

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL031319\
 Data File : VL033312.D
 Acq On : 14 Mar 2019 12:15
 Operator : SY/AP
 Sample : K1758-01
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 DP-VPB201-AIR-UW-20190305

Quant Time: Mar 15 02:05:35 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL031319AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 14 00:01:31 2019
 QLast Update : Thu Mar 14 00:01:31 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	720912	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1676507	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1616234	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1270748	10.30	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.00%

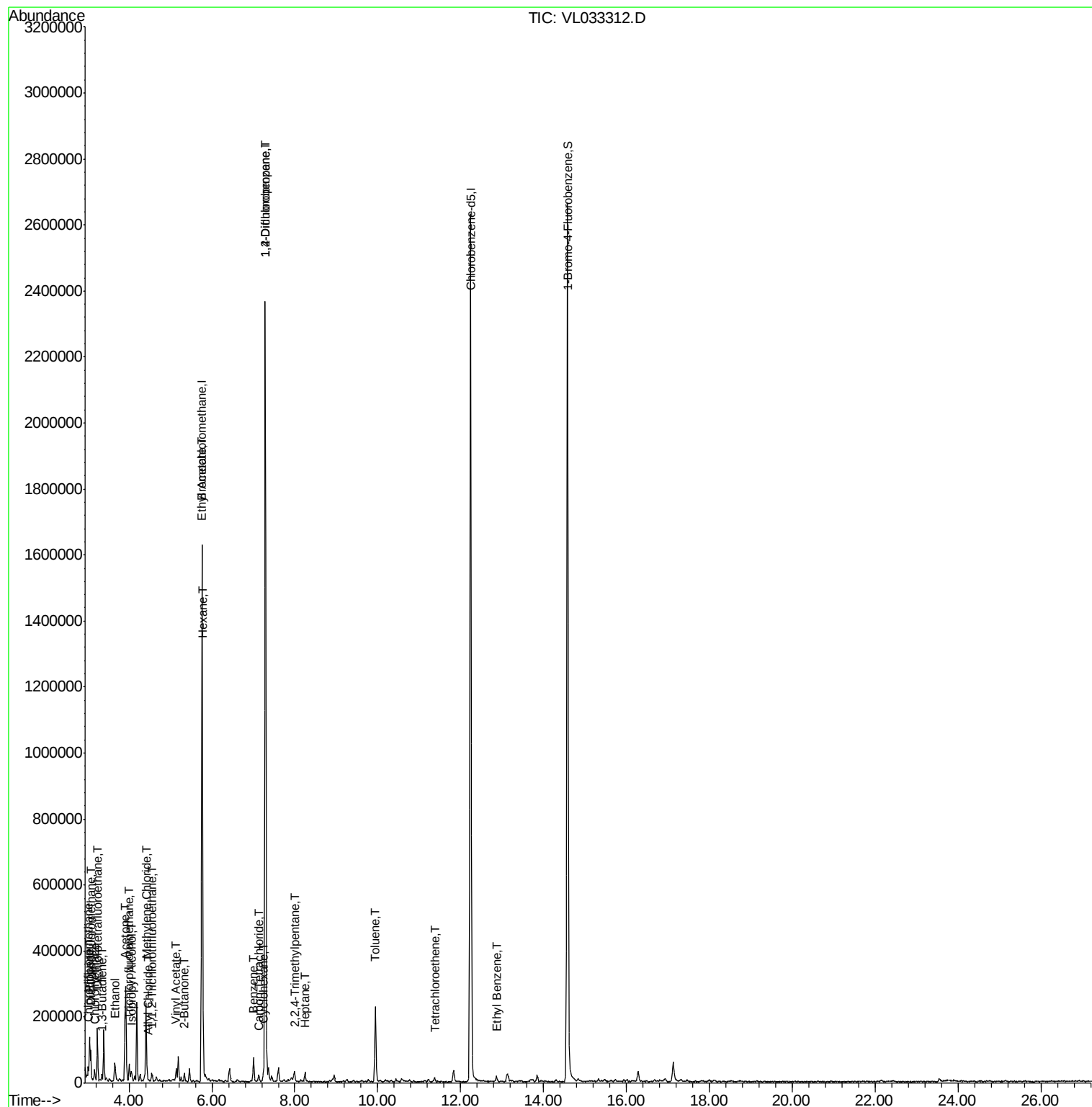
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	61464	0.461	ppbv	95
3) Chlorodifluoromethane	3.02	51	38994	0.415	ppbv	97
4) Chloromethane	3.17	50	25602	0.503	ppbv	95
8) Dichlorotetrafluoroethane	3.22	85	2776	0.023	ppbv #	20
9) Propene	3.05	41	23937	0.564	ppbv #	77
10) Heptane	8.25	43	5678	0.055	ppbv #	40
11) Trichlorofluoromethane	4.00	101	34910	0.260	ppbv	88
12) 1,1,2-Trichlorotrifluoroet	4.55	101	5704	0.063	ppbv #	58
13) Ethanol	3.66	45	31098	2.394	ppbv #	38
15) Acetone	3.90	43	271033	2.734	ppbv #	89
16) 1,3-Butadiene	3.36	39	1417	0.035	ppbv #	37
19) Isopropyl Alcohol	4.05	45	12701	0.209	ppbv #	95
20) Methylene Chloride	4.41	84	77876	1.941	ppbv	96
21) Allyl Chloride	4.48	41	1269	0.021	ppbv #	45
23) Vinyl Acetate	5.14	43	14034	0.098	ppbv #	1
25) Ethyl Acetate	5.77	43	61366	0.340	ppbv #	87
26) Hexane	5.78	57	65268	0.774	ppbv #	50
30) Cyclohexane	7.24	84	3510	0.054	ppbv #	1
34) 2-Butanone	5.34	43	28921	0.250	ppbv	94
35) Carbon Tetrachloride	7.13	117	9205	0.071	ppbv	95
36) Benzene	7.00	78	53314	0.324	ppbv	98
39) 1,2-Dichloropropane	7.29	63	445757	7.050	ppbv #	25
44) 2,2,4-Trimethylpentane	7.99	57	15229	0.054	ppbv #	45
52) Tetrachloroethene	11.37	164	2145	0.032	ppbv #	61
53) Toluene	9.94	91	168715	0.895	ppbv	98
58) Ethyl Benzene	12.87	91	7535	0.032	ppbv	97

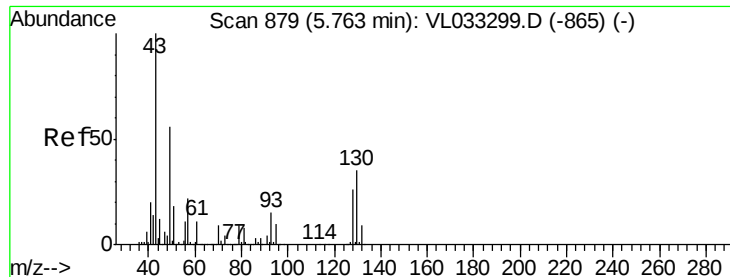
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Thu Mar 14 00:01:31 2019
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

DP-VPB201-AIR-UW-20190305

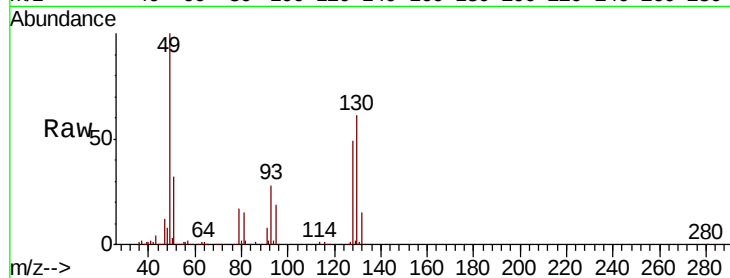
Tgt Ion: 49 Resp: 720912

Ion Ratio Lower Upper

49 100

128 47.5 23.4 70.3

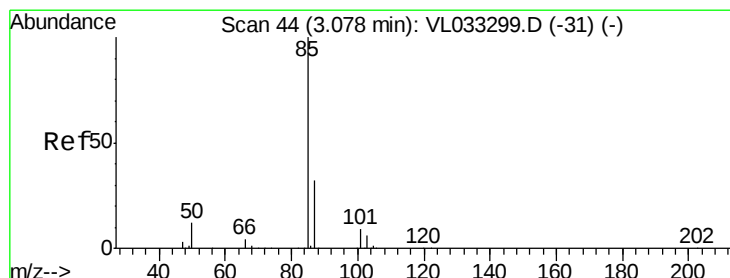
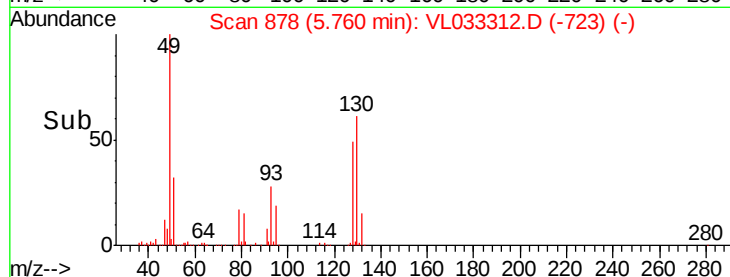
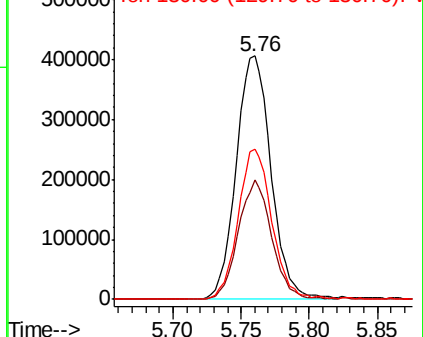
130 60.2 29.9 89.7



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.461 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL033312.D

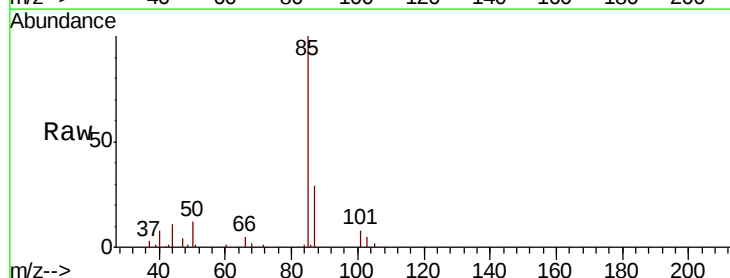
Acq: 14 Mar 2019 12:15

Tgt Ion: 85 Resp: 61464

Ion Ratio Lower Upper

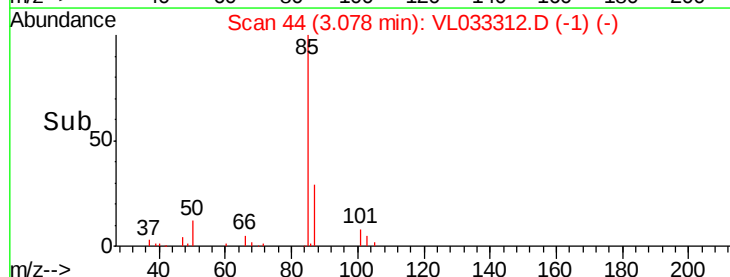
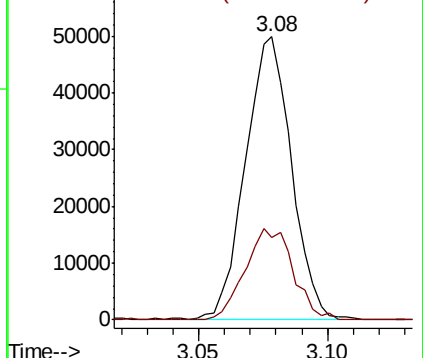
85 100

