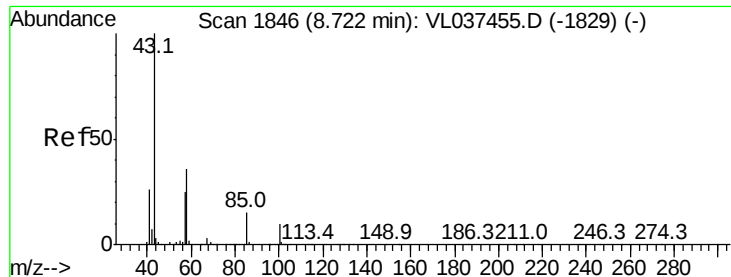
Ion Ratio Lower Upper

42 100

72 13.8 32.2 48.4#

71 19.9 30.5 45.7#

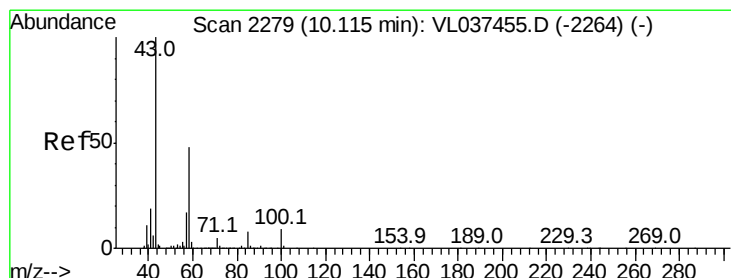
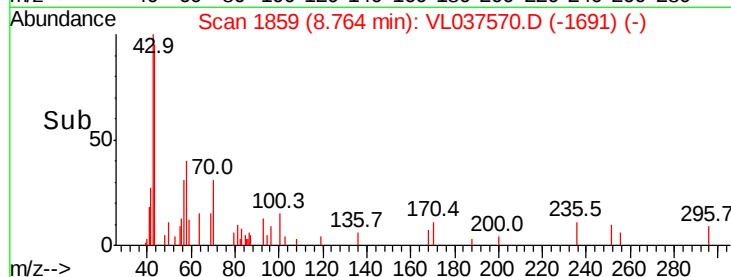
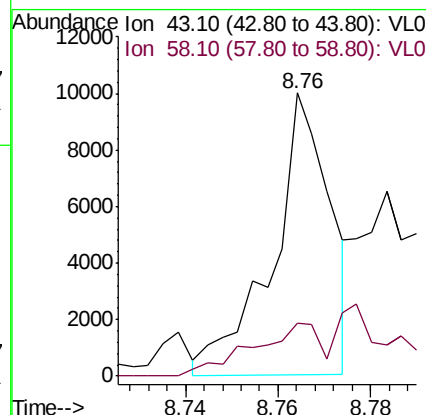
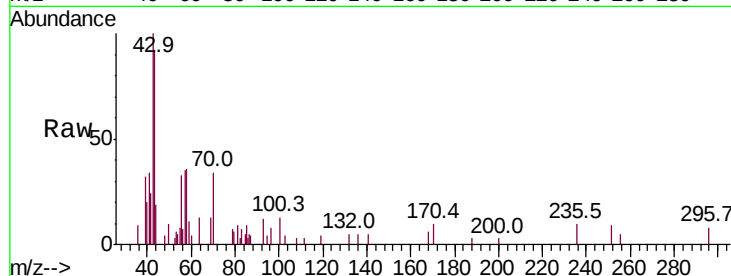




#50
 4-Methyl-2-Pentanone
 Concen: 0.032 ppbv
 RT: 8.76 min Scan# 1859
 Delta R.T. 0.04 min
 Lab File: VL037570.D
 Acq: 8 Sep 2021 13:41

