

Data File : VL034868.D
Acq On : 10 Mar 2020 16:18
Operator : SY/AP
Sample : L1861-01DL2 40X
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
O-1DL2

Quant Time: Mar 11 05:52:23 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL030920AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 09 16:42:53 2020
QLast Update : Mon Mar 09 16:42:53 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	949865	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2142364	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.11	117	2078334	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.45 95 1662466 10.26 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 102.60%

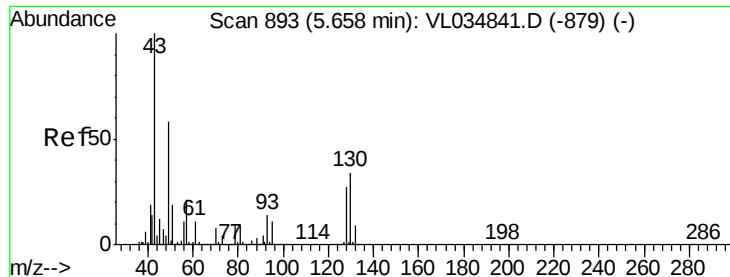
Target Compounds					Qvalue	
3) Chlorodifluoromethane	2.95	51	1903	0.018	ppbv #	91
4) Chloromethane	3.10	50	1230	0.021	ppbv #	70
8) Dichlorotetrafluoroethane	3.01	85	2074	0.015	ppbv #	18
9) Propene	3.17	41	453480	8.951	ppbv	94
10) Heptane	8.13	43	173534	1.392	ppbv	96
13) Ethanol	3.57	45	172721	11.214	ppbv	94
15) Acetone	3.82	43	375659	3.051	ppbv #	59
16) 1,3-Butadiene	3.27	39	99599	1.789	ppbv #	14
17) tert-Butyl alcohol	4.28	59	36666	0.309	ppbv #	72
19) Isopropyl Alcohol	3.95	45	14085	0.181	ppbv #	1
20) Methylene Chloride	4.31	84	12626	0.324	ppbv #	92
21) Allyl Chloride	4.34	41	33421	0.423	ppbv #	52
23) Vinyl Acetate	5.04	43	119160	0.655	ppbv #	1
25) Ethyl Acetate	5.68	43	553251	2.522	ppbv #	76
26) Hexane	5.68	57	777869	8.236	ppbv #	41
30) Cyclohexane	7.13	84	1959	0.025	ppbv #	1
34) 2-Butanone	5.24	43	10380	0.073	ppbv #	66
36) Benzene	6.89	78	3499	0.018	ppbv #	15
39) 1,2-Dichloropropane	7.18	63	566386	7.486	ppbv #	23
41) Tetrahydrofuran	5.97	42	12102	0.157	ppbv #	38
51) 2-Hexanone	10.14	43	2397	0.014	ppbv #	29
53) Toluene	9.82	91	25349	0.115	ppbv	87
59) m/p-Xylene	13.03	91	2366	0.010	ppbv #	30

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

Instrument :
MSVOA_L
ClientSampleId :
O-1DL2

The chromatogram displays a series of peaks corresponding to different chemical compounds. The x-axis represents time in minutes, ranging from 0 to 26.00. The y-axis represents abundance, ranging from 0 to 4,200,000. The following table lists the labeled compounds and their approximate retention times:

Compound	Retention Time (min)
Chloroform	~1.5
Diethyl ether	~2.0
1,2-Dichloroethane	~2.5
Propene	~3.0
Ethanol	~3.5
Acetone	~4.0
Methyl acetate	~4.5
2-Butanone	~5.0
Vinyl acetate	~5.5
Tetrahydrofuran	~6.0
Benzene	~7.0
Cyclohexane	~7.5
Heptane	~8.0
Toluene	~10.0
2-Hexanone	~10.5
Chlorobenzene-d5	~12.0
m/p-Xylene	~13.0
1-Bromo-4-Fluorobenzene	~14.5



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.00 min

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ClientSampleId :

O-1DL2

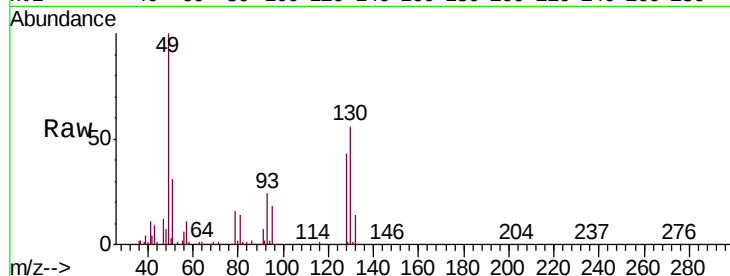
Tgt Ion: 49 Resp: 949865

Ion Ratio Lower Upper

49 100

128 46.2 23.4 70.3

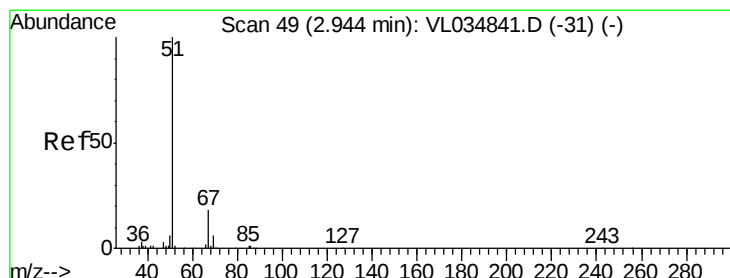
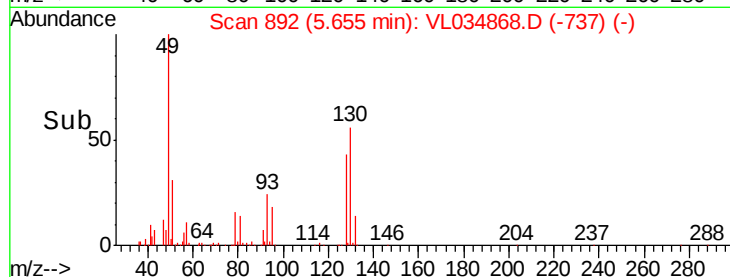
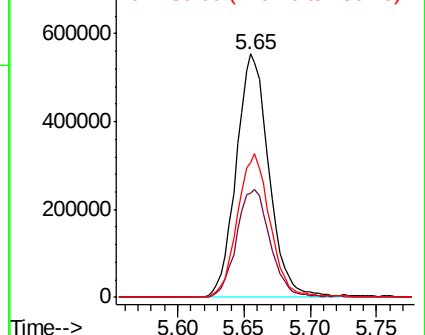
130 59.6 30.0 90.0



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: 0.018 ppbv

RT: 2.95 min Scan# 51

Delta R.T. 0.01 min

Lab File: VL034868.D

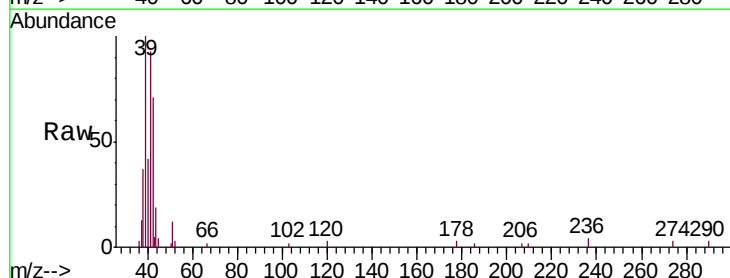
Acq: 10 Mar 2020 16:18

Tgt Ion: 51 Resp: 1903

Ion Ratio Lower Upper

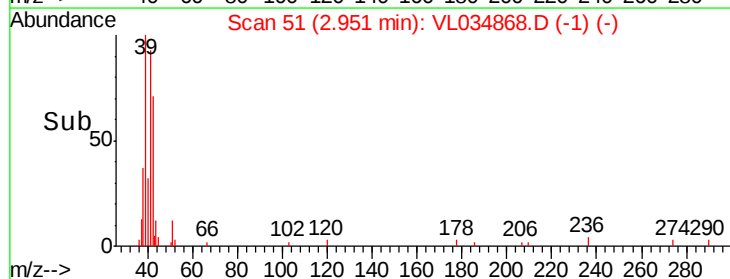
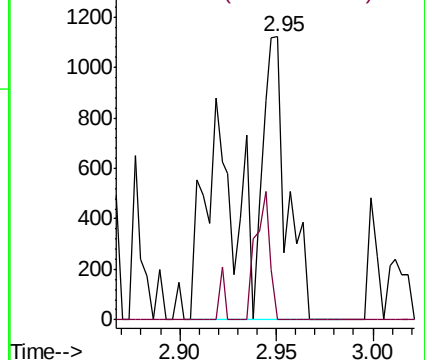
51 100

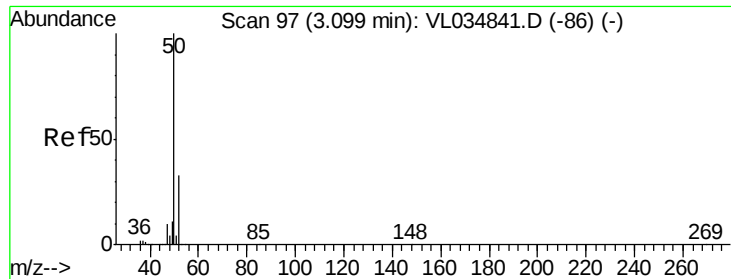
67 14.0 14.3 21.5#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.021 ppbv

RT: 3.10 min Scan# 98

Delta R.T. 0.00 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampleId :