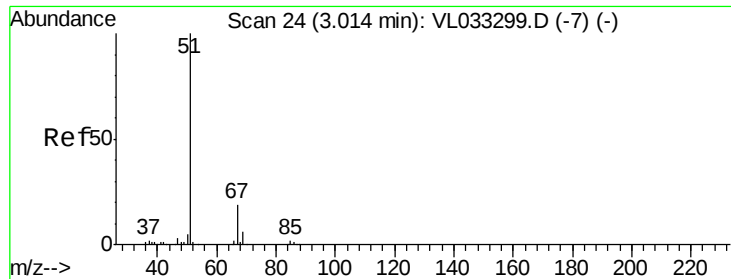
87 29.4 25.8 38.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.415 ppbv

RT: 3.02 min Scan# 25

Delta R.T. 0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

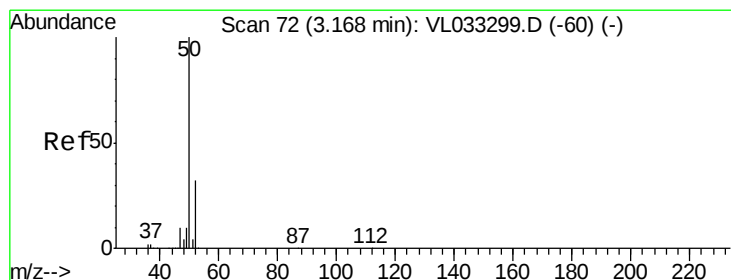
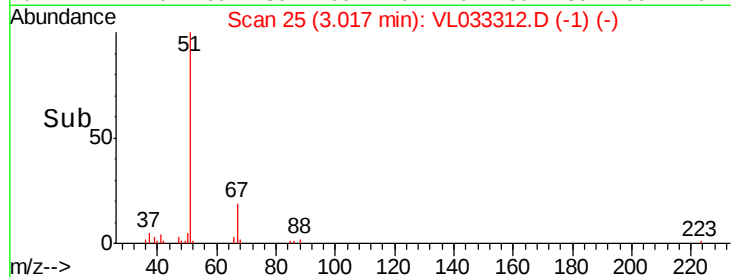
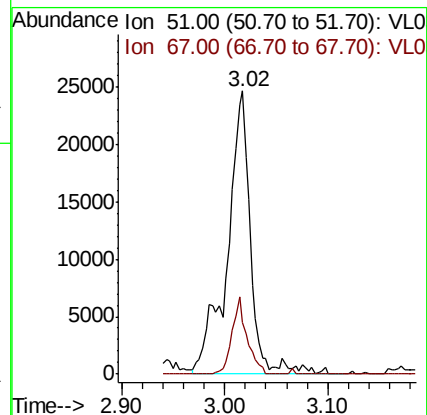
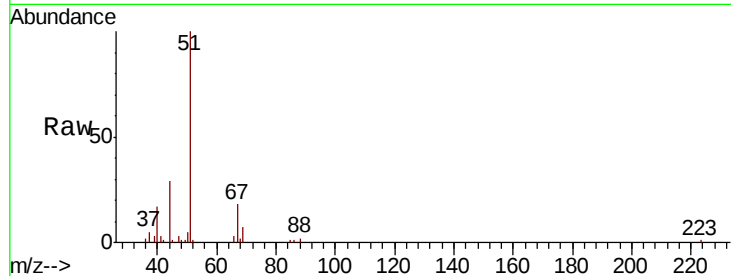
DP-VPB201-AIR-UW-20190305

Tgt Ion: 51 Resp: 38994

Ion Ratio Lower Upper

51 100

67 17.4 14.9 22.3



#4

Chloromethane

Concen: 0.503 ppbv

RT: 3.17 min Scan# 73

Delta R.T. 0.00 min

Lab File: VL033312.D

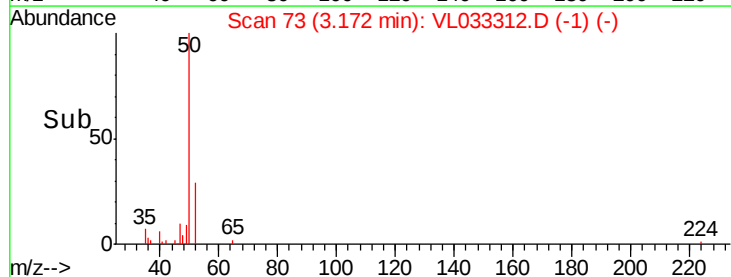
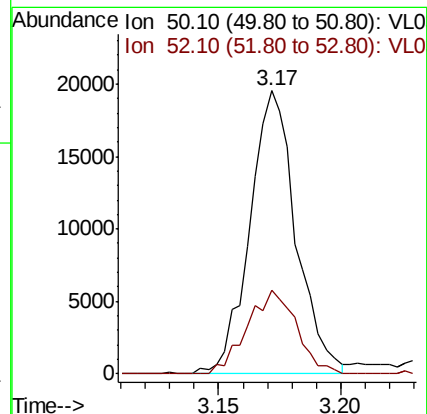
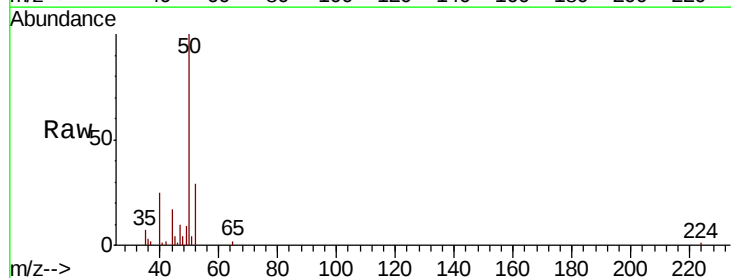
Acq: 14 Mar 2019 12:15

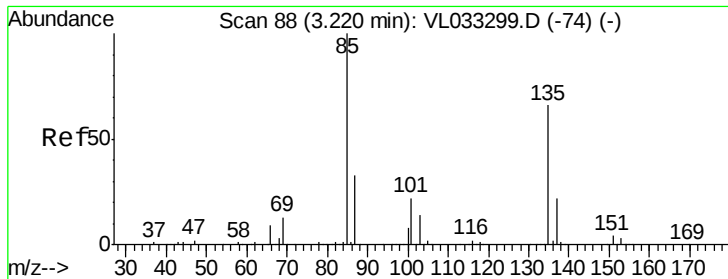
Tgt Ion: 50 Resp: 25602

Ion Ratio Lower Upper

50 100

52 29.5 25.7 38.5





#8

Dichlorotetrafluoroethane

Concen: 0.023 ppbv

RT: 3.22 min Scan# 89

Delta R.T. 0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

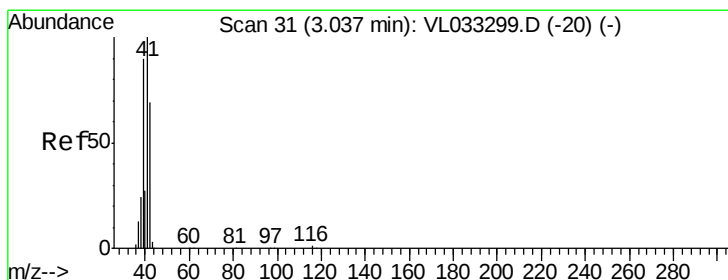
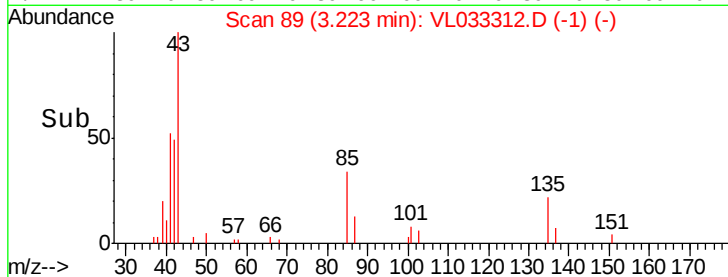
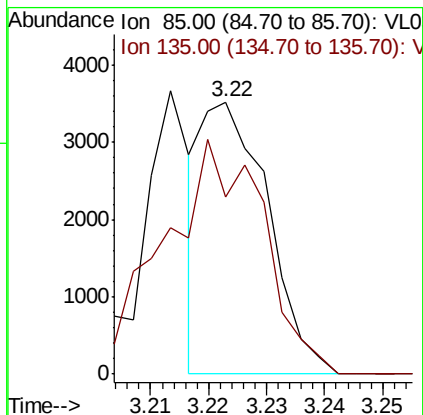
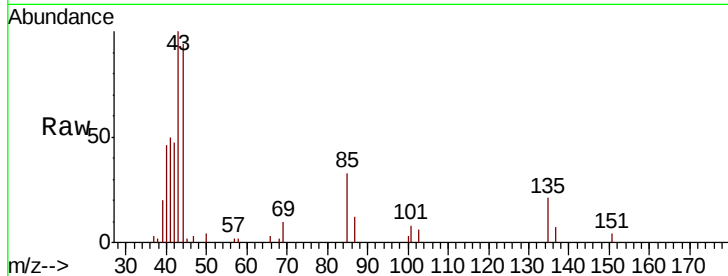
DP-VPB201-AIR-UW-20190305

Tgt Ion: 85 Resp: 2776

Ion Ratio Lower Upper

85 100

135 129.6 52.9 79.3#



#9

Propene

Concen: 0.564 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.01 min

Lab File: VL033312.D

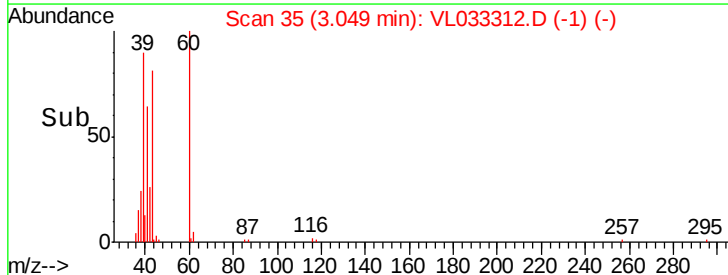
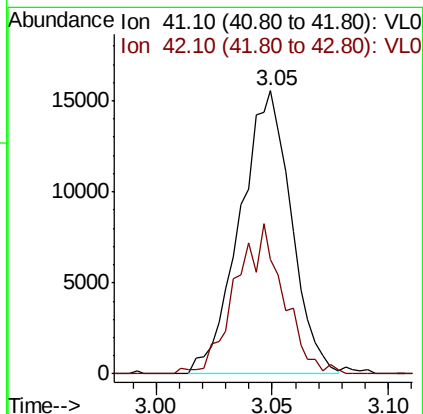
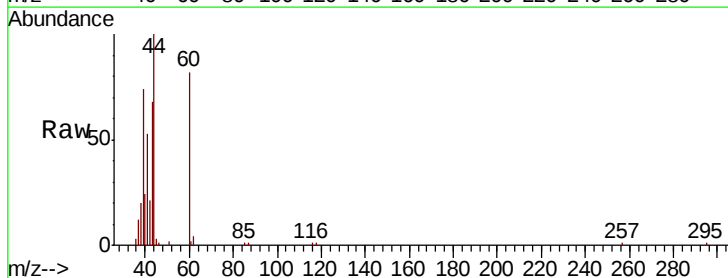
Acq: 14 Mar 2019 12:15