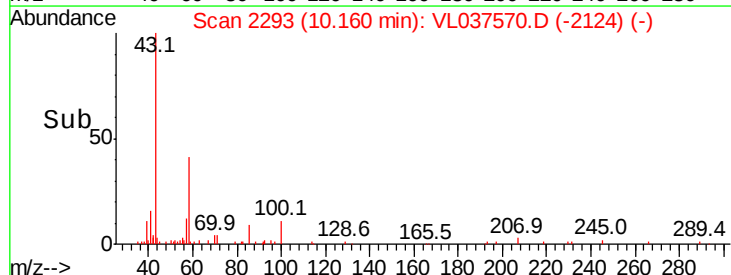
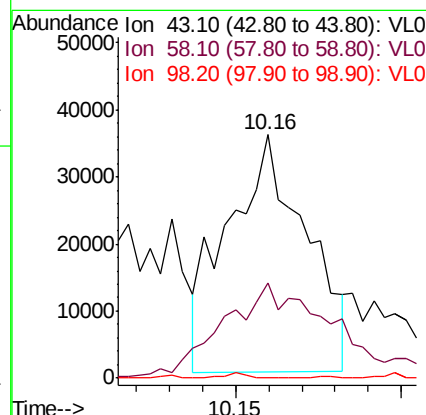
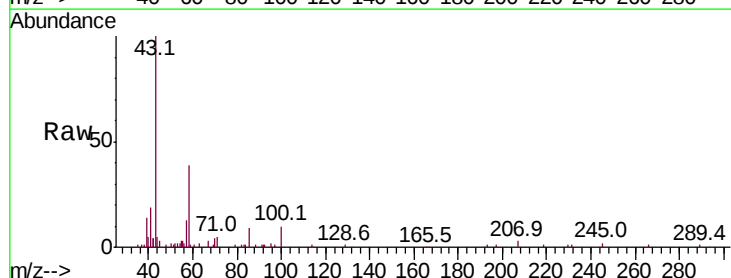
Instrument :
 MSVOA_L
 ClientSampleID :
 SV-4DL

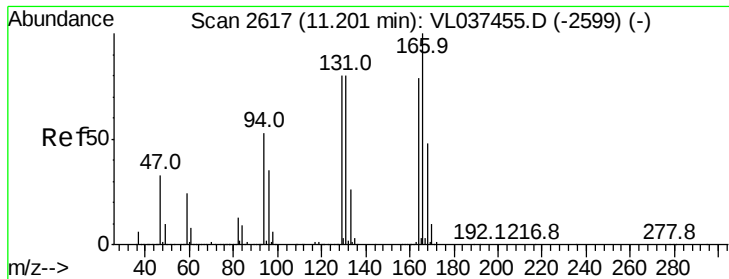
Tot Ion: 43 Resp: 8621
 Ion Ratio Lower Upper
 43 100
 58 0.0 29.9 44.9#



#51
 2-Hexanone
 Concen: 0.476 ppbv
 RT: 10.16 min Scan# 2293
 Delta R.T. 0.04 min
 Lab File: VL037570.D
 Acq: 8 Sep 2021 13:41

Tgt Ion: 43 Resp: 58576
 Ion Ratio Lower Upper
 43 100
 58 64.2 41.0 61.6#
 98 0.0 0.3 0.5#





#52

Tetrachloroethene

Concen: 47.720 ppbv

RT: 11.24 min Scan# 2629

Delta R.T. 0.04 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL

Tot Ion:164 Resp: 8249898

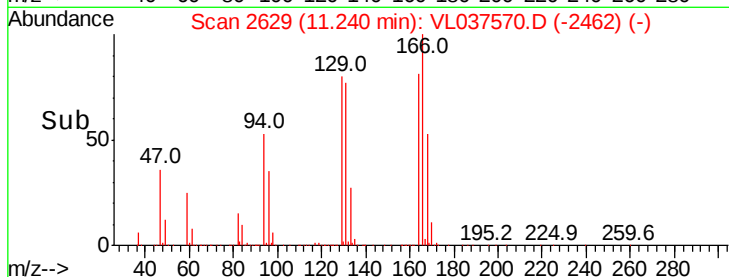
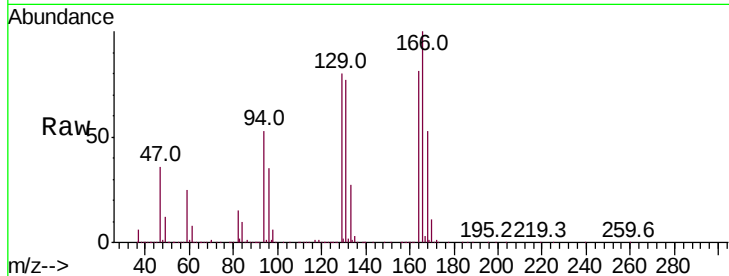
Ion Ratio Lower Upper