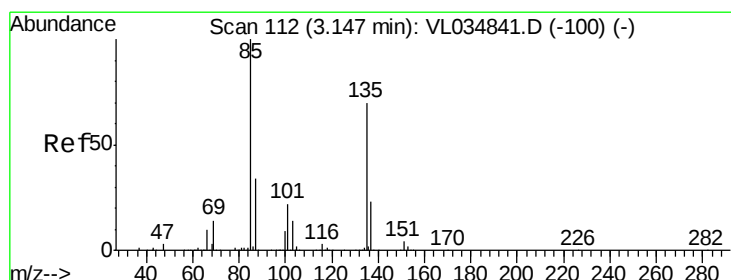
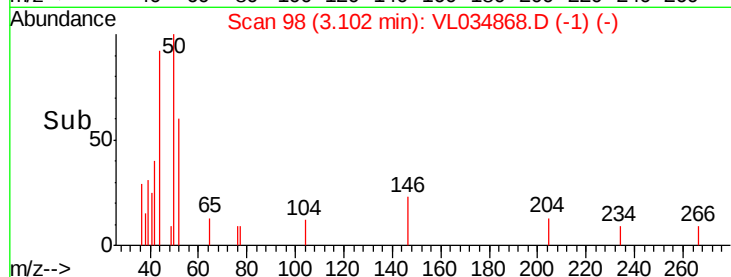
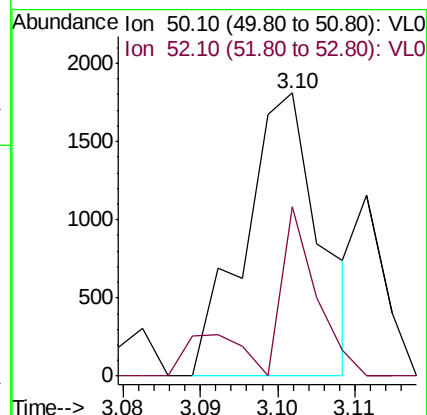
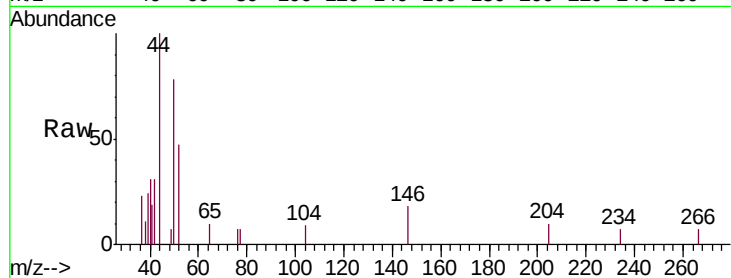
O-1DL2

Tgt Ion: 50 Resp: 1230

Ion Ratio Lower Upper

50 100

52 50.7 26.8 40.2#



#8

Dichlorotetrafluoroethane

Concen: 0.015 ppbv

RT: 3.01 min Scan# 70

Delta R.T. -0.13 min

Lab File: VL034868.D

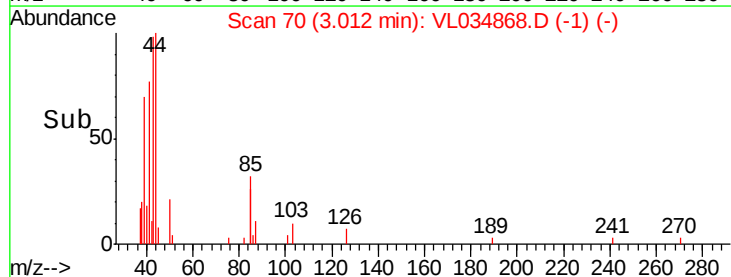
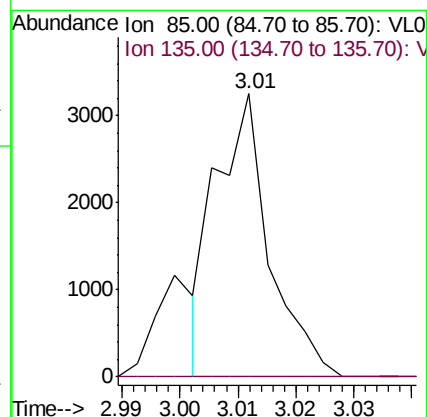
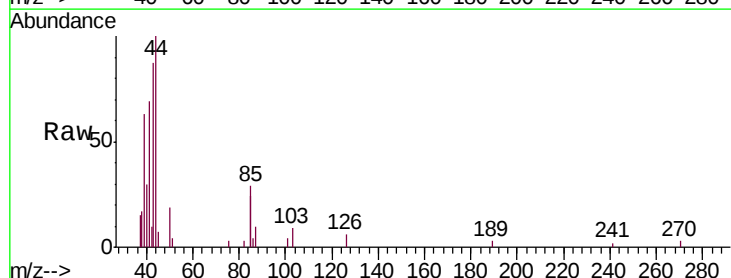
Acq: 10 Mar 2020 16:18

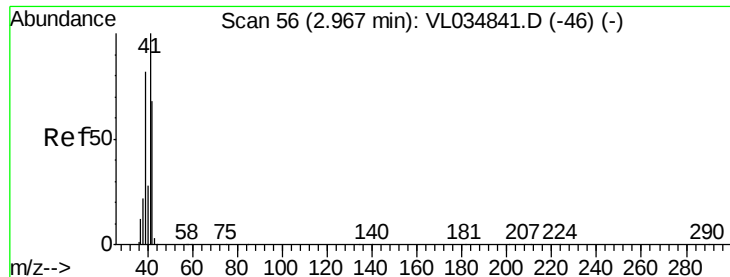
Tgt Ion: 85 Resp: 2074

Ion Ratio Lower Upper

85 100

135 2.1 54.3 81.5#





#9

Propene

Concen: 8.951 ppbv

RT: 3.17 min Scan# 118

Delta R.T. 0.20 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampleId :

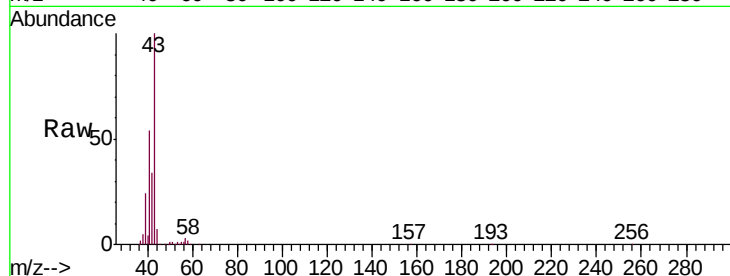
O-1DL2

Tgt Ion: 41 Resp: 453480

Ion Ratio Lower Upper

41 100

42 64.3 55.2 82.8



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

3.17

400000

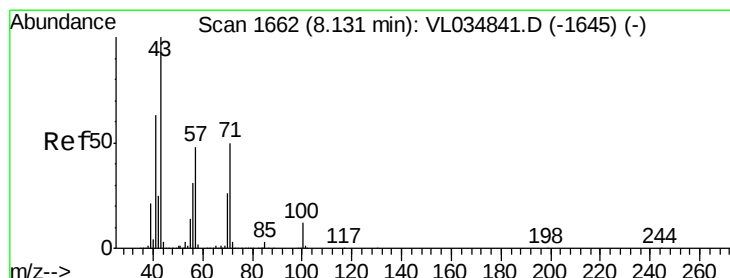
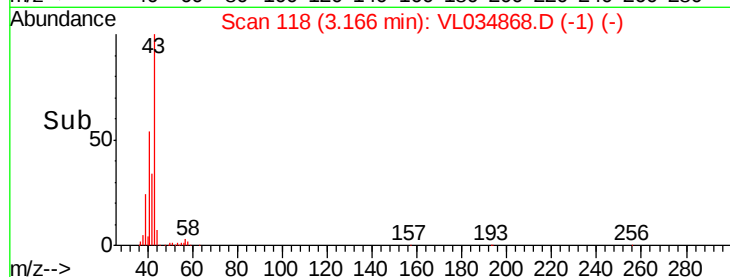
300000

200000

100000

0

Time--> 3.10 3.15 3.20



#10

Heptane

Concen: 1.392 ppbv

RT: 8.13 min Scan# 1662

Delta R.T. 0.00 min

Lab File: VL034868.D

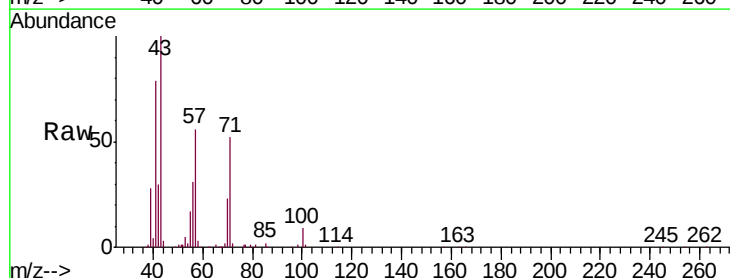
Acq: 10 Mar 2020 16:18

Tgt Ion: 43 Resp: 173534

Ion Ratio Lower Upper

43 100

57 52.5 39.7 59.5



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

8.13

100000

80000

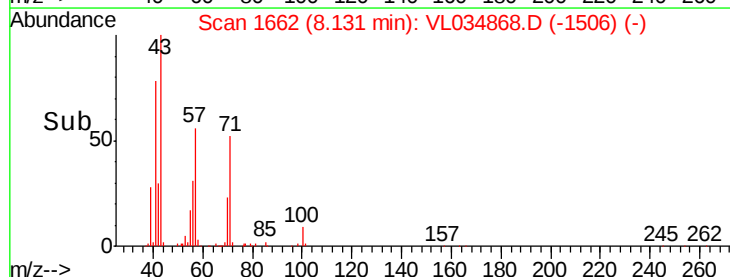
60000

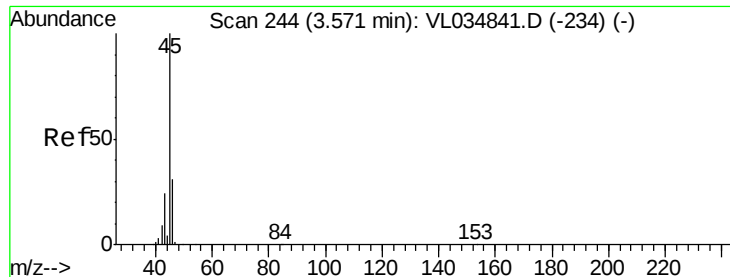
40000

20000

0

Time--> 8.05 8.10 8.15 8.20





#13

Ethanol

Concen: 11.214 ppbv

RT: 3.57 min Scan# 244

Delta R.T. 0.00 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampleId :