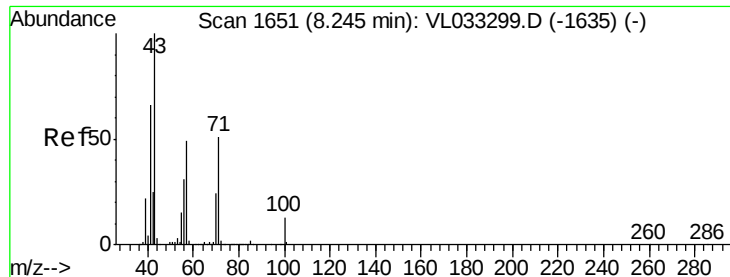
Tgt Ion: 41 Resp: 23937

Ion Ratio Lower Upper

41 100

42 49.6 54.4 81.6#

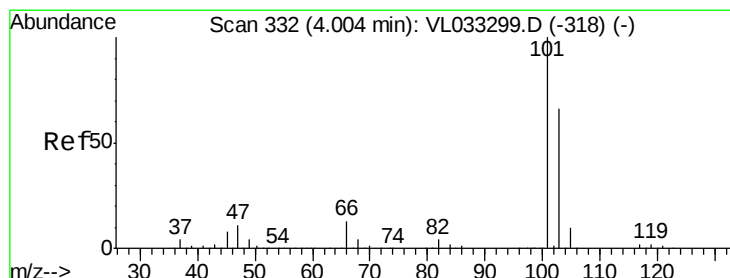
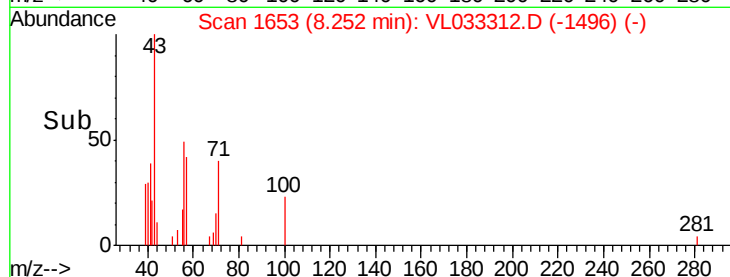
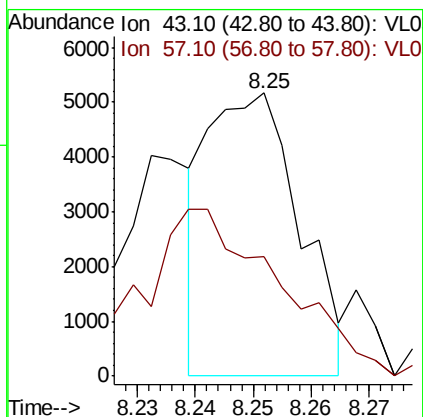
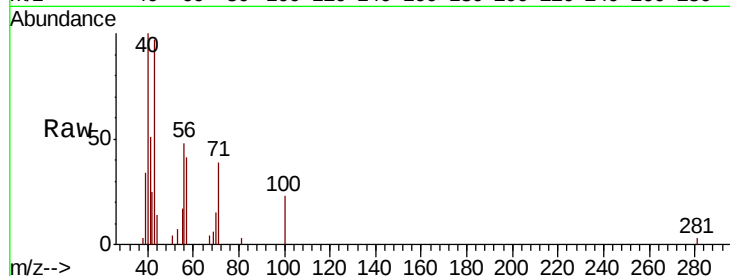




#10
 Heptane
 Concen: 0.055 ppbv
 RT: 8.25 min Scan# 1653
 Delta R.T. 0.01 min
 Lab File: VL033312.D
 Acq: 14 Mar 2019 12:15

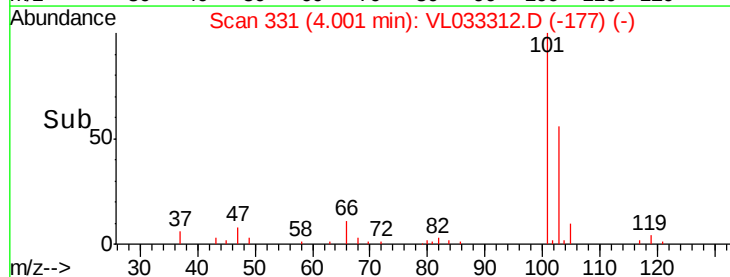
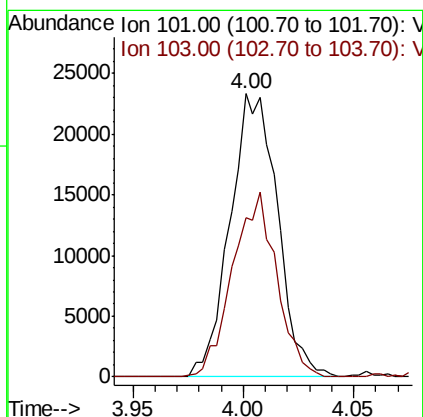
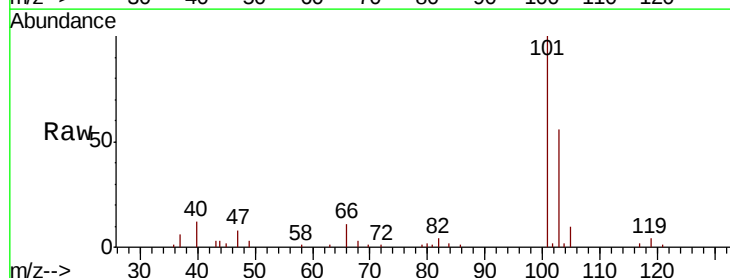
Instrument :
 MSVOA_L
 ClientSampleId :
 DP-VPB201-AIR-UW-20190305

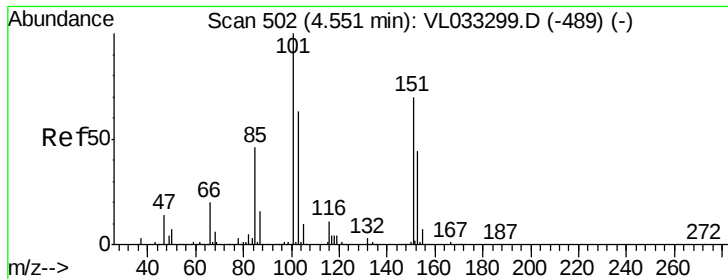
Tgt Ion: 43 Resp: 5678
 Ion Ratio Lower Upper
 43 100
 57 90.9 39.6 59.4#



#11
 Trichlorofluoromethane
 Concen: 0.260 ppbv
 RT: 4.00 min Scan# 331
 Delta R.T. -0.00 min
 Lab File: VL033312.D
 Acq: 14 Mar 2019 12:15

Tgt Ion: 101 Resp: 34910
 Ion Ratio Lower Upper
 101 100
 103 56.3 52.5 78.7





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.063 ppbv

RT: 4.55 min Scan# 502

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

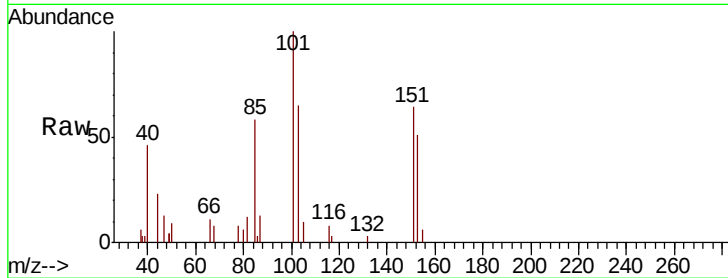
DP-VPB201-AIR-UW-20190305

Tgt Ion:101 Resp: 5704

Ion Ratio Lower Upper

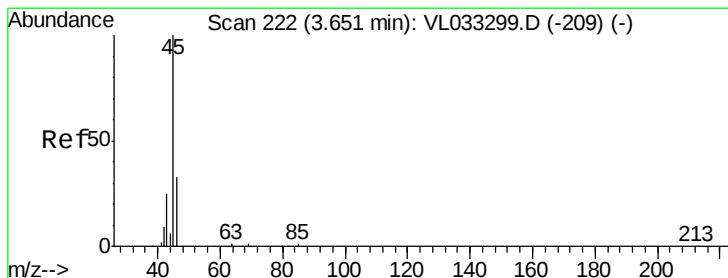
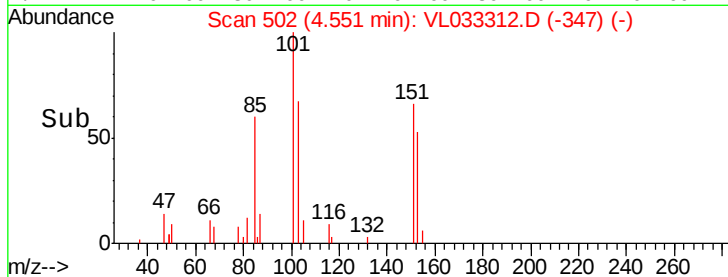
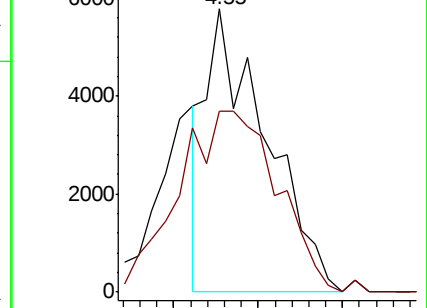
101 100

151 106.7 57.2 85.8#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 2.394 ppbv