164 100

166 124.1 100.7 151.1

129 99.5 80.9 121.3

131 95.4 80.2 120.4

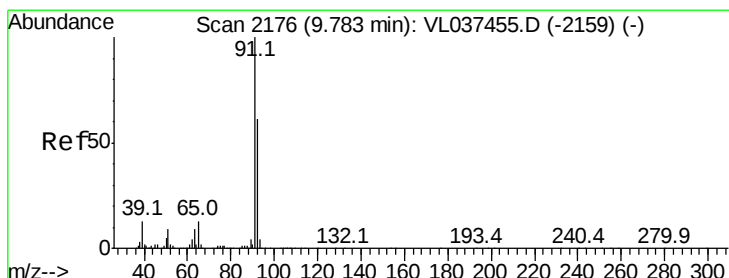
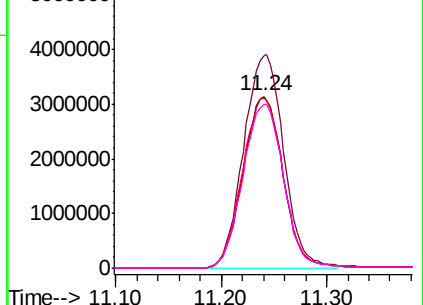


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.778 ppbv

RT: 9.82 min Scan# 2187

Delta R.T. 0.04 min

Lab File: VL037570.D

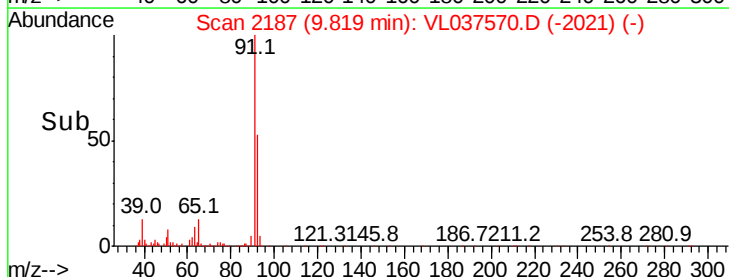
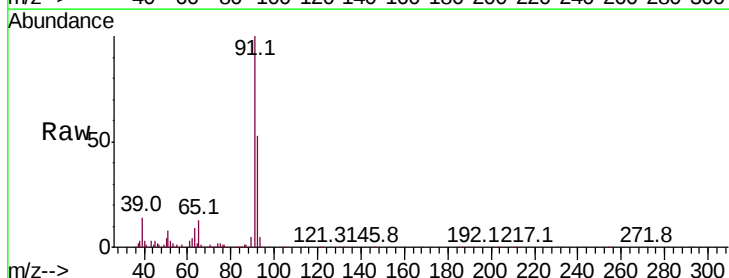
Acq: 8 Sep 2021 13:41

Tgt Ion: 91 Resp: 374930

Ion Ratio Lower Upper

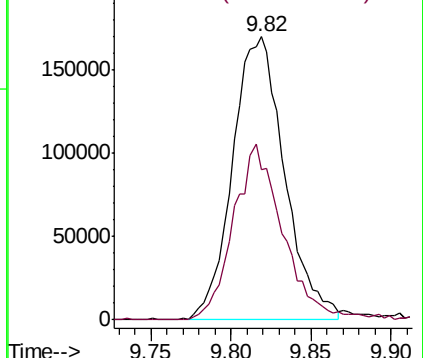
91 100

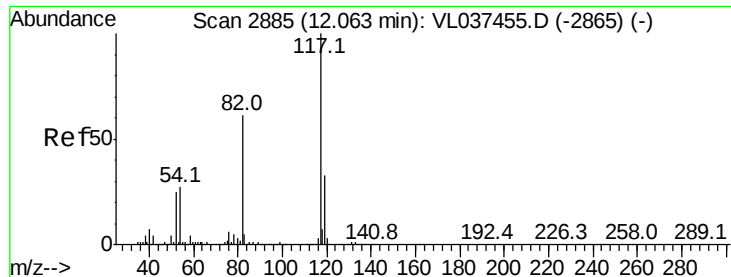
92 60.0 48.8 73.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

