

Data File : VL034180.D
Acq On : 17 Sep 2019 11:44
Operator : SY/AP
Sample : K4098-01DL 2X
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
E049-1100DL

Quant Time: Sep 19 07:25:55 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL091719AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Sep 18 12:53:31 2019
QLast Update : Wed Sep 18 12:53:31 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.70	49	1150248	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.22	114	1891674	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.16	117	2021482	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.50	95	1967361	11.20	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	112.00%

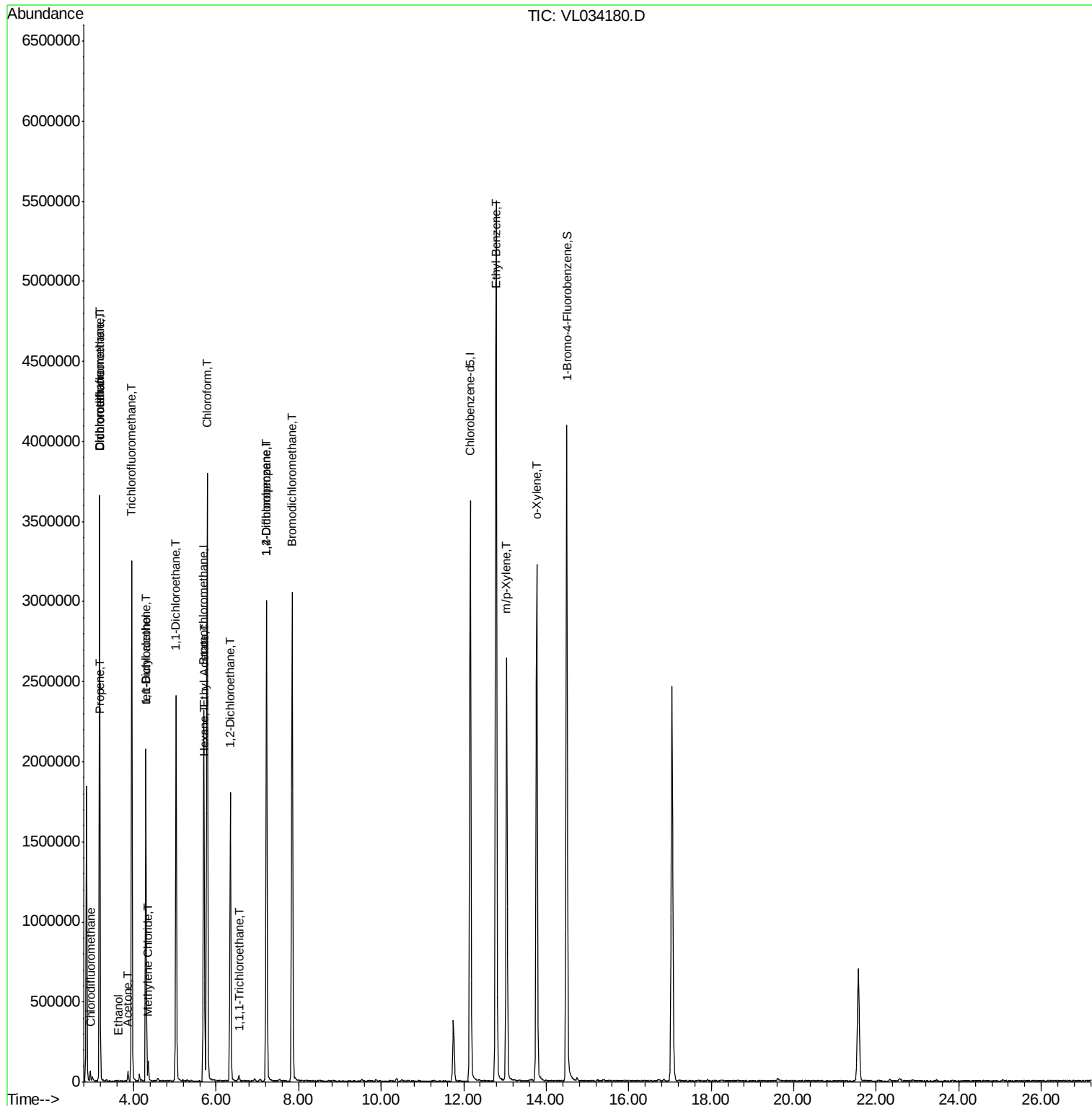
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.18	85	1405475	8.272	ppbv	100
3) Chlorodifluoromethane	2.95	51	38024	0.282	ppbv #	61
4) Chloromethane	3.18	50	206122	2.601	ppbv #	41
8) Dichlorotetrafluoroethane	3.18	85	1405475	9.373	ppbv	99
9) Propene	3.20	41	10724	0.161	ppbv	98
11) Trichlorofluoromethane	3.95	101	2049756	13.254	ppbv	98
13) Ethanol	3.61	45	3321	0.206	ppbv #	29
15) Acetone	3.86	43	57669	0.374	ppbv	98
17) tert-Butyl alcohol	4.29	59	46919	0.480	ppbv #	72
18) 1,1-Dichloroethene	4.29	96	528540	11.973	ppbv	95
20) Methylene Chloride	4.35	84	29566	0.665	ppbv #	91
24) 1,1-Dichloroethane	5.03	63	2013627	13.164	ppbv	99
25) Ethyl Acetate	5.71	43	90523	0.311	ppbv #	77
26) Hexane	5.72	57	118528	0.977	ppbv #	41
29) Chloroform	5.78	83	2555313	14.746	ppbv	94
32) 1,1,1-Trichloroethane	6.55	97	14360	0.086	ppbv #	84
37) 1,2-Dichloroethane	6.34	62	1489300	10.022	ppbv	99
39) 1,2-Dichloropropane	7.22	63	636913	6.785	ppbv #	20
42) Bromodichloromethane	7.84	83	2019937	11.326	ppbv	97
58) Ethyl Benzene	12.79	91	4856603	14.890	ppbv	96
59) m/p-Xylene	13.04	91	1911957	7.077	ppbv	99
60) o-Xylene	13.77	91	2540124	9.403	ppbv	99