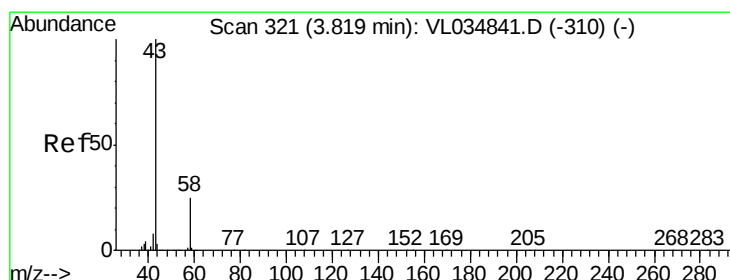
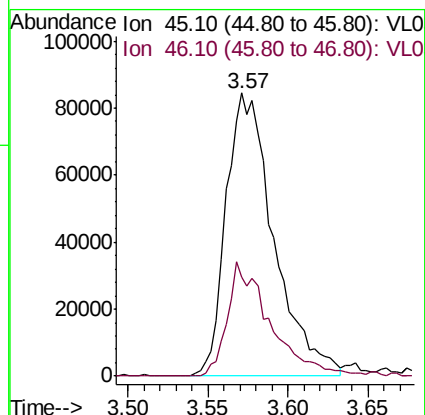
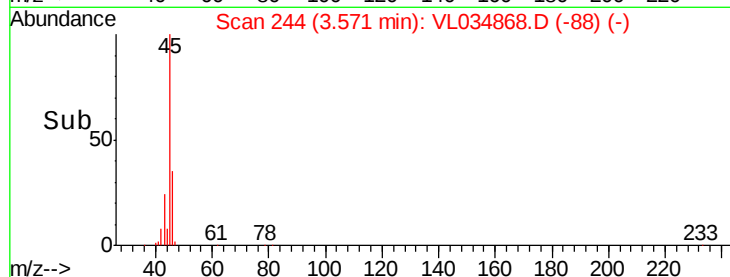
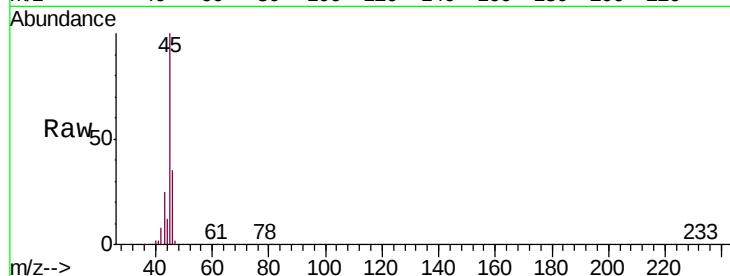
O-1DL2

Tgt Ion: 45 Resp: 172721

Ion Ratio Lower Upper

45 100

46 36.2 16.0 64.0



#15

Acetone

Concen: 3.051 ppbv

RT: 3.82 min Scan# 321

Delta R.T. 0.00 min

Lab File: VL034868.D

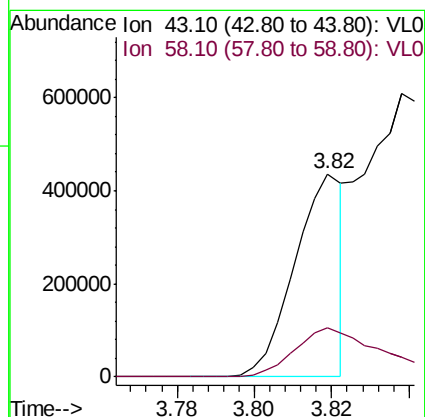
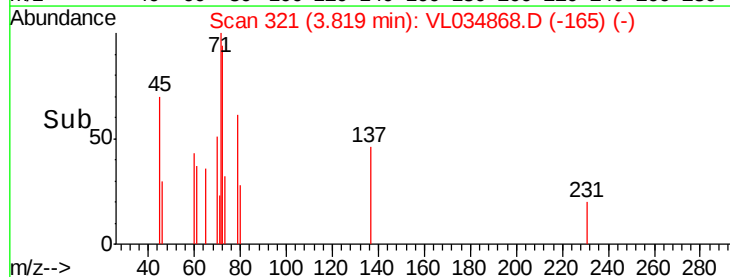
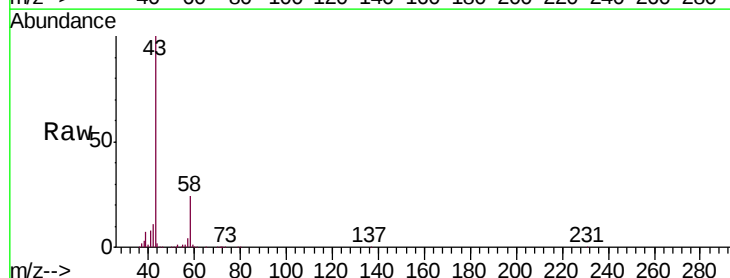
Acq: 10 Mar 2020 16:18

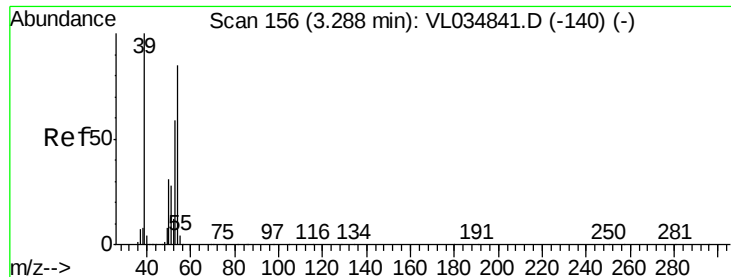
Tgt Ion: 43 Resp: 375659

Ion Ratio Lower Upper

43 100

58 47.4 21.0 31.6#





#16

1,3-Butadiene

Concen: 1.789 ppbv

RT: 3.27 min Scan# 149

Delta R.T. -0.02 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampleId :

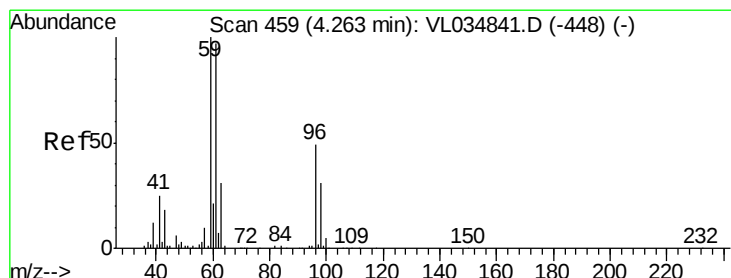
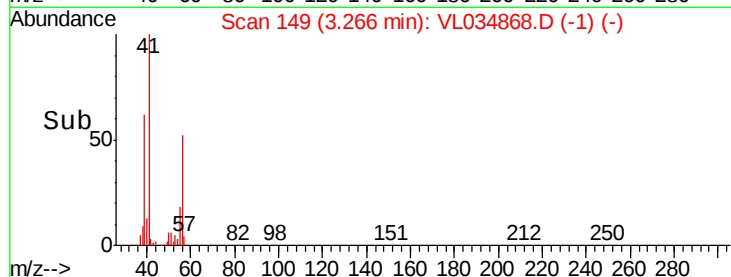
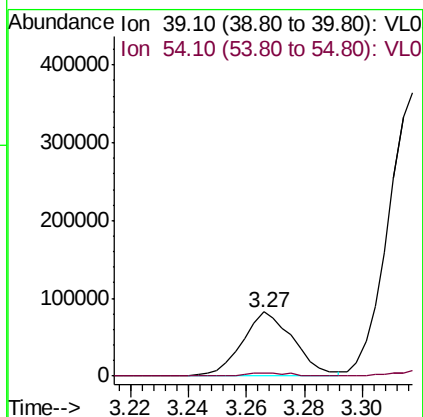
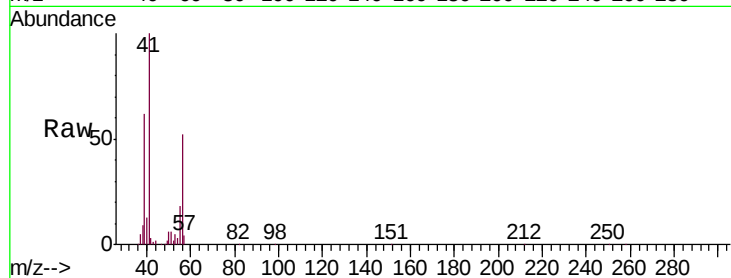
O-1DL2

Tgt Ion: 39 Resp: 99599

Ion Ratio Lower Upper

39 100

54 4.9 65.0 97.6#



#17

tert-Butyl alcohol

Concen: 0.309 ppbv

RT: 4.28 min Scan# 465

Delta R.T. 0.02 min

Lab File: VL034868.D

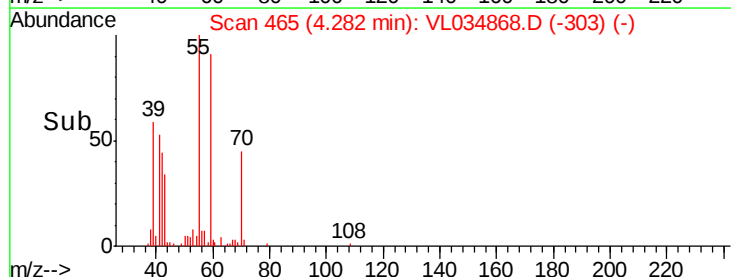
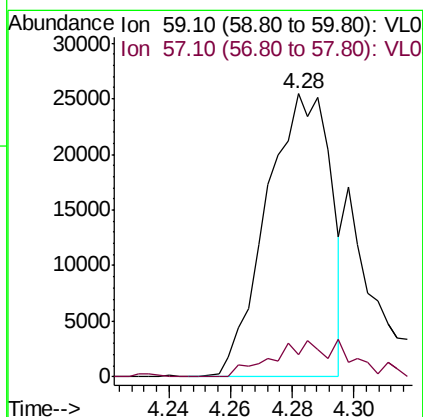
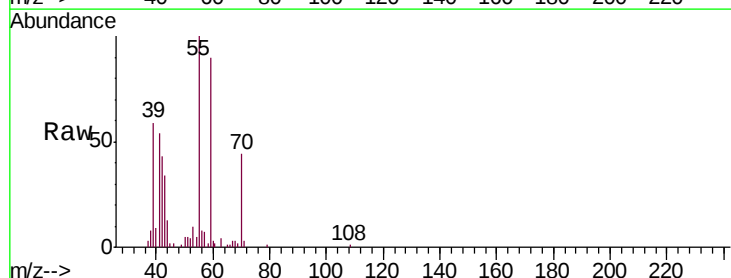
Acq: 10 Mar 2020 16:18