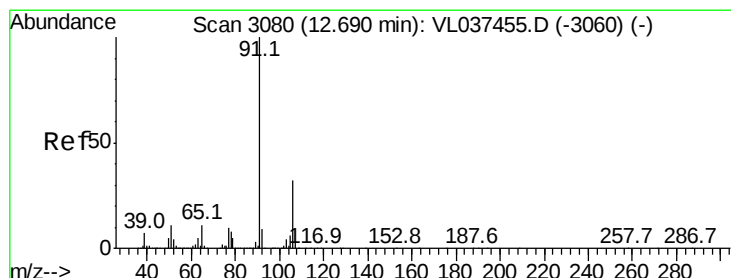
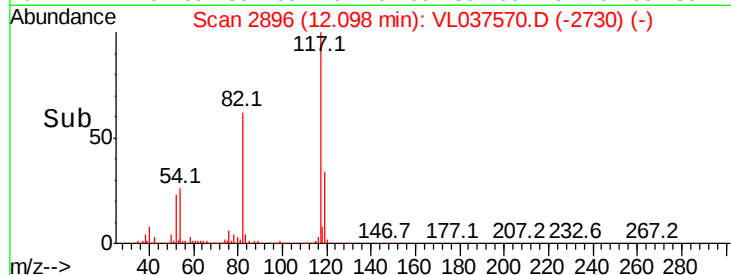
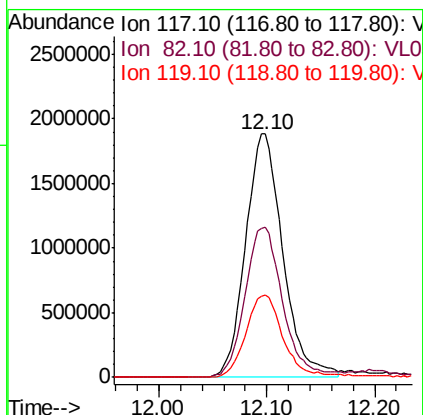
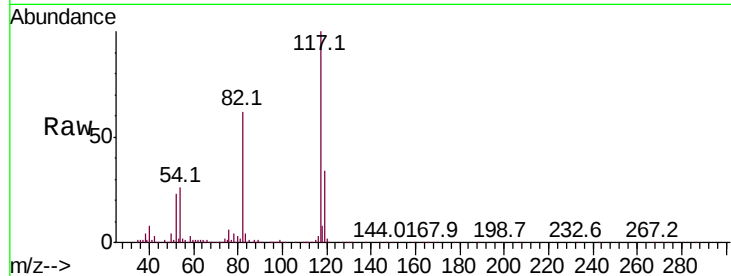




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min Scan# 2896
Delta R.T. 0.04 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

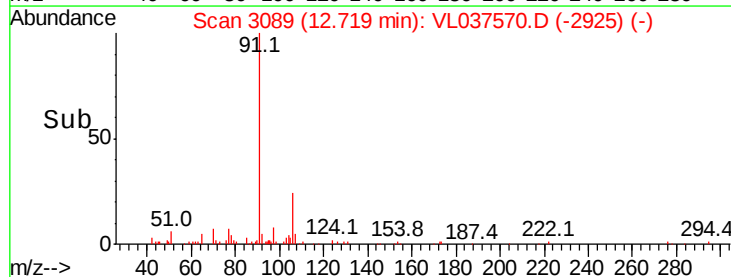
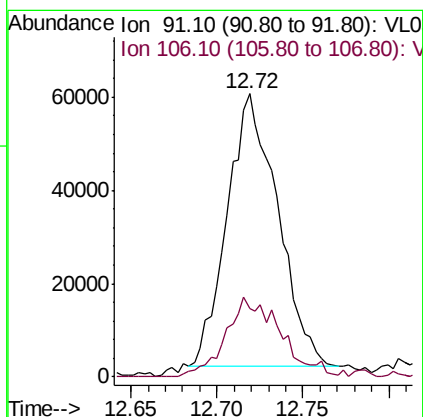
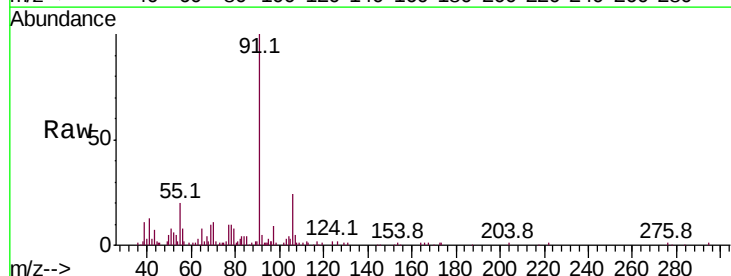
Instrument :
MSVOA_L
ClientSampled :
SV-4DL