RT: 3.66 min Scan# 224

Delta R.T. 0.01 min

Lab File: VL033312.D

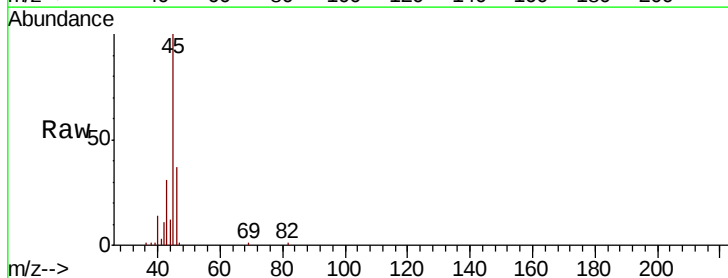
Acq: 14 Mar 2019 12:15

Tgt Ion: 45 Resp: 31098

Ion Ratio Lower Upper

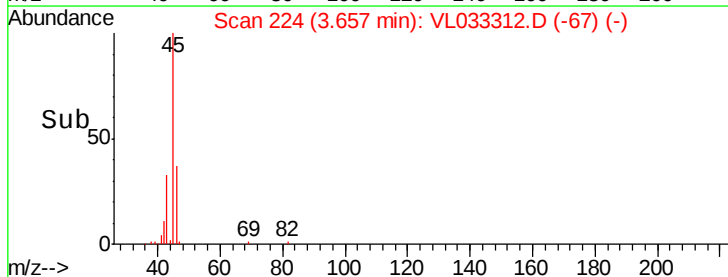
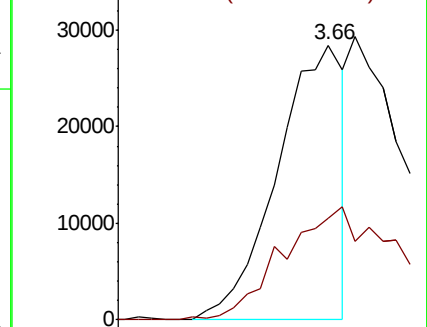
45 100

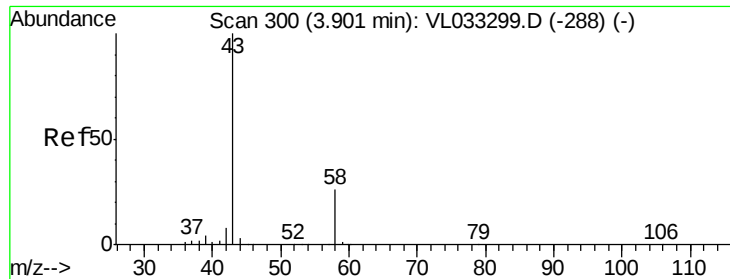
46 0.0 14.9 59.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 2.734 ppbv

RT: 3.90 min Scan# 300

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

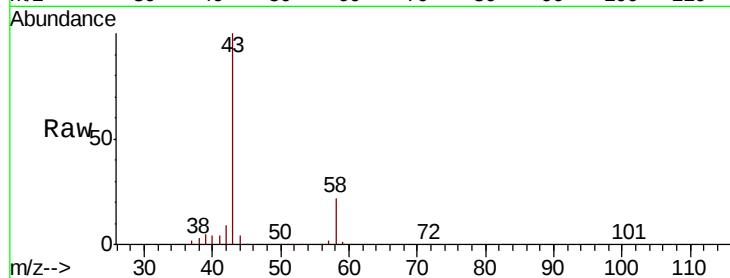
DP-VPB201-AIR-UW-20190305

Tgt Ion: 43 Resp: 271033

Ion Ratio Lower Upper

43 100

58 20.2 20.6 31.0#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

150000

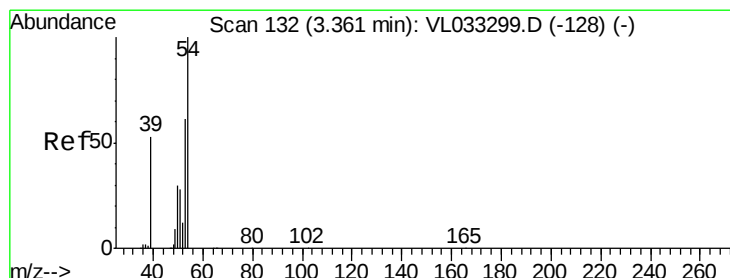
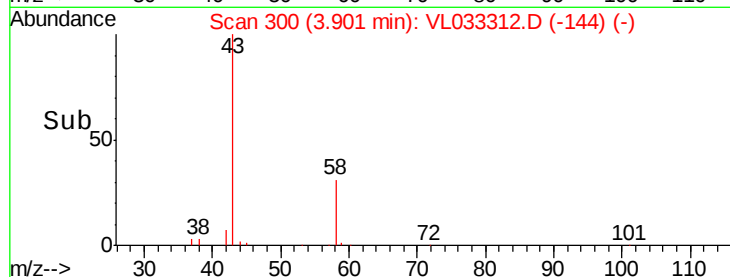
100000

50000

0

3.85 3.90 3.95 4.00

Time-->



#16

1,3-Butadiene

Concen: 0.035 ppbv

RT: 3.36 min Scan# 131

Delta R.T. -0.00 min

Lab File: VL033312.D

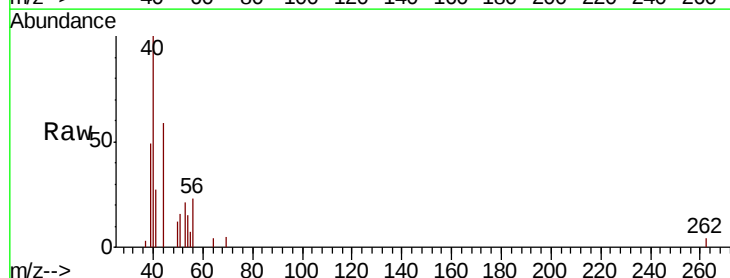
Acq: 14 Mar 2019 12:15

Tgt Ion: 39 Resp: 1417

Ion Ratio Lower Upper

39 100

54 143.2 68.4 102.6#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

5000

4000

3000

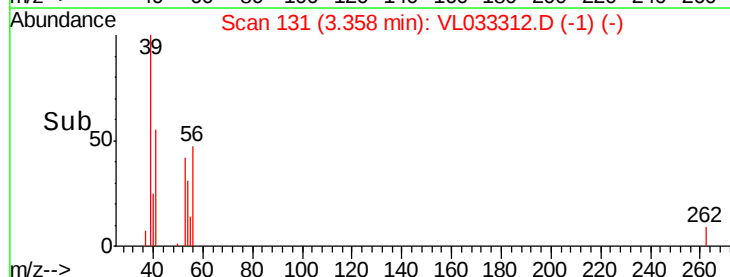
2000

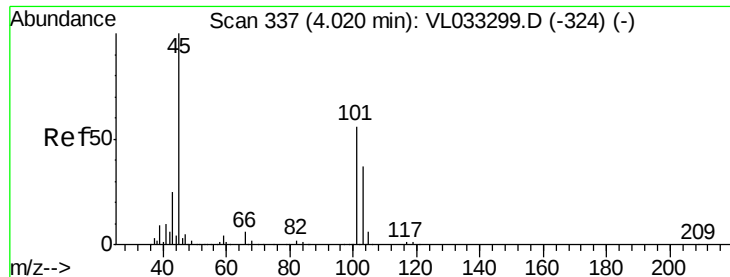
1000

0

3.35 3.36 3.37

Time-->





#19

Isopropyl Alcohol

Concen: 0.209 ppbv

RT: 4.05 min Scan# 347

Delta R.T. 0.03 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

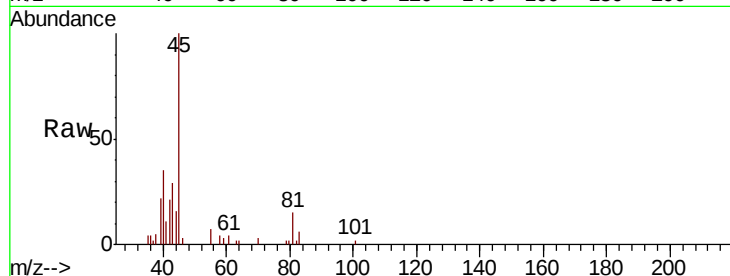
DP-VPB201-AIR-UW-20190305

Tgt Ion: 45 Resp: 12701

Ion Ratio Lower Upper

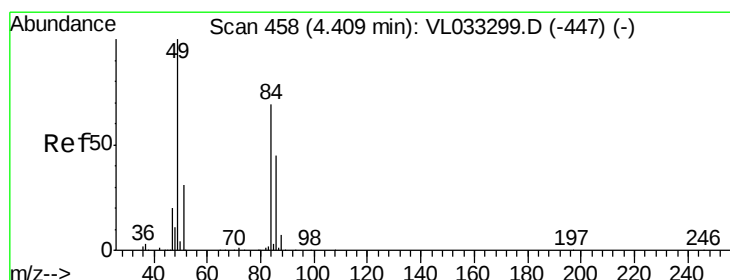
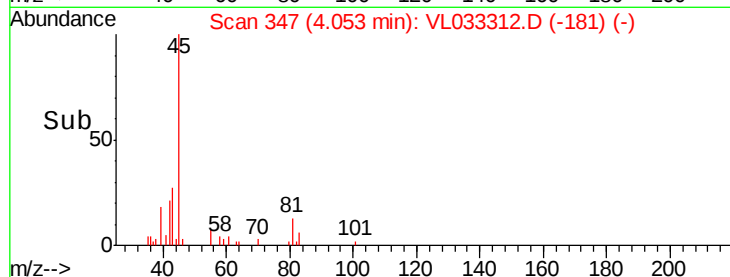
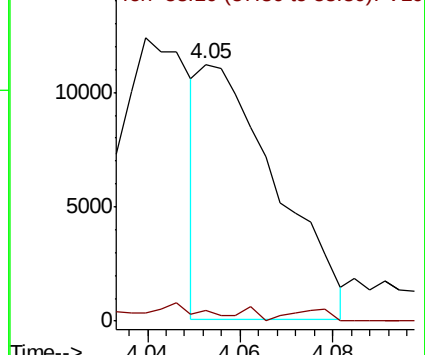
45 100

58 0.0 1.4 2.0#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 1.941 ppbv

RT: 4.41 min Scan# 457

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Tgt Ion: 84 Resp: 77876

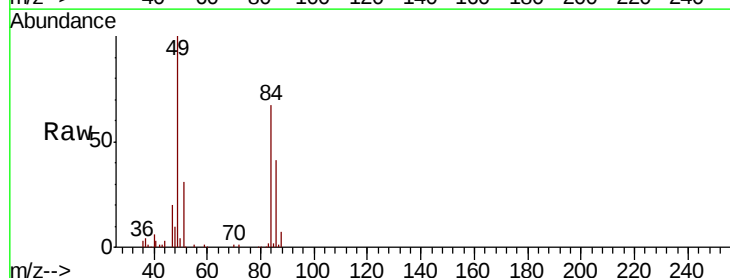
Ion Ratio Lower Upper

84 100

49 148.6 115.4 173.2

51 45.6 35.7 53.5

86 61.3 52.6 78.8

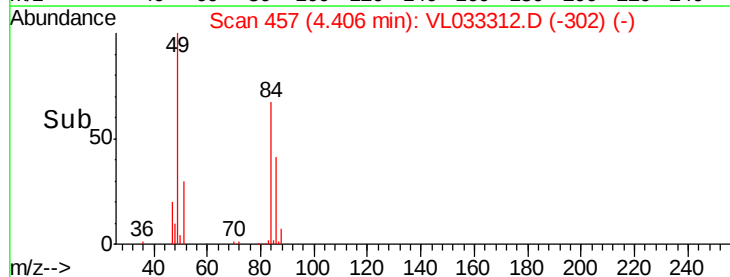
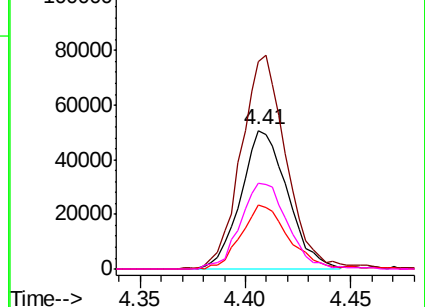