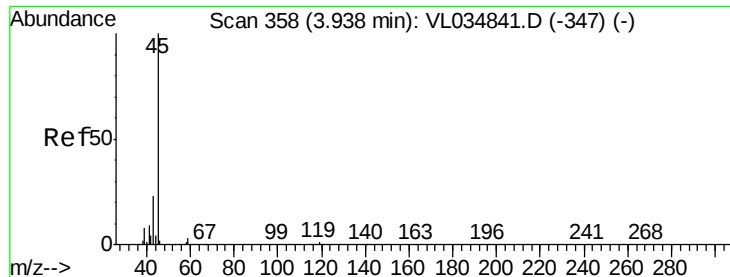
Tgt Ion: 59 Resp: 36666

Ion Ratio Lower Upper

59 100

57 0.0 8.3 12.5#





#19

Isopropyl Alcohol

Concen: 0.181 ppbv

RT: 3.95 min Scan# 361

Delta R.T. 0.01 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampleId :

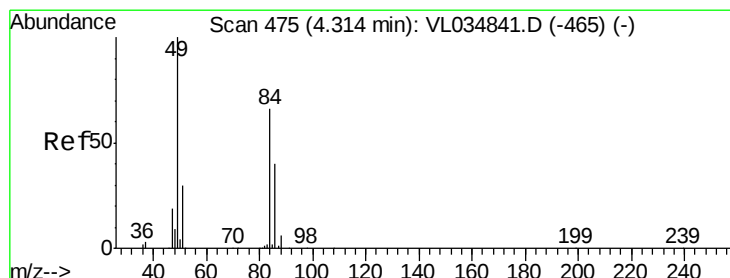
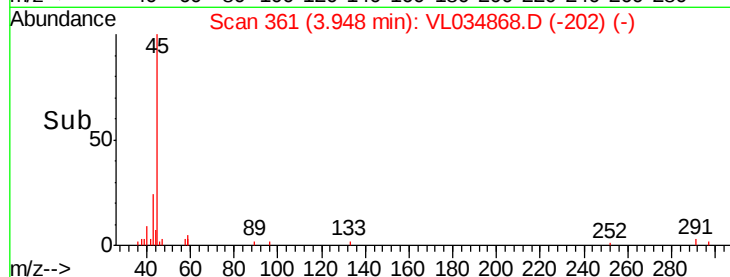
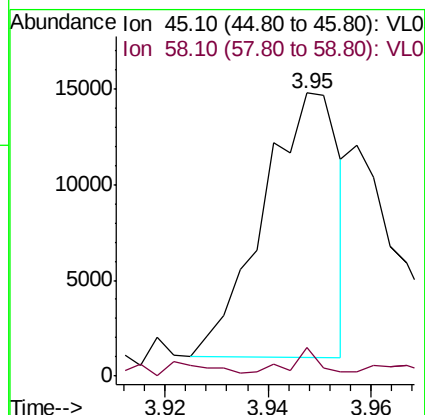
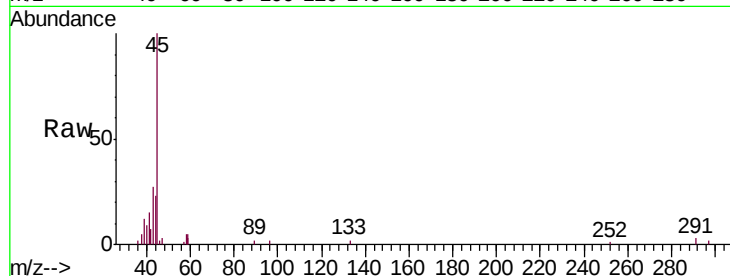
O-1DL2

Tgt Ion: 45 Resp: 14085

Ion Ratio Lower Upper

45 100

58 1256.3 30.5 45.7#



#20

Methylene Chloride

Concen: 0.324 ppbv

RT: 4.31 min Scan# 475

Delta R.T. 0.00 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Tgt Ion: 84 Resp: 12626

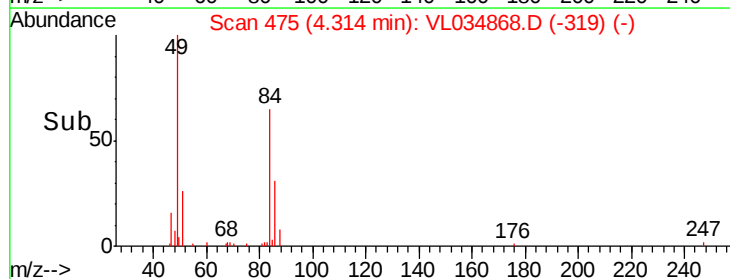
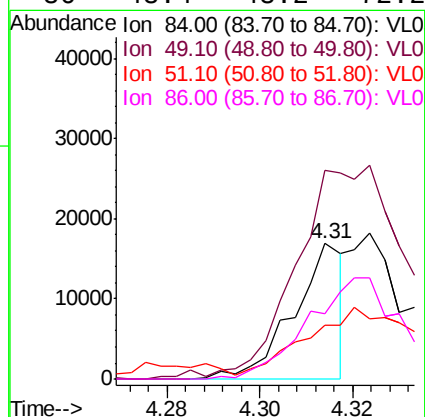
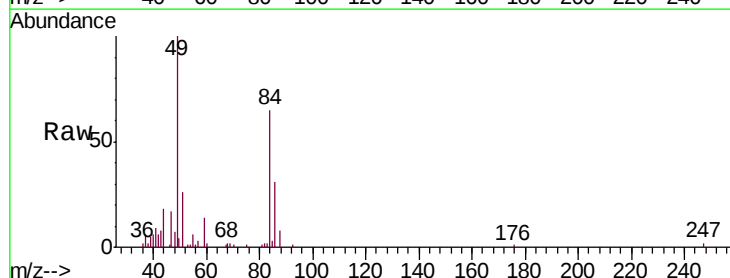
Ion Ratio Lower Upper

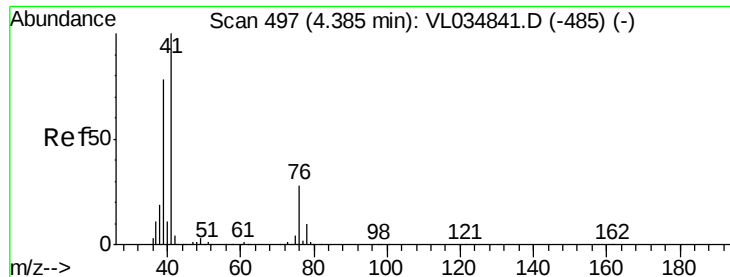
84 100

49 152.8 121.5 182.3

51 31.7 36.6 55.0#

86 48.4 48.2 72.2





#21

Allyl Chloride

Concen: 0.423 ppbv

RT: 4.34 min Scan# 484

Delta R.T. -0.04 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampleId :

O-1DL2

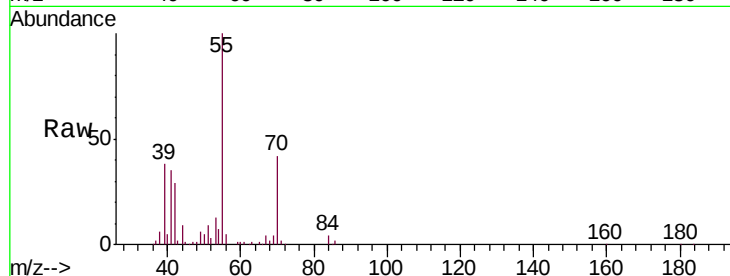
Tgt Ion: 41 Resp: 33421

Ion Ratio Lower Upper

41 100

76 3.3 22.2 33.2#

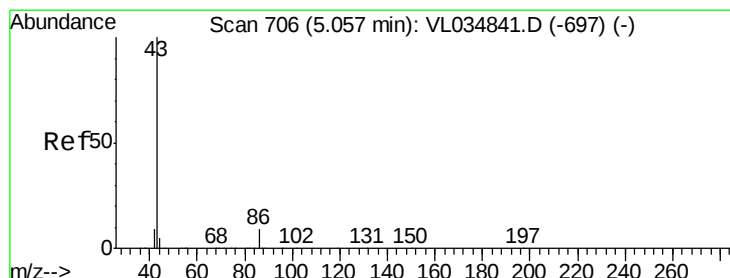
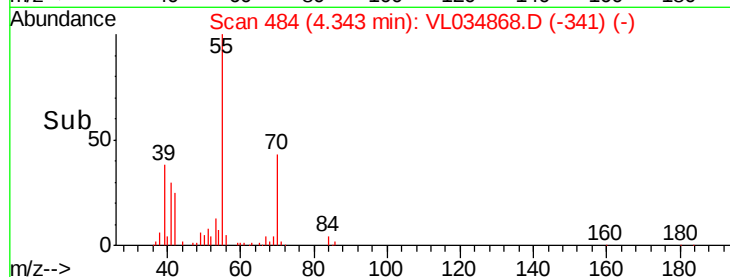
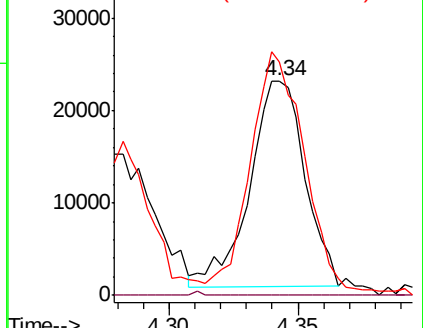
39 119.9 62.6 93.8#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