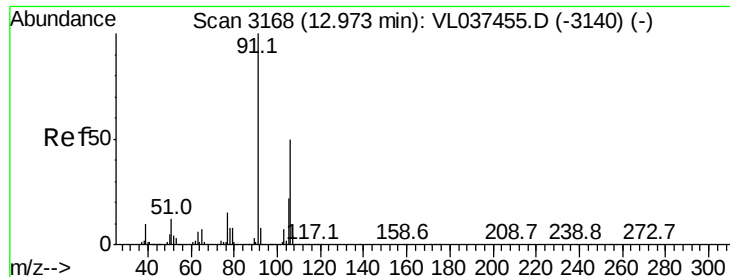
Tot Ion:117 Resp: 4533260
Ion Ratio Lower Upper
117 100
82 62.5 52.9 79.3
119 35.0 24.8 37.2



#58
Ethyl Benzene
Concen: 0.190 ppbv
RT: 12.72 min Scan# 3089
Delta R.T. 0.03 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

Tgt Ion: 91 Resp: 119560
Ion Ratio Lower Upper
91 100
106 24.5 25.7 38.5#

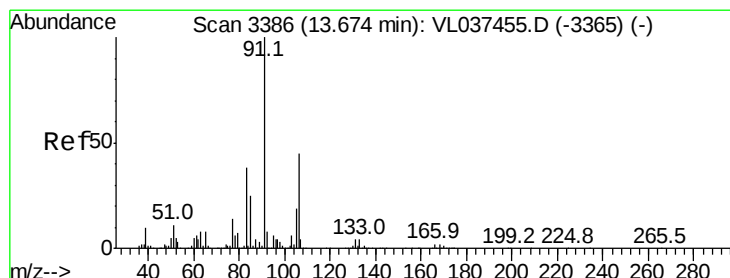
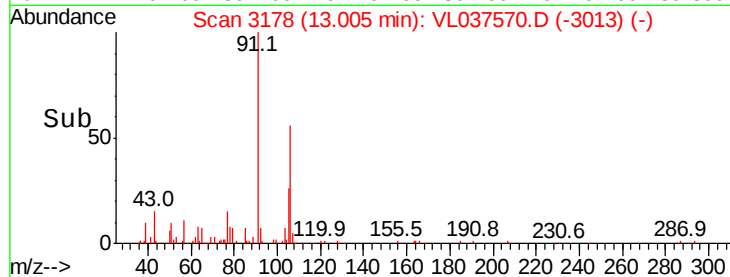
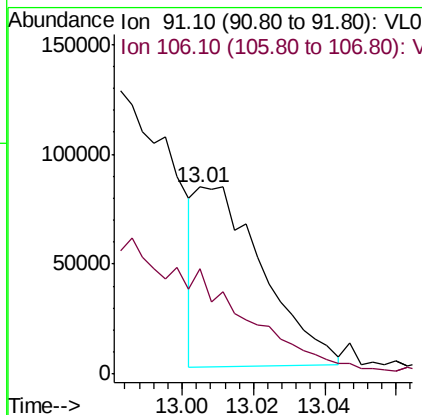
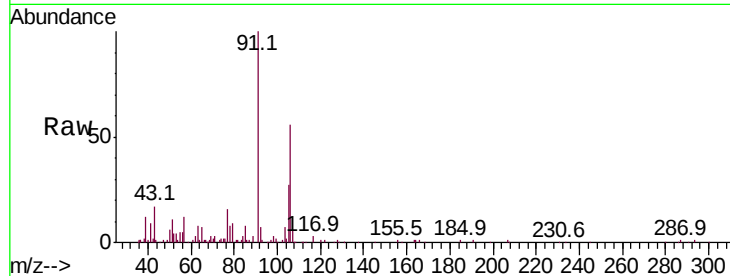




#59
m/p-Xylene
Concen: 0.194 ppbv
RT: 13.01 min Scan# 3178
Delta R.T. 0.03 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