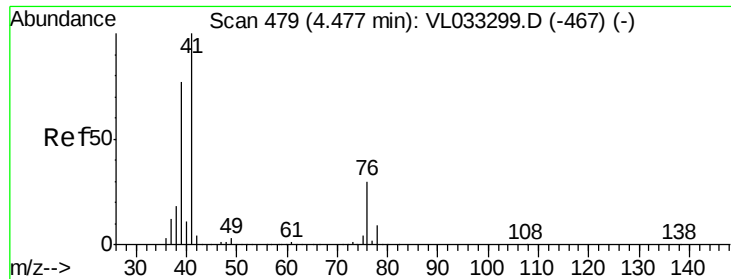
Abundance Ion 84.00 (83.70 to 84.70): VL0

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





#21

Allyl Chloride

Concen: 0.021 ppbv

RT: 4.48 min Scan# 479

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

DP-VPB201-AIR-UW-20190305

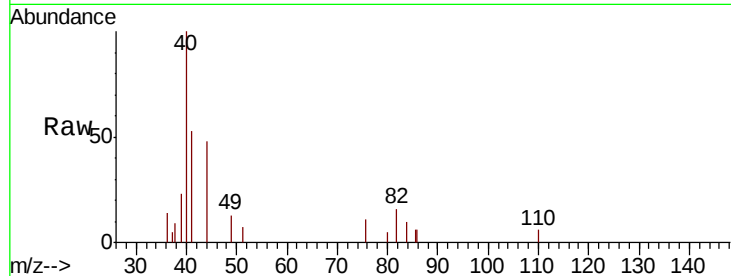
Tgt Ion: 41 Resp: 1269

Ion Ratio Lower Upper

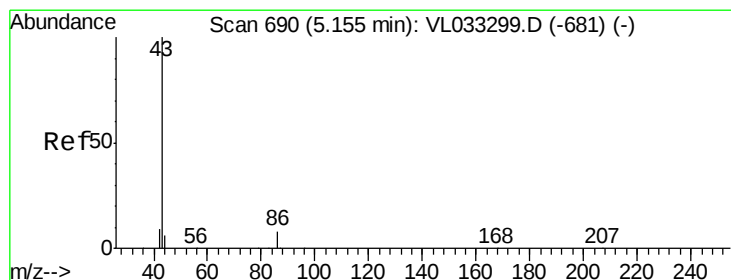
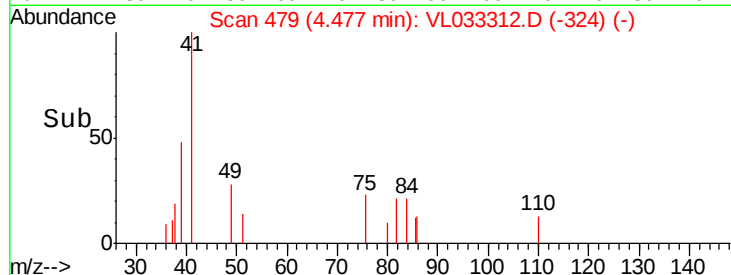
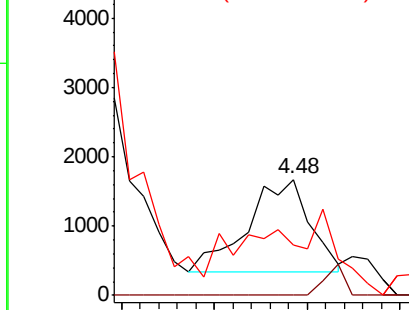
41 100

76 10.1 24.3 36.5#

39 134.9 64.4 96.6#



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: 0.098 ppbv

RT: 5.14 min Scan# 686

Delta R.T. -0.01 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Tgt Ion: 43 Resp: 14034

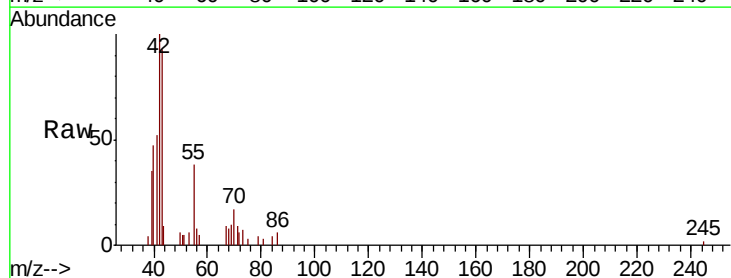
Ion Ratio Lower Upper

43 100

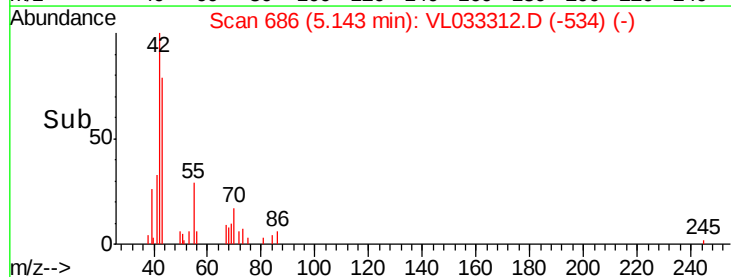
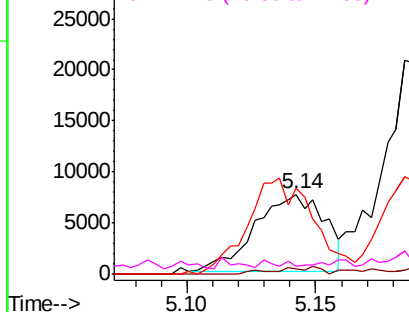
86 5.9 5.8 8.8

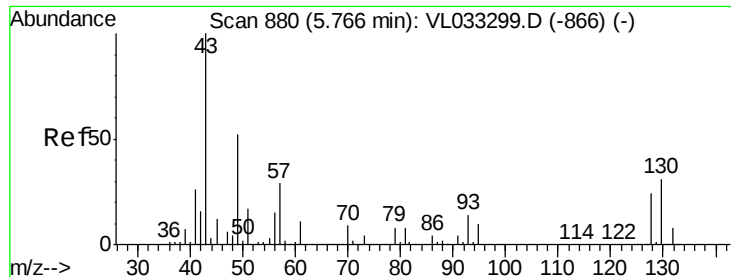
42 98.5 7.8 11.8#

44 0.0 4.1 6.1#



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

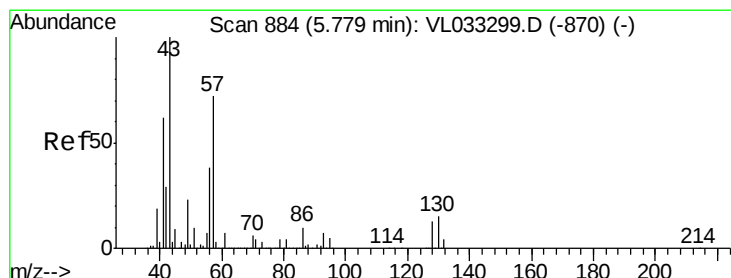
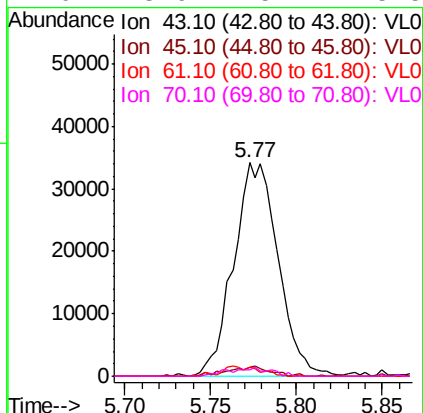
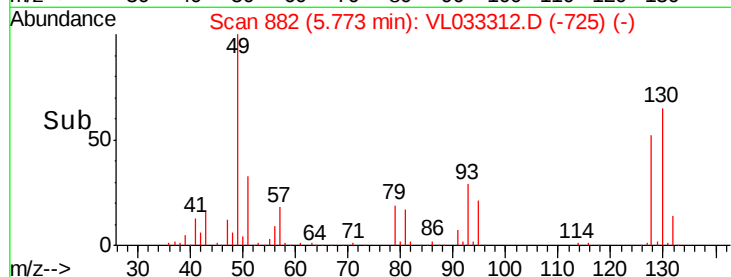
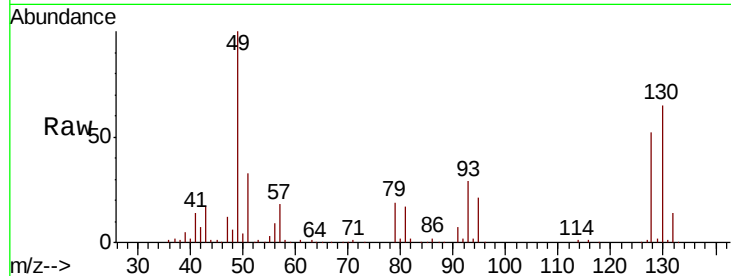




#25
Ethyl Acetate
Concen: 0.340 ppbv
RT: 5.77 min Scan# 882
Delta R.T. 0.01 min
Lab File: VL033312.D
Acq: 14 Mar 2019 12:15

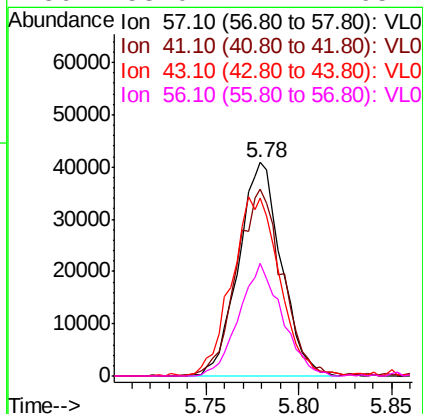
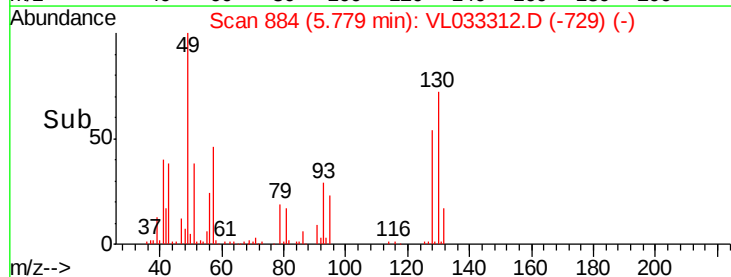
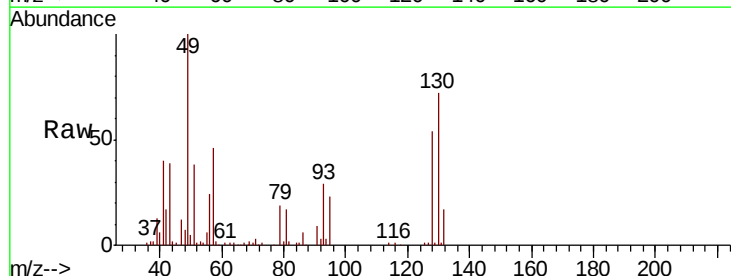
Instrument :
MSVOA_L
ClientSampleId :
DP-VPB201-AIR-UW-20190305