Ion 39.10 (38.80 to 39.80): VL0



#23

Vinyl Acetate

Concen: 0.655 ppbv

RT: 5.04 min Scan# 701

Delta R.T. -0.02 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Tgt Ion: 43 Resp: 119160

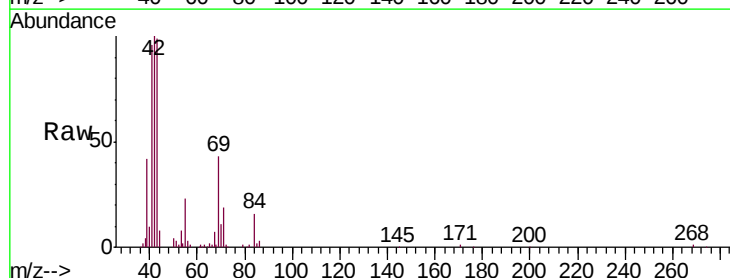
Ion Ratio Lower Upper

43 100

86 3.5 6.3 9.5#

42 100.5 7.8 11.8#

44 4.6 4.0 6.0

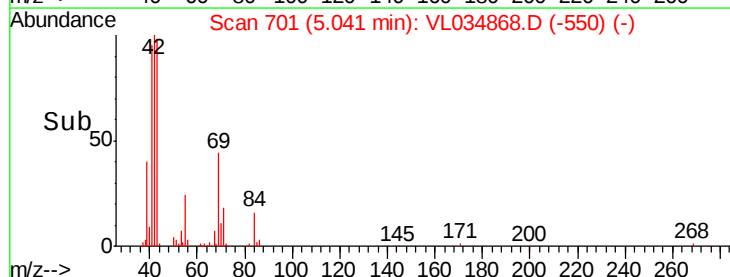
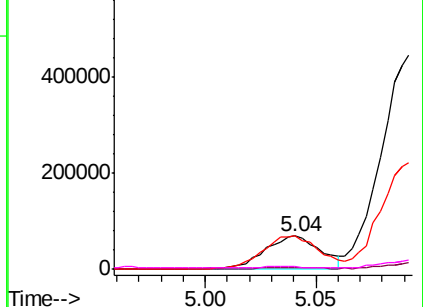


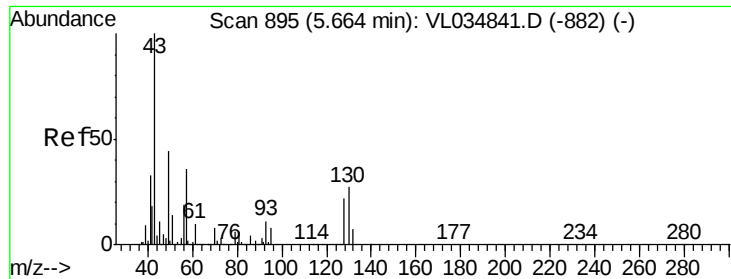
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

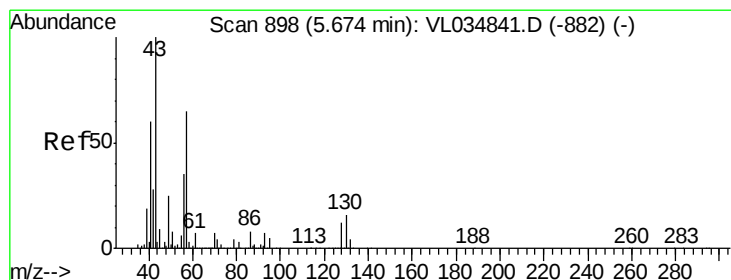
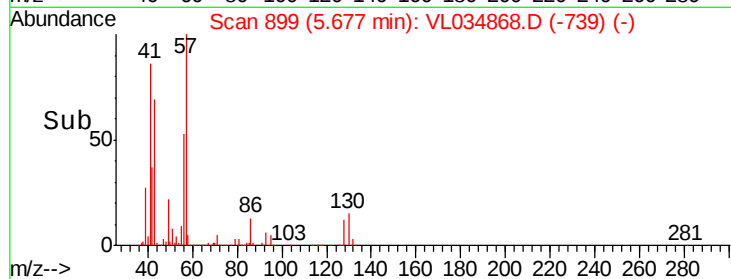
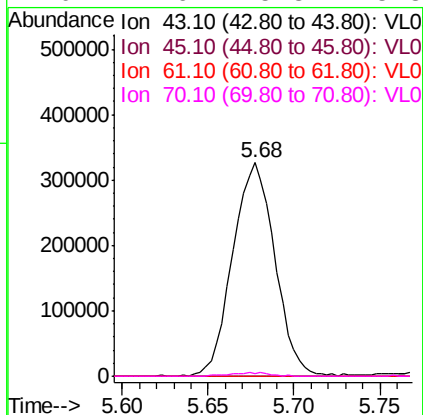
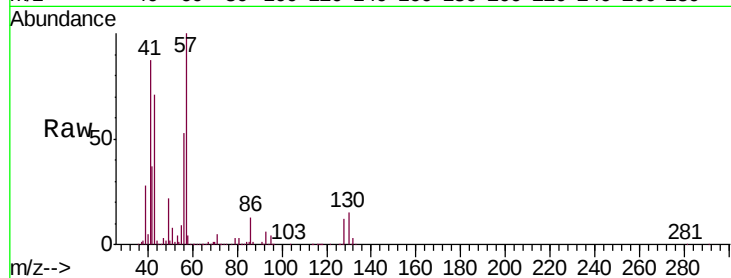




#25
Ethyl Acetate
Concen: 2.522 ppbv
RT: 5.68 min Scan# 899
Delta R.T. 0.01 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

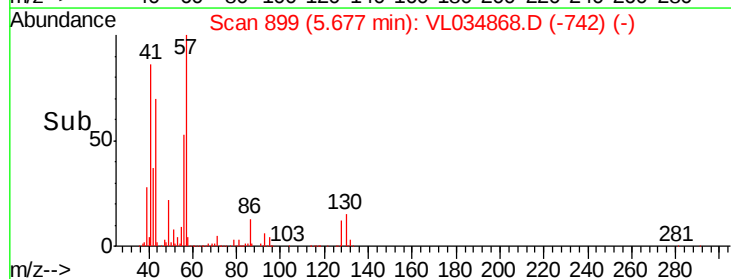
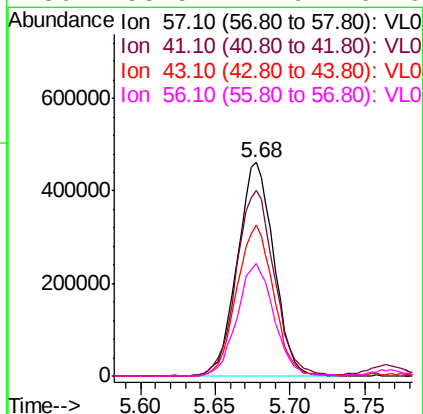
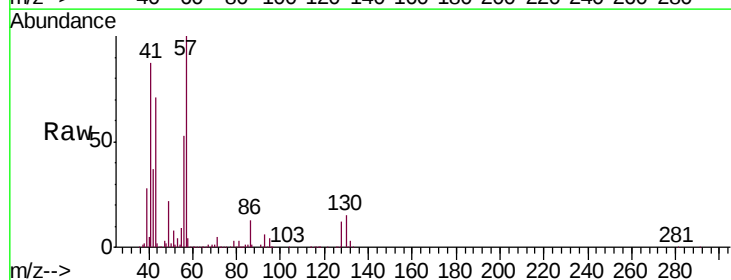
Instrument :
MSVOA_L
ClientSampleId :
O-1DL2

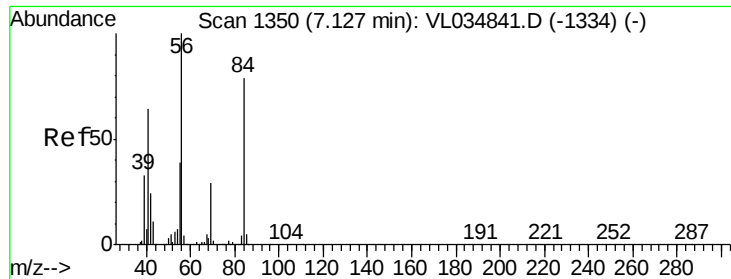
Tgt Ion:	43	Resp:	553251
Ion	Ratio	Lower	Upper
43	100		
45	0.2	8.2	12.2#
61	0.3	7.8	11.6#
70	1.6	5.8	8.8#



#26
Hexane
Concen: 8.236 ppbv
RT: 5.68 min Scan# 899
Delta R.T. 0.00 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

Tgt Ion:	57	Resp:	777869
Ion	Ratio	Lower	Upper
57	100		
41	91.7	72.6	109.0
43	71.9	183.8	275.6#
56	53.5	41.9	62.9