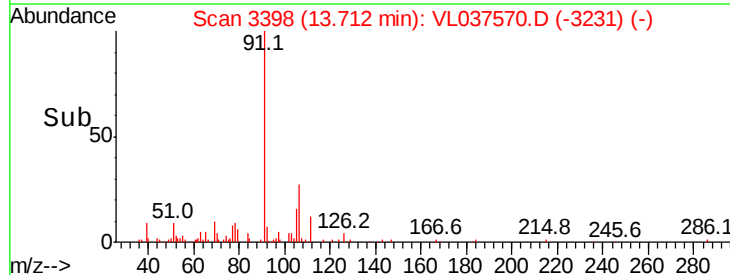
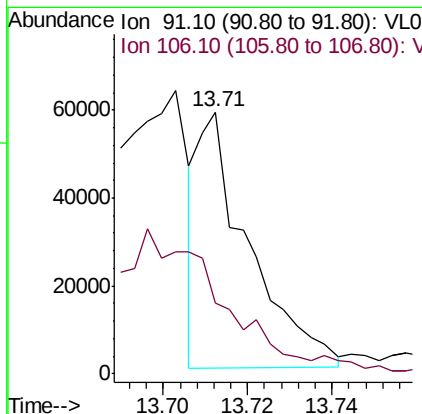
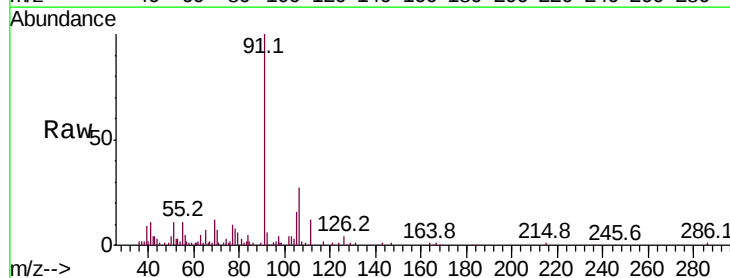
Instrument :
MSVOA_L
ClientSampled :
SV-4DL

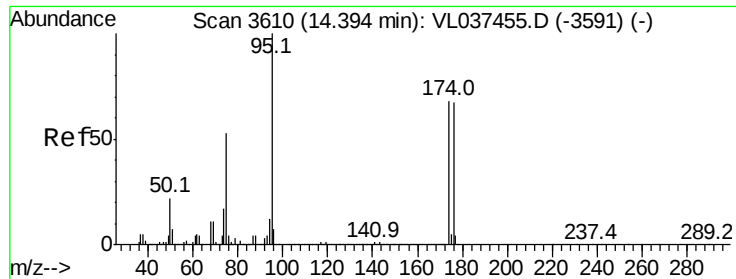
Tot Ion: 91 Resp: 105757
Ion Ratio Lower Upper
91 100
106 0.0 36.9 55.3#



#60
o-Xylene
Concen: 0.096 ppbv
RT: 13.71 min Scan# 3398
Delta R.T. 0.04 min
Lab File: VL037570.D
Acq: 8 Sep 2021 13:41