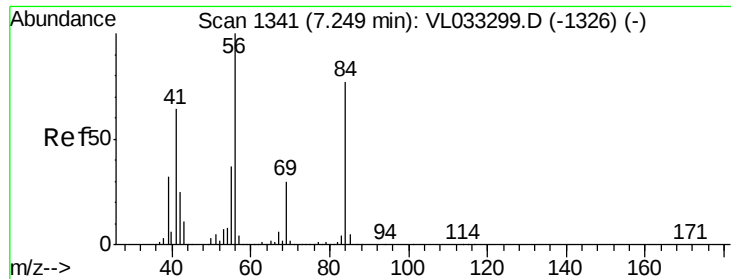
Tgt Ion:	43	Resp:	61366
Ion	Ratio	Lower	Upper
43	100		
45	4.4	8.0	12.0#
61	4.2	7.5	11.3#
70	3.9	5.7	8.5#



#26
Hexane
Concen: 0.774 ppbv
RT: 5.78 min Scan# 884
Delta R.T. -0.00 min
Lab File: VL033312.D
Acq: 14 Mar 2019 12:15

Tgt Ion:	57	Resp:	65268
Ion	Ratio	Lower	Upper
57	100		
41	96.3	71.6	107.4
43	94.7	179.2	268.8#
56	53.0	42.2	63.2

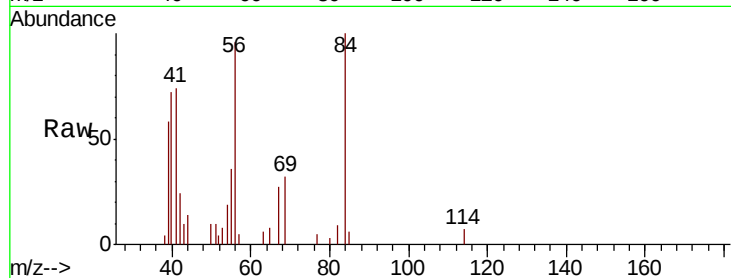




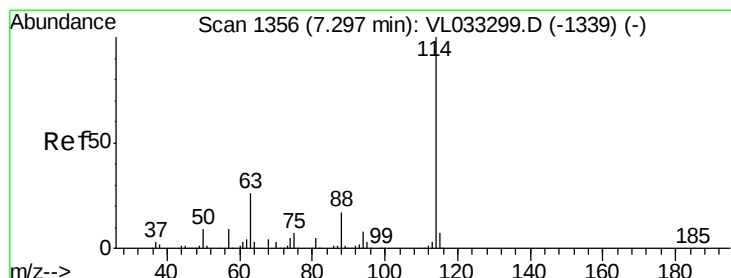
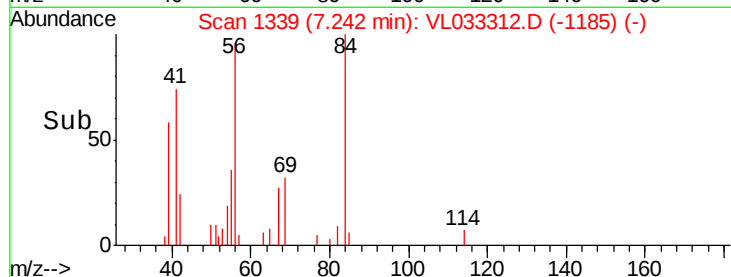
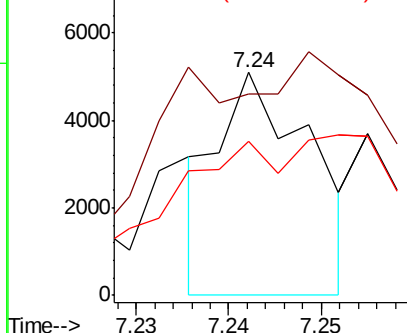
#30
Cyclohexane
Concen: 0.054 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033312.D
Acq: 14 Mar 2019 12:15

Instrument :
MSVOA_L
ClientSampleId :
DP-VPB201-AIR-UW-20190305

Tgt Ion: 84 Resp: 3510
Ion Ratio Lower Upper
84 100
56 0.0 109.8 164.8#
41 0.0 68.1 102.1#

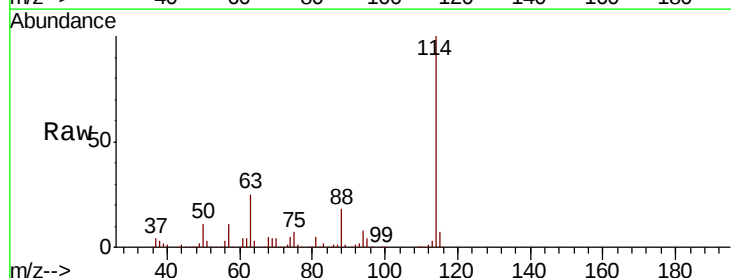


Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

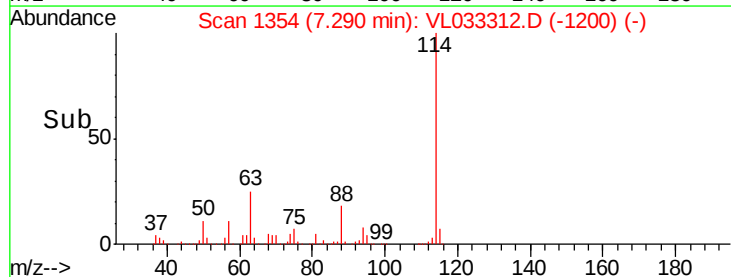
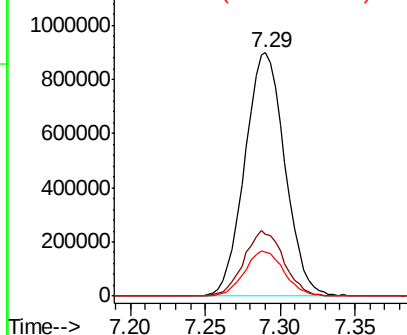


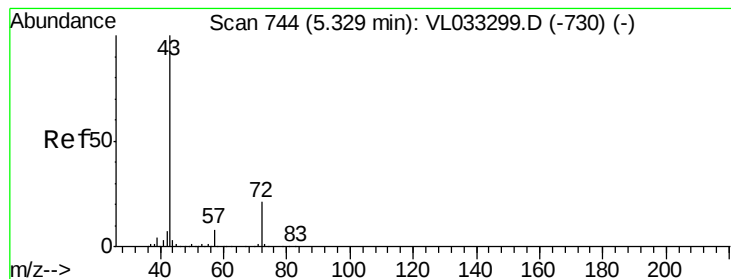
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1354
Delta R.T. -0.01 min
Lab File: VL033312.D
Acq: 14 Mar 2019 12:15

Tgt Ion: 114 Resp: 1676507
Ion Ratio Lower Upper
114 100
63 26.8 21.3 31.9
88 18.3 14.5 21.7



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





#34

2-Butanone

Concen: 0.250 ppbv

RT: 5.34 min Scan# 746

Delta R.T. 0.01 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

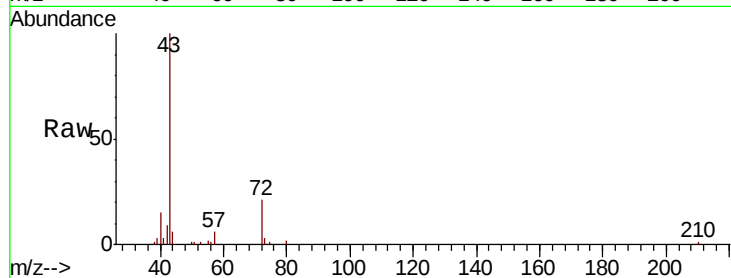
DP-VPB201-AIR-UW-20190305

Tgt Ion: 43 Resp: 28921

Ion Ratio Lower Upper

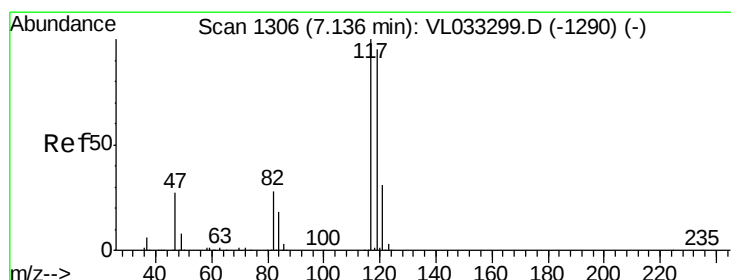
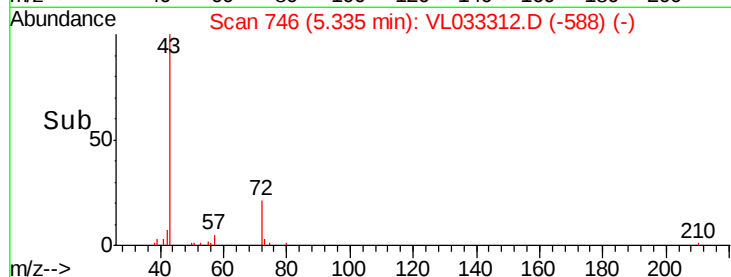
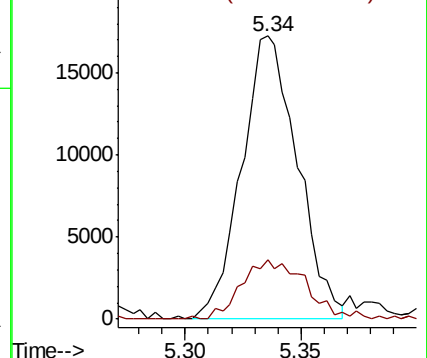
43 100

72 24.4 17.2 25.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#35

Carbon Tetrachloride

Concen: 0.071 ppbv

RT: 7.13 min Scan# 1305

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

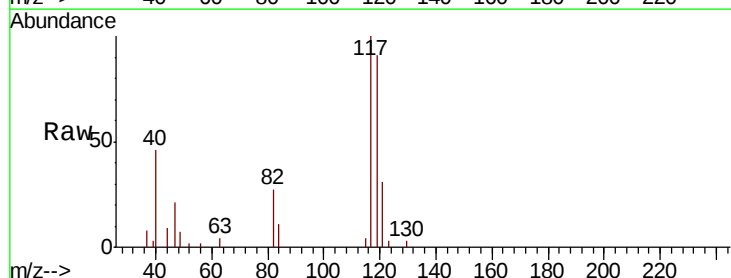
Tgt Ion: 117 Resp: 9205

Ion Ratio Lower Upper

117 100

119 91.0 75.9 113.9

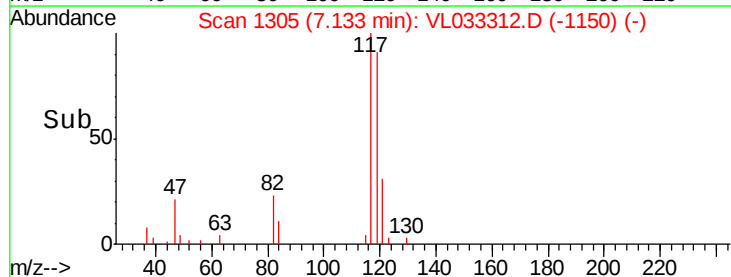
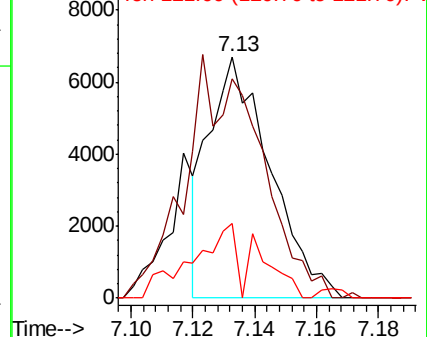
121 27.5 25.2 37.8