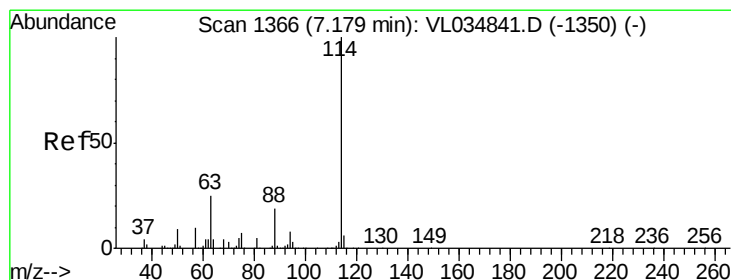
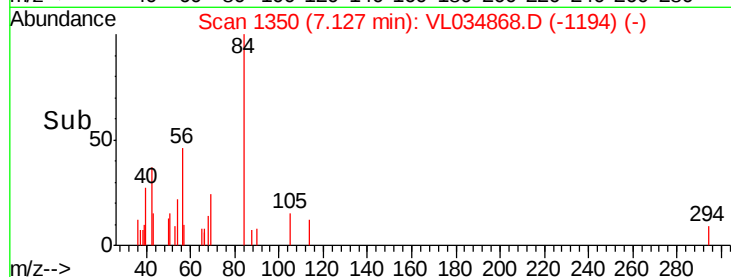
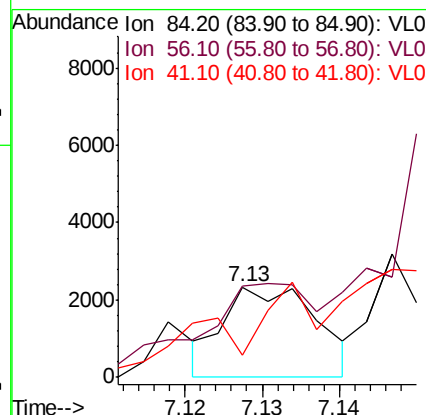
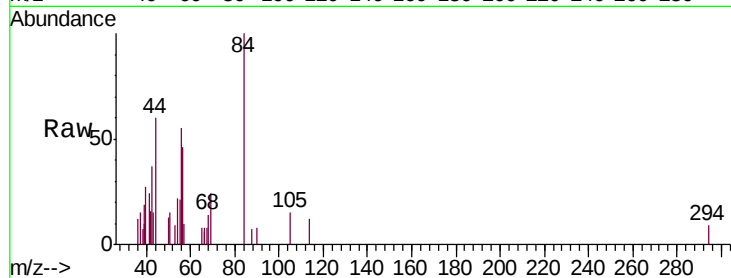




#30
Cyclohexane
Concen: 0.025 ppbv
RT: 7.13 min Scan# 1350
Delta R.T. 0.00 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

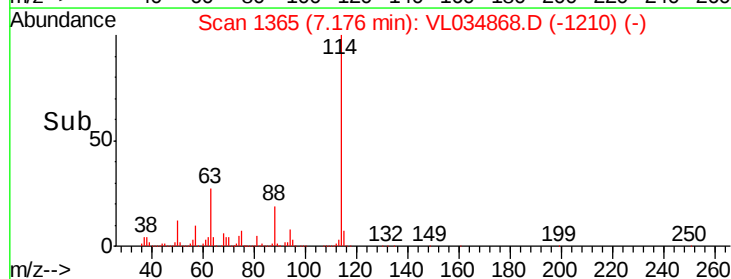
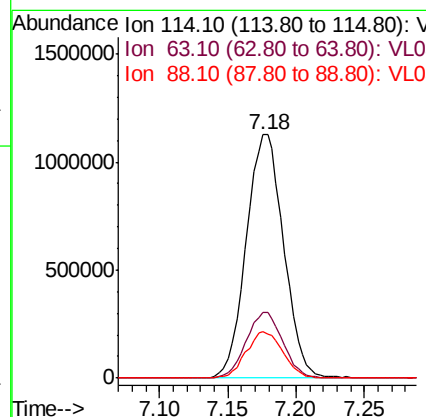
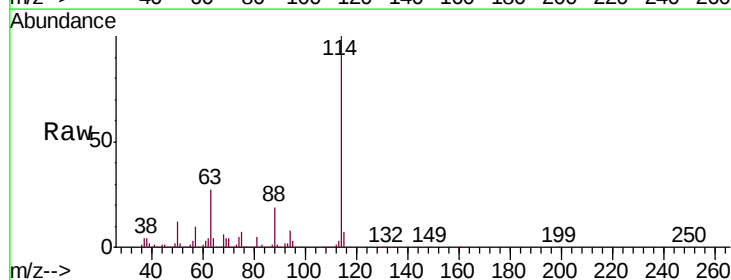
Instrument :
MSVOA_L
ClientSampleId :
O-1DL2

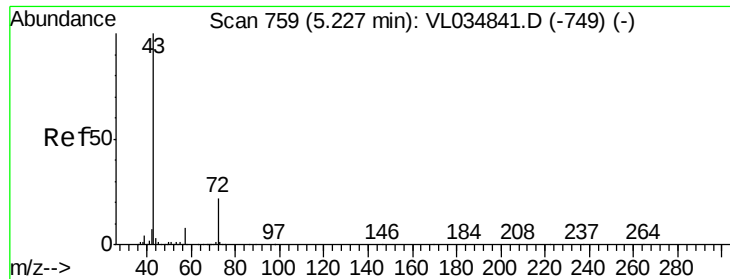
Tgt Ion: 84 Resp: 1959
Ion Ratio Lower Upper
84 100
56 0.0 110.5 165.7#
41 0.0 68.2 102.4#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1365
Delta R.T. -0.00 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

Tgt Ion: 114 Resp: 2142364
Ion Ratio Lower Upper
114 100
63 26.7 20.6 31.0
88 18.8 15.0 22.6

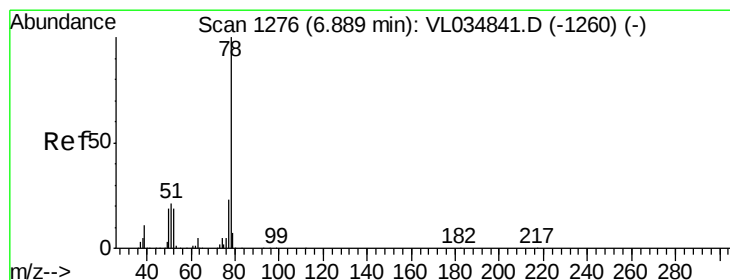
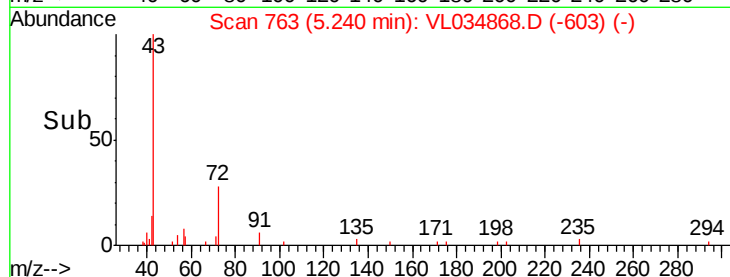
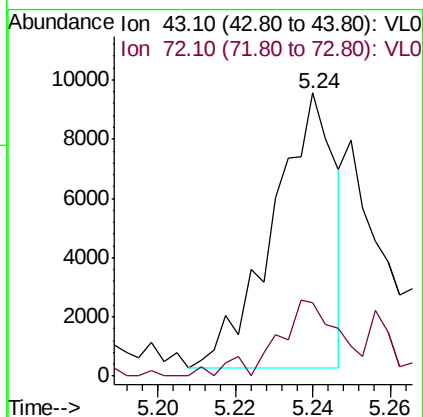
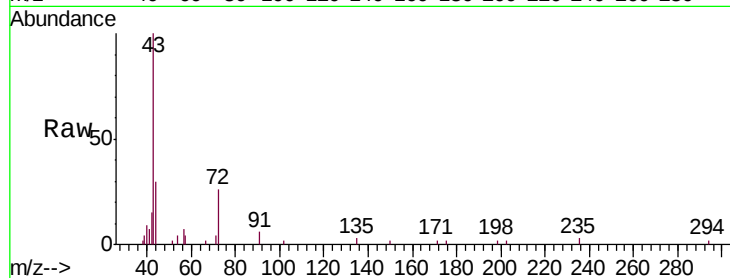




#34
2-Butanone
Concen: 0.073 ppbv
RT: 5.24 min Scan# 763
Delta R.T. 0.01 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

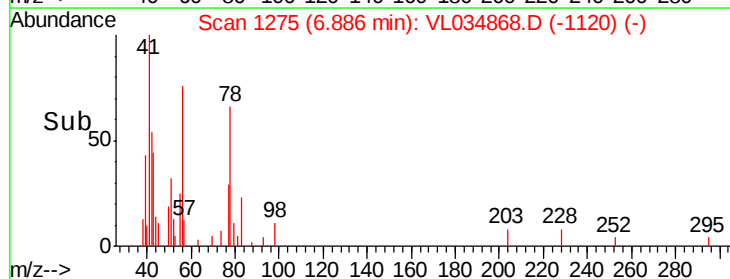
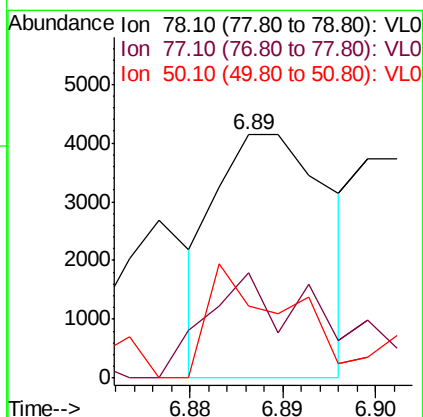
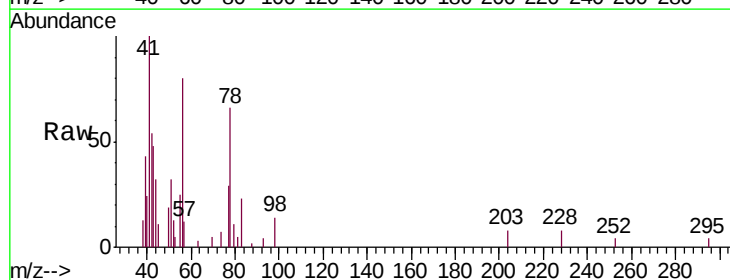
Instrument :
MSVOA_L
ClientSampleId :
O-1DL2