Tgt Ion: 91 Resp: 48692
Ion Ratio Lower Upper
91 100
106 0.0 23.7 71.1#

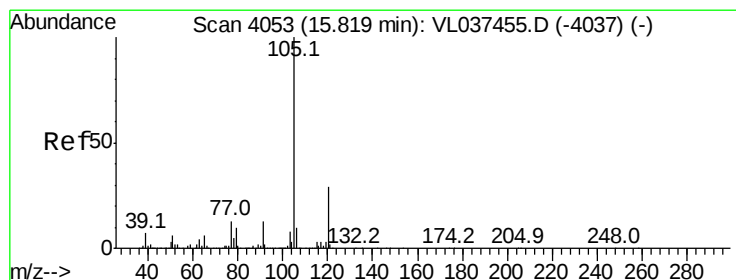
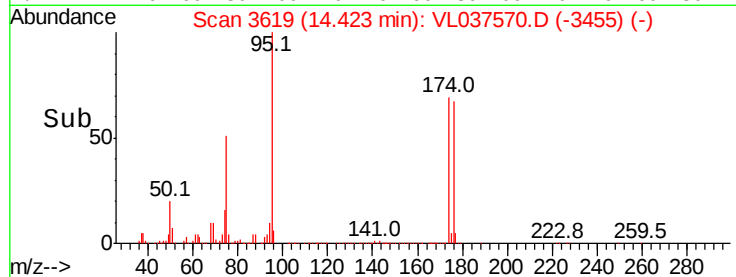
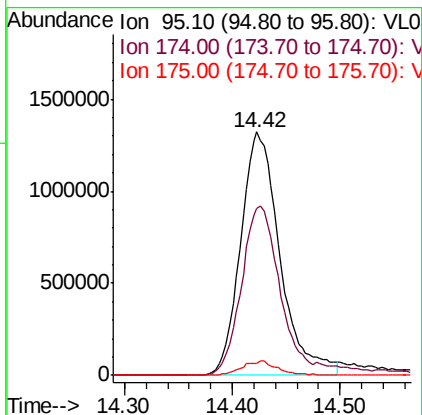
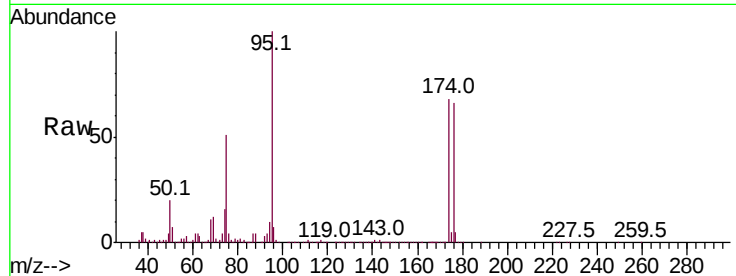




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.392 ppbv
 RT: 14.42 min Scan# 3619
 Delta R.T. 0.03 min
 Lab File: VL037570.D
 Acq: 8 Sep 2021 13:41

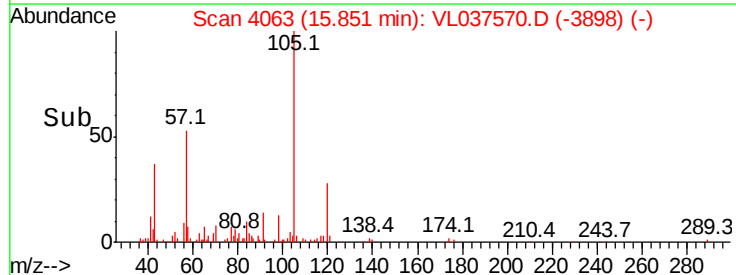
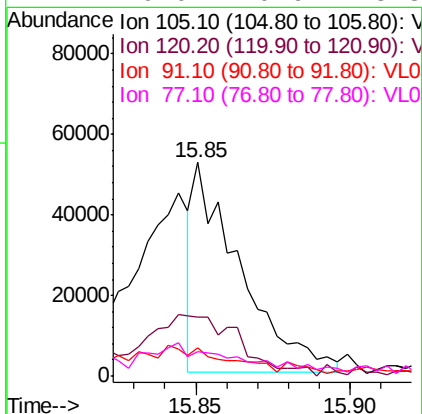
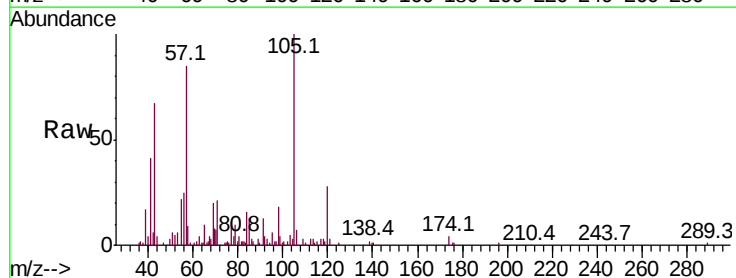
Instrument :
 MSVOA_L
 ClientSampleId :
 SV-4DL

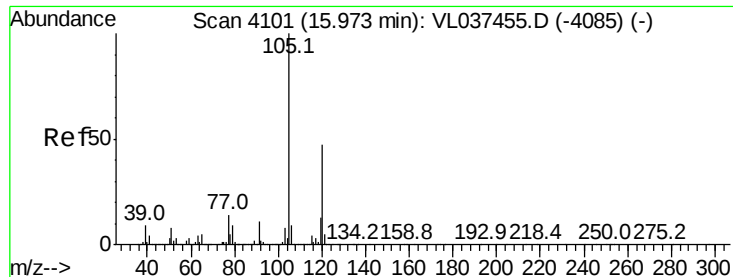
Tot Ion: 95 Resp: 3347038
 Ion Ratio Lower Upper
 95 100
 174 75.1 59.6 89.4
 175 5.7 4.6 7.0