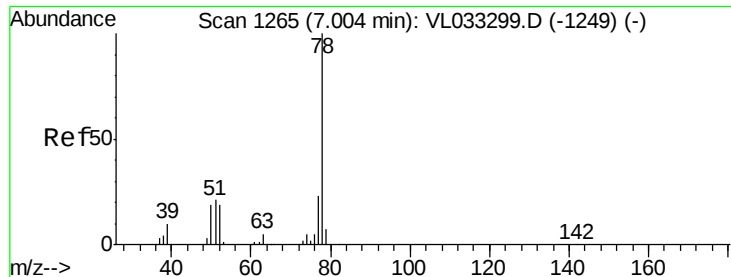


Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V

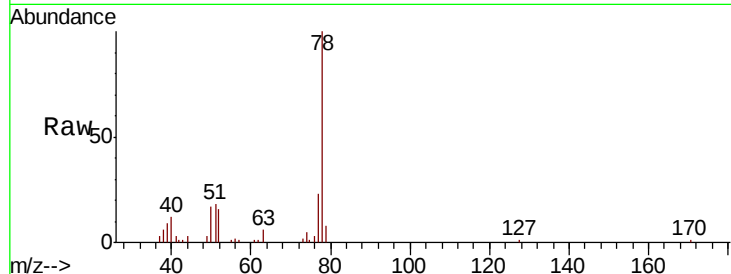




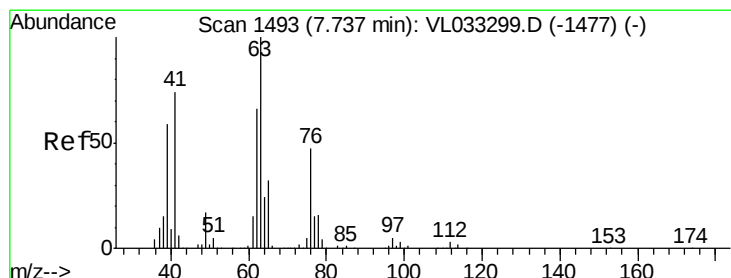
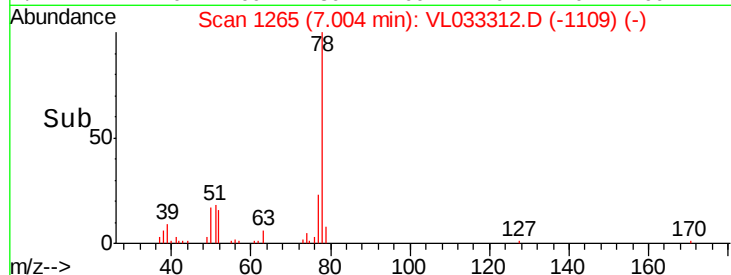
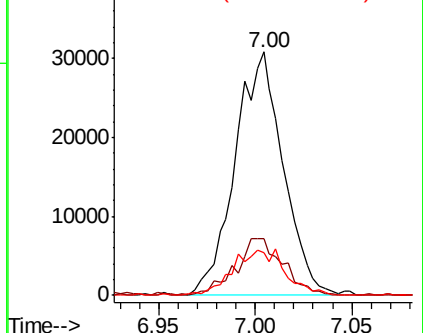
#36
Benzene
Concen: 0.324 ppbv
RT: 7.00 min Scan# 1265
Delta R.T. -0.00 min
Lab File: VL033312.D
Acq: 14 Mar 2019 12:15

Instrument :
MSVOA_L
ClientSampleId :
DP-VPB201-AIR-UW-20190305

Tgt Ion: 78 Resp: 53314
Ion Ratio Lower Upper
78 100
77 23.2 18.6 28.0
50 17.3 15.2 22.8

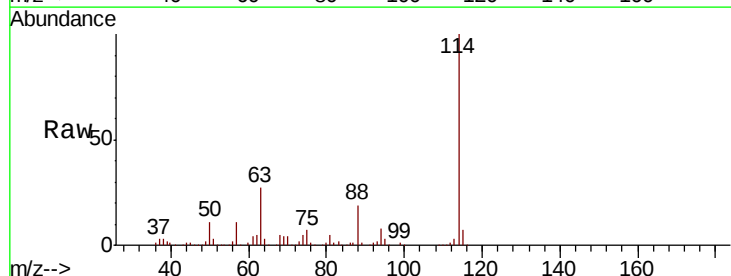


Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0

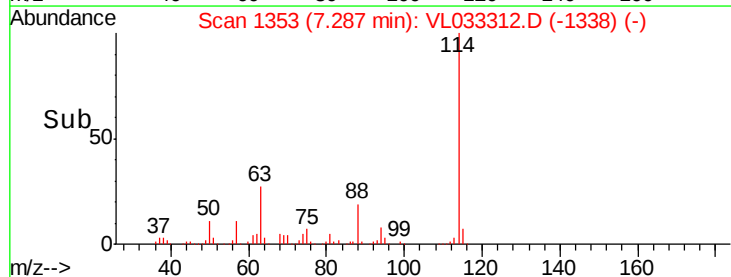
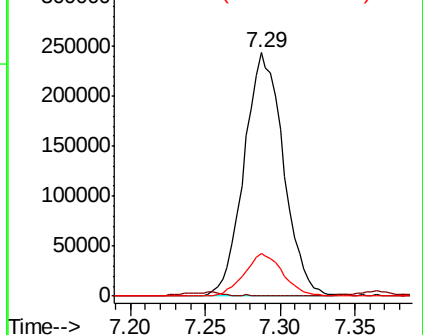


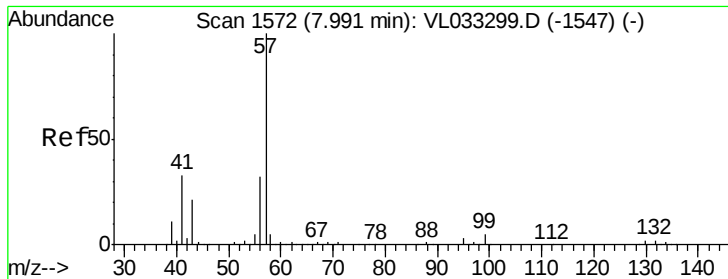
#39
1,2-Dichloropropane
Concen: 7.050 ppbv
RT: 7.29 min Scan# 1353
Delta R.T. -0.45 min
Lab File: VL033312.D
Acq: 14 Mar 2019 12:15

Tgt Ion: 63 Resp: 445757
Ion Ratio Lower Upper
63 100
41 0.0 59.0 88.4#
62 17.7 53.0 79.4#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 0.054 ppbv

RT: 7.99 min Scan# 1571

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

DP-VPB201-AIR-UW-20190305

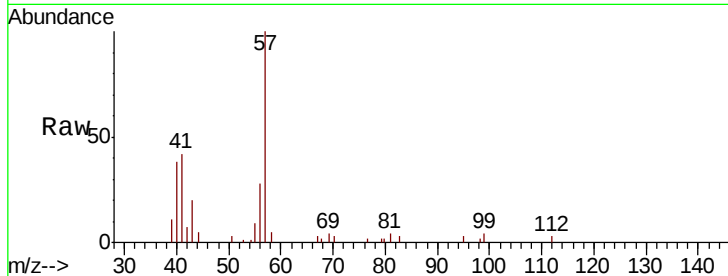
Tgt Ion: 57 Resp: 15229

Ion Ratio Lower Upper

57 100

41 66.7 25.9 38.9#

56 57.6 24.6 36.8#

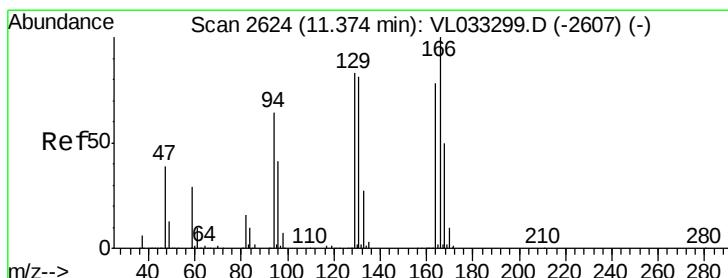
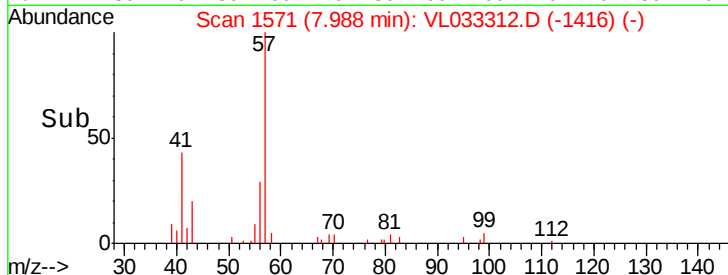
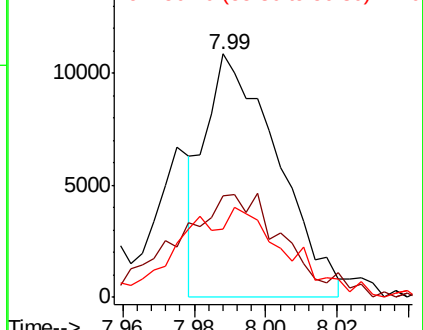


Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#52

Tetrachloroethene

Concen: 0.032 ppbv

RT: 11.37 min Scan# 2622

Delta R.T. -0.01 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Tgt Ion: 164 Resp: 2145