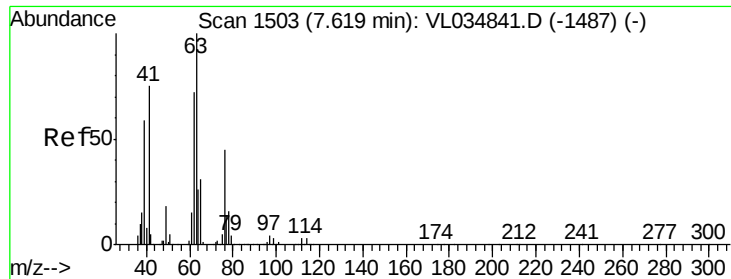
Tgt Ion: 43 Resp: 10380
Ion Ratio Lower Upper
43 100
72 38.3 17.6 26.4#



#36
Benzene
Concen: 0.018 ppbv
RT: 6.89 min Scan# 1275
Delta R.T. -0.00 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

Tgt Ion: 78 Resp: 3499
Ion Ratio Lower Upper
78 100
77 59.6 18.2 27.2#
50 62.3 15.2 22.8#





#39

1,2-Dichloropropane

Concen: 7.486 ppbv

RT: 7.18 min Scan# 1365

Delta R.T. -0.44 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampled :

O-1DL2

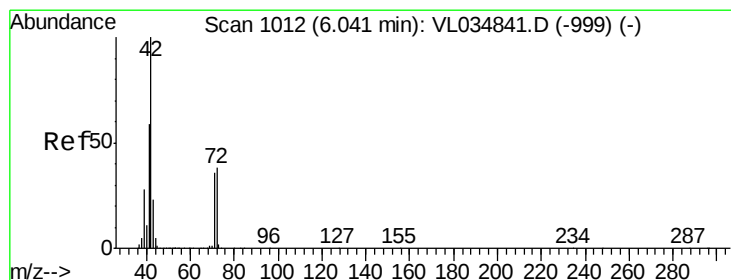
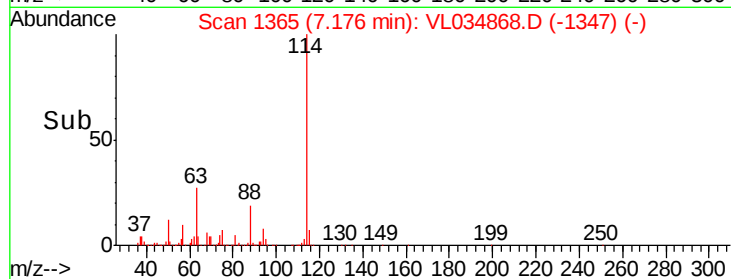
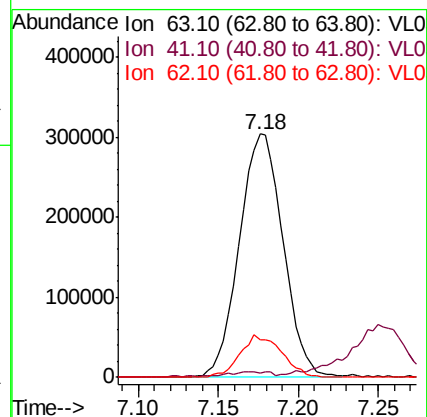
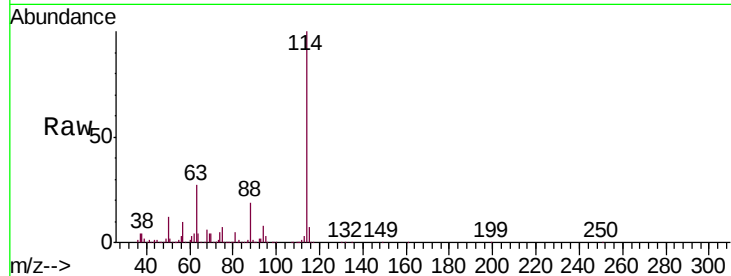
Tgt Ion: 63 Resp: 566386

Ion Ratio Lower Upper

63 100

41 1.3 59.8 89.8#

62 15.4 57.6 86.4#



#41

Tetrahydrofuran

Concen: 0.157 ppbv

RT: 5.97 min Scan# 991

Delta R.T. -0.07 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

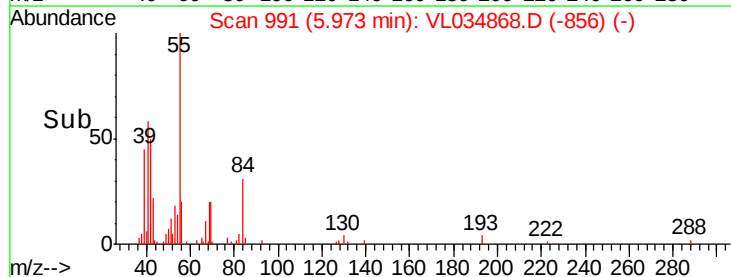
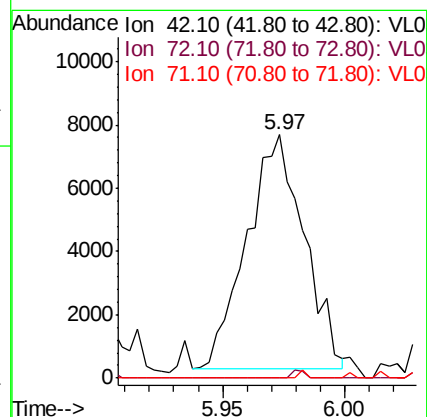
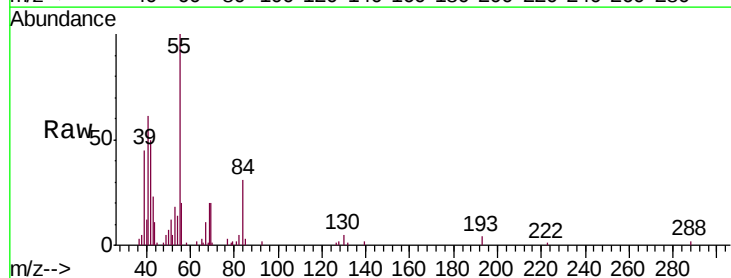
Tgt Ion: 42 Resp: 12102

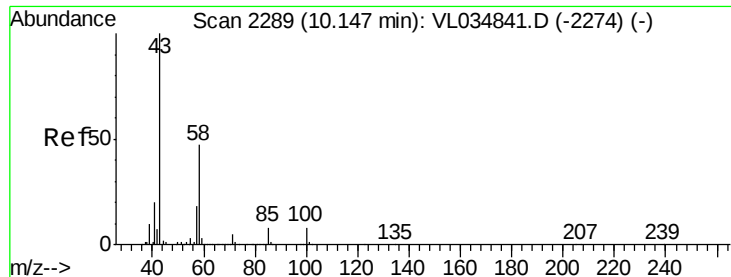
Ion Ratio Lower Upper

42 100

72 0.7 30.8 46.2#

71 0.0 30.1 45.1#

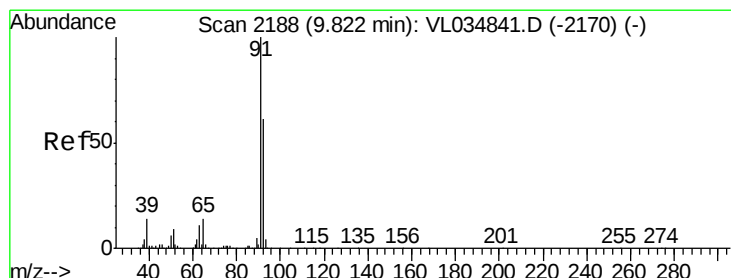
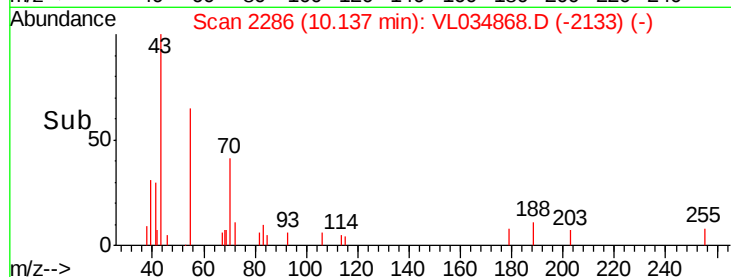
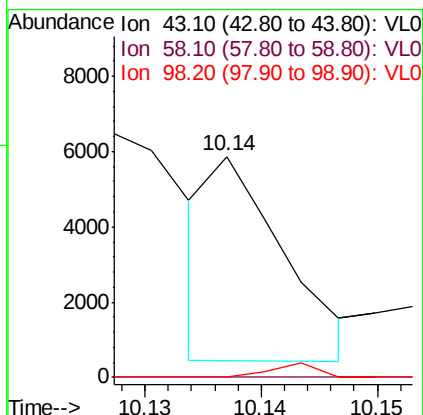
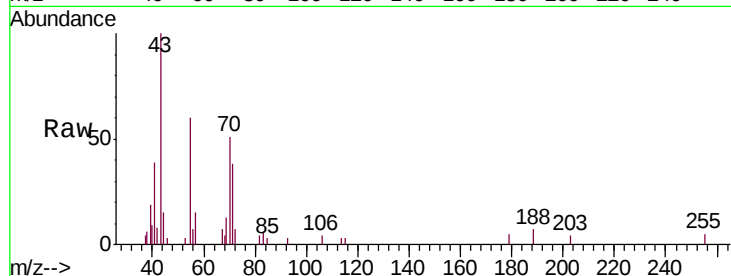




#51
2-Hexanone
Concen: 0.014 ppbv
RT: 10.14 min Scan# 2286
Delta R.T. -0.01 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