#72
 4-Ethyltoluene
 Concen: 0.090 ppbv
 RT: 15.85 min Scan# 4063
 Delta R.T. 0.03 min
 Lab File: VL037570.D
 Acq: 8 Sep 2021 13:41

Tgt Ion: 105 Resp: 54266
 Ion Ratio Lower Upper
 105 100
 120 0.0 24.7 37.1#
 91 0.0 9.8 14.8#
 77 0.0 10.6 15.8#





#73

1,3,5-Trimethylbenzene

Concen: 0.043 ppbv

RT: 16.01 min Scan# 4113

Delta R.T. 0.04 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Instrument :

MSVOA_L

ClientSampleId :

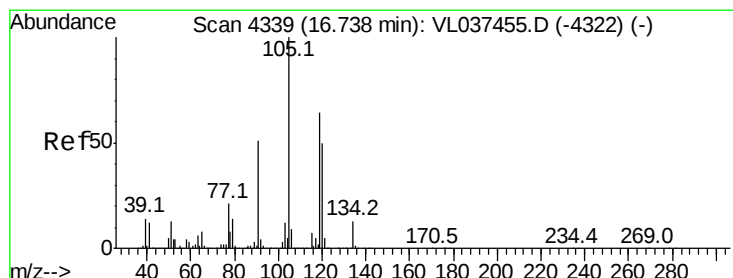
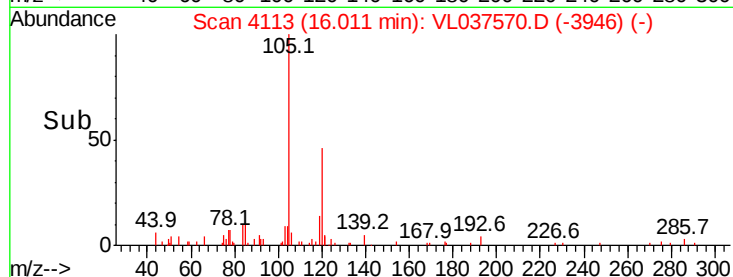
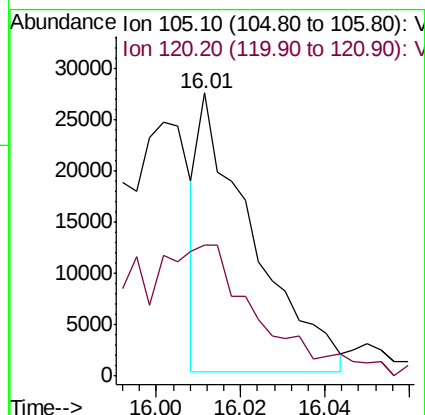
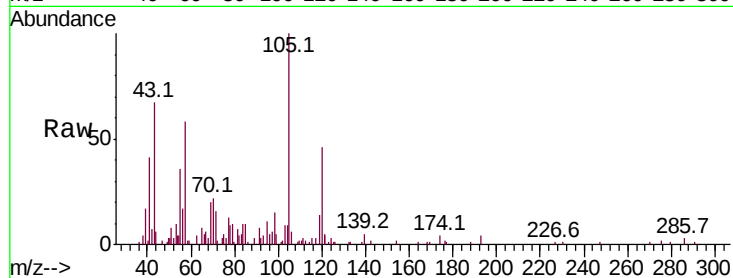
SV-4DL

Tot Ion:105 Resp: 23995

Ion Ratio Lower Upper

105 100

120 39.3 37.6 56.4



#74

1,2,4-Trimethylbenzene

Concen: 0.489 ppbv

RT: 16.77 min Scan# 4348

Delta R.T. 0.03 min

Lab File: VL037570.D

Acq: 8 Sep 2021 13:41

Tgt Ion:105 Resp: 292660

Ion Ratio Lower Upper

105 100

120 39.6 40.4 60.6#

91 10.1 44.6 67.0#

77 10.7 17.8 26.6#