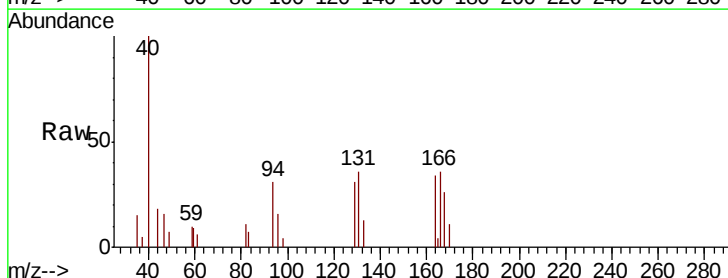
Ion Ratio Lower Upper

164 100

166 93.4 103.2 154.8#

129 81.6 85.8 128.8#

131 38.4 83.6 125.4#



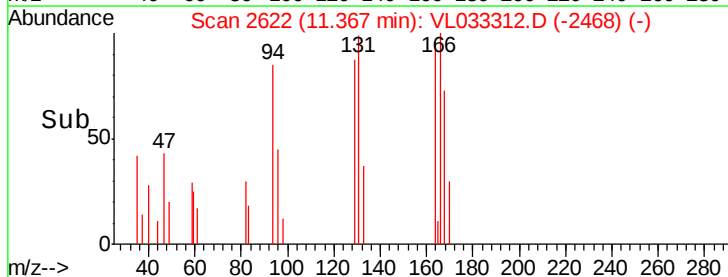
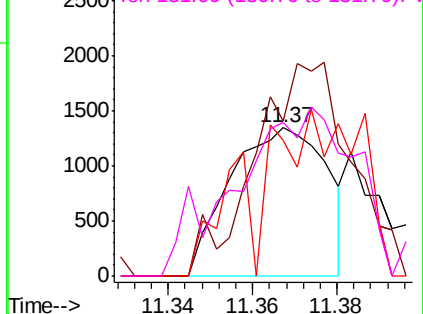
Abundance

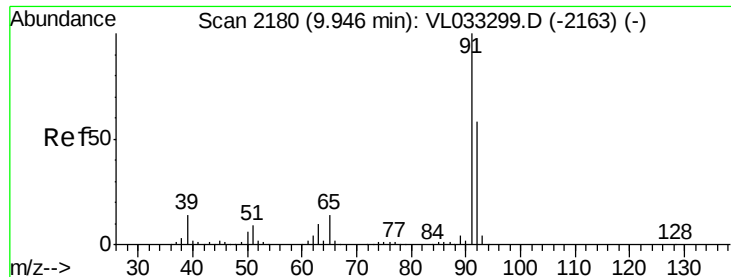
Ion 163.90 (163.60 to 164.60): V

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: 0.895 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. -0.01 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

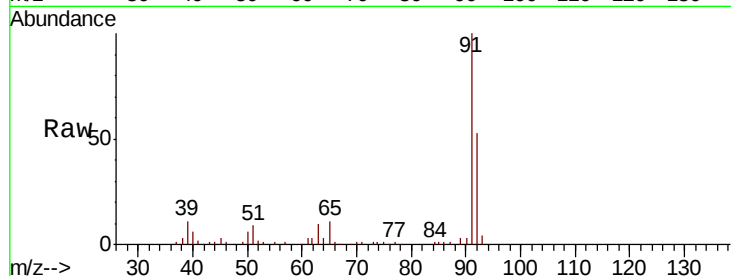
DP-VPB201-AIR-UW-20190305

Tgt Ion: 91 Resp: 168715

Ion Ratio Lower Upper

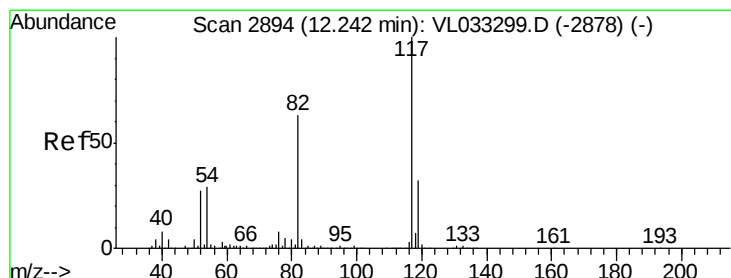
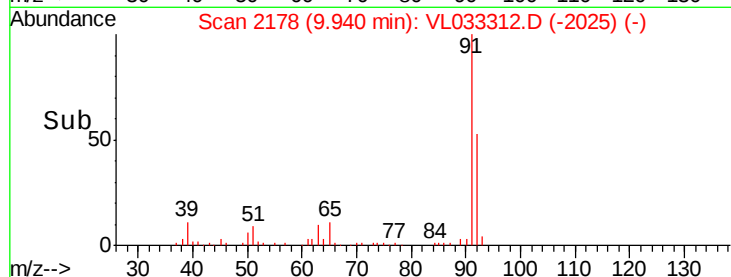
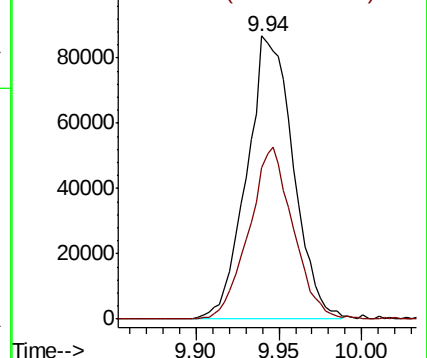
91 100

92 57.9 47.4 71.2



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: 12.24 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

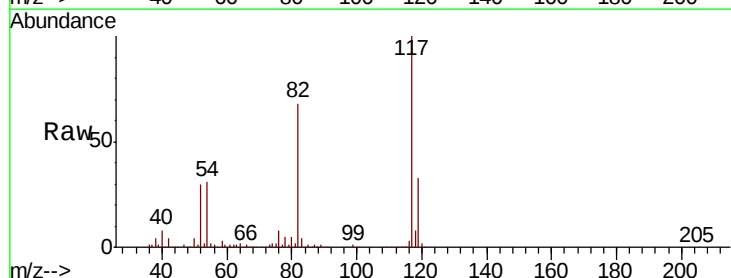
Tgt Ion: 117 Resp: 1616234

Ion Ratio Lower Upper

117 100

82 67.6 51.3 76.9

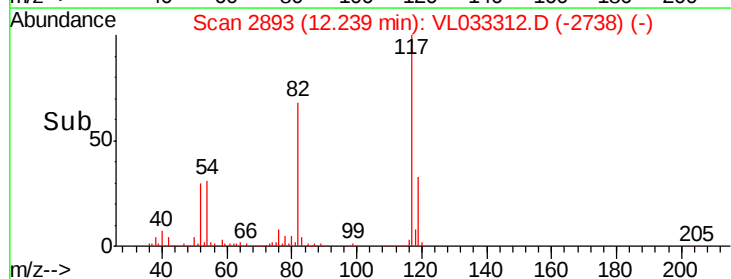
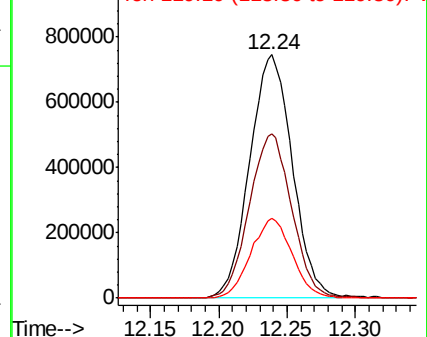
119 32.0 27.0 40.4

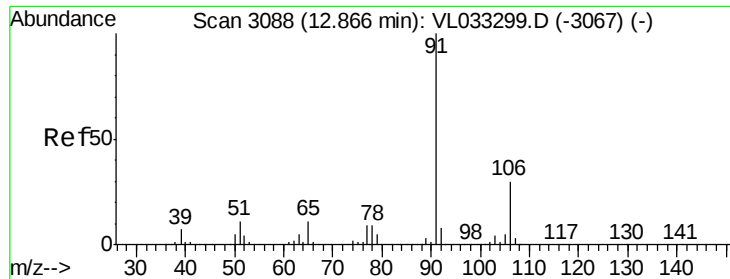


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.032 ppbv

RT: 12.87 min Scan# 3088

Delta R.T. -0.00 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

Instrument :

MSVOA_L

ClientSampleId :

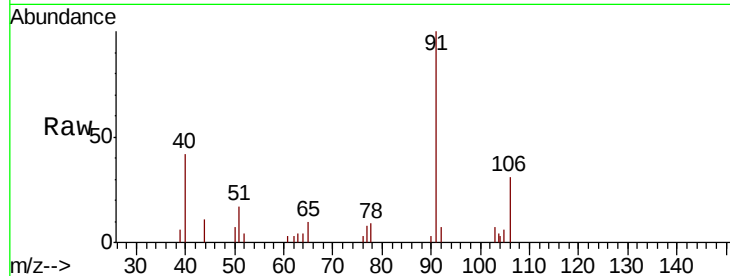
DP-VPB201-AIR-UW-20190305

Tgt Ion: 91 Resp: 7535

Ion Ratio Lower Upper

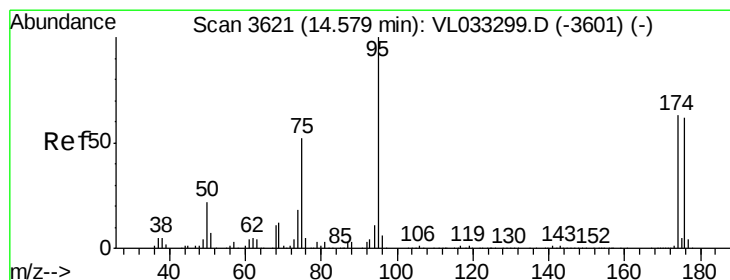
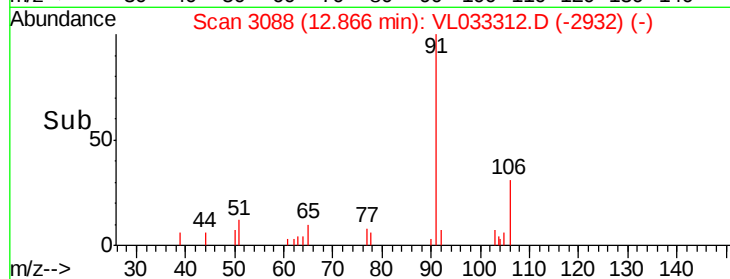
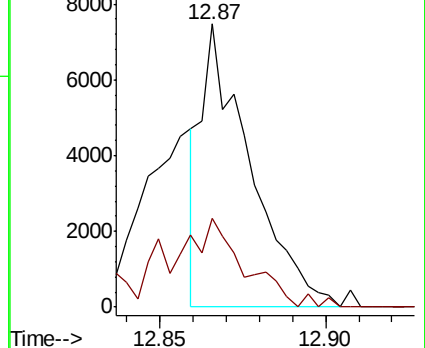
91 100

106 31.3 23.8 35.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.295 ppbv

RT: 14.57 min Scan# 3619

Delta R.T. -0.01 min

Lab File: VL033312.D

Acq: 14 Mar 2019 12:15

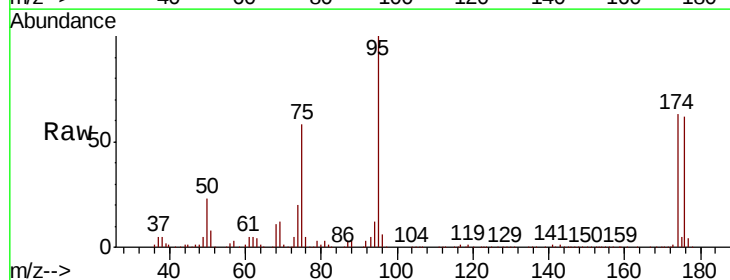
Tgt Ion: 95 Resp: 1270748

Ion Ratio Lower Upper

95 100

174 64.9 51.9 77.9

175 4.7 3.9 5.9



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