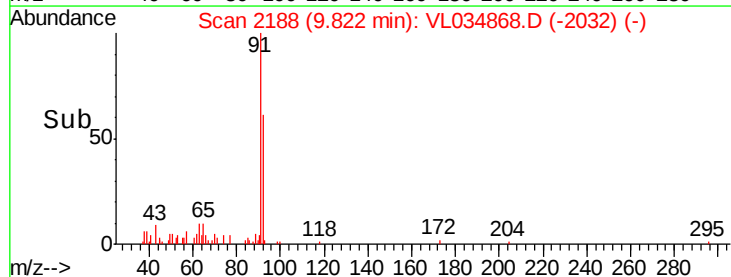
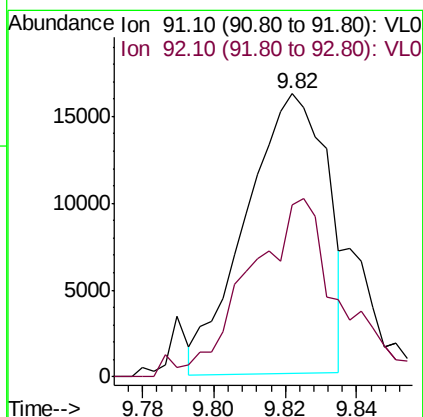
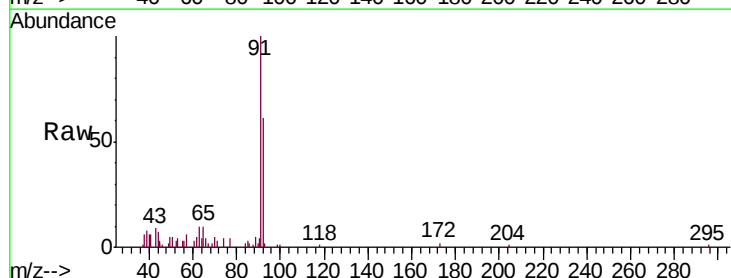
Instrument :
MSVOA_L
ClientSampleId :
O-1DL2

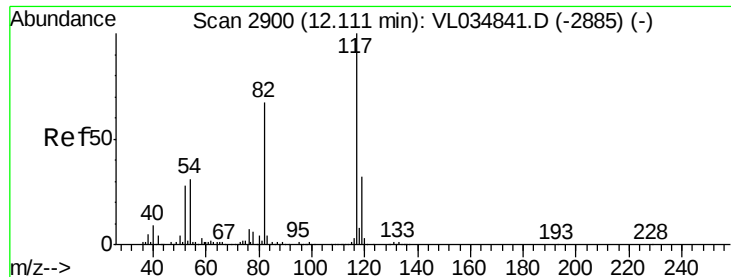
Tgt Ion: 43 Resp: 2397
Ion Ratio Lower Upper
43 100
58 0.0 38.6 58.0#
98 4.5 0.1 0.1#



#53
Toluene
Concen: 0.115 ppbv
RT: 9.82 min Scan# 2188
Delta R.T. 0.00 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

Tgt Ion: 91 Resp: 25349
Ion Ratio Lower Upper
91 100
92 70.9 48.6 72.8

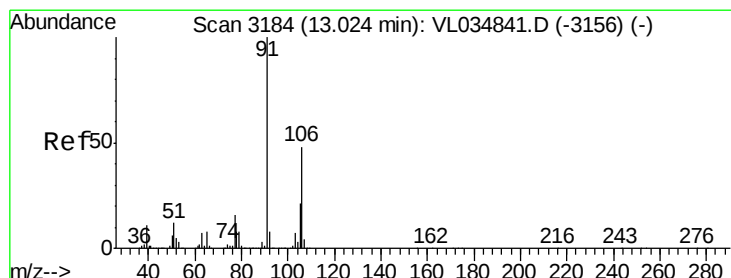
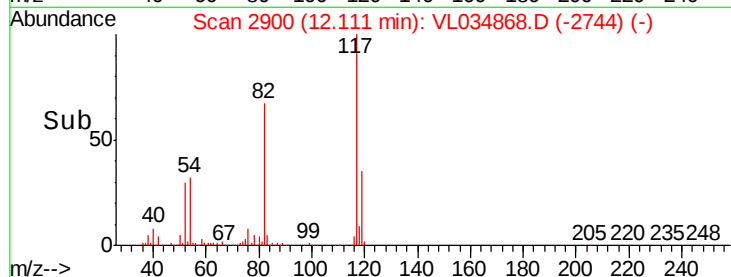
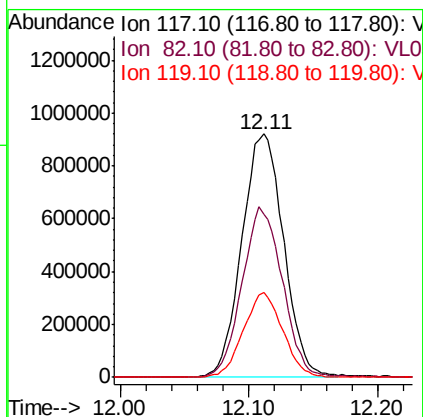
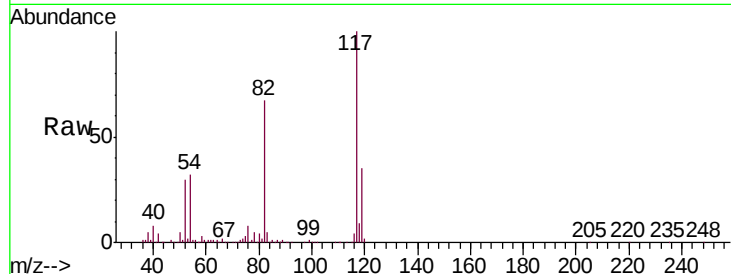




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.11 min Scan# 2900
Delta R.T. 0.00 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

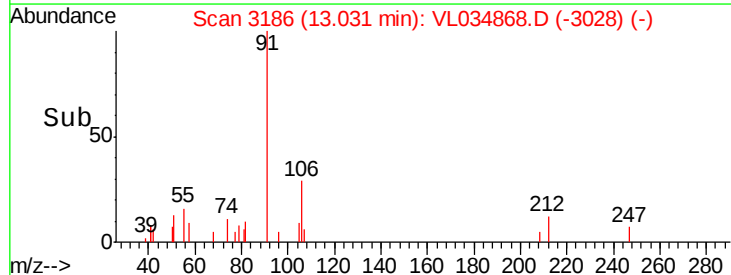
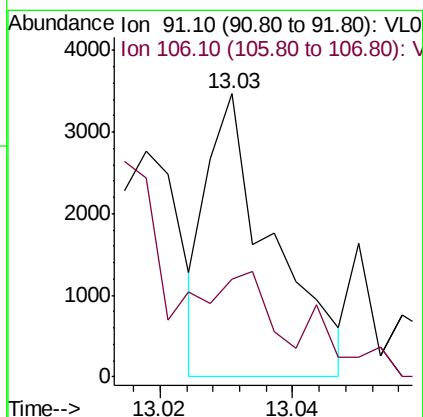
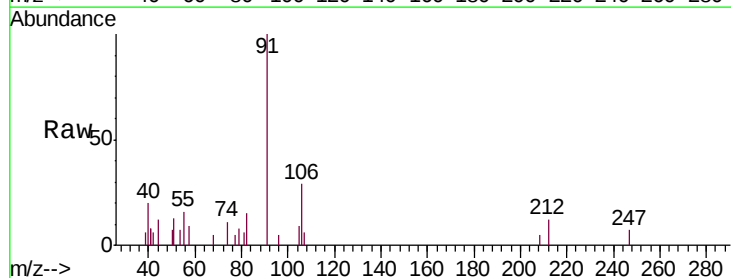
Instrument :
MSVOA_L
ClientSampleId :
O-1DL2

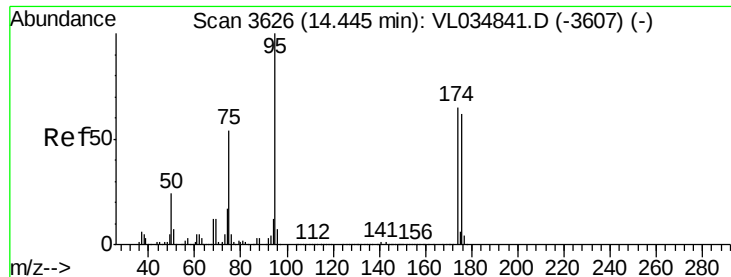
Tgt Ion:117 Resp: 2078334
Ion Ratio Lower Upper
117 100
82 68.6 51.1 76.7
119 33.1 27.3 40.9



#59
m/p-Xylene
Concen: 0.010 ppbv
RT: 13.03 min Scan# 3186
Delta R.T. 0.01 min
Lab File: VL034868.D
Acq: 10 Mar 2020 16:18

Tgt Ion: 91 Resp: 2366
Ion Ratio Lower Upper
91 100
106 0.0 37.1 55.7#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.257 ppbv

RT: 14.45 min Scan# 3628

Delta R.T. 0.01 min

Lab File: VL034868.D

Acq: 10 Mar 2020 16:18

Instrument :

MSVOA_L

ClientSampleId :

O-1DL2

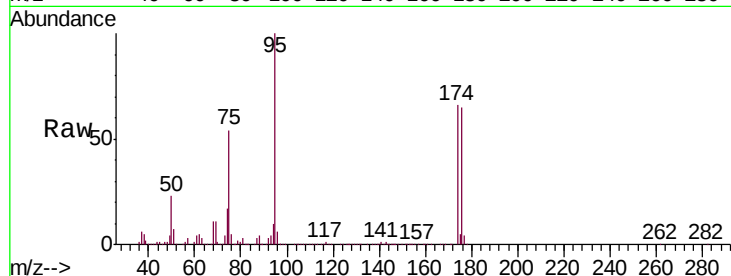
Tgt Ion: 95 Resp: 1662466

Ion Ratio Lower Upper

95 100

174 67.8 55.2 82.8

175 5.2 4.3 6.5



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