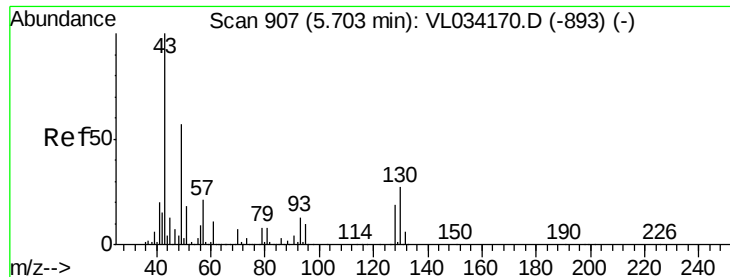
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.70 min Scan# 905

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

E049-1100DL

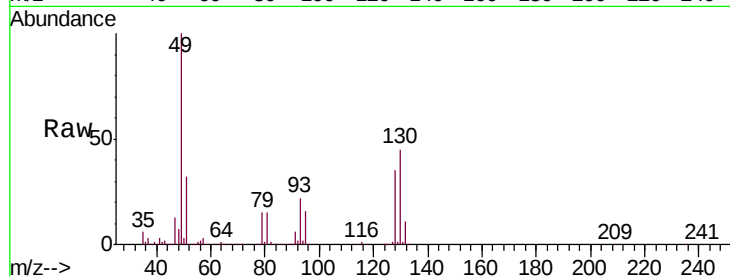
Tgt Ion: 49 Resp: 1150248

Ion Ratio Lower Upper

49 100

128 34.6 17.6 52.9

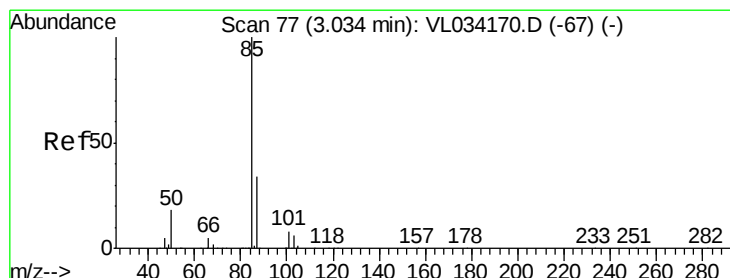
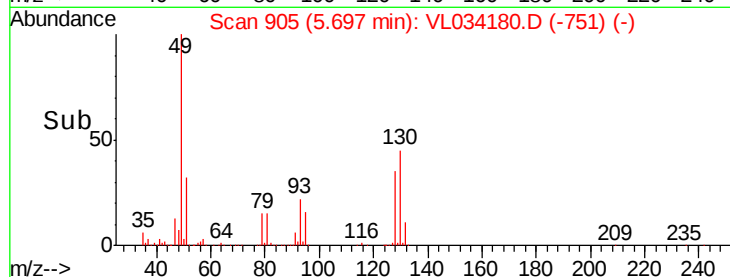
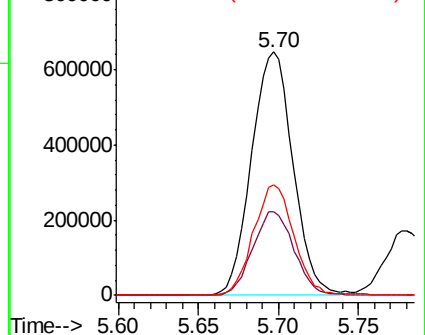
130 44.7 22.3 66.9



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: 8.272 ppbv

RT: 3.18 min Scan# 121

Delta R.T. 0.14 min

Lab File: VL034180.D

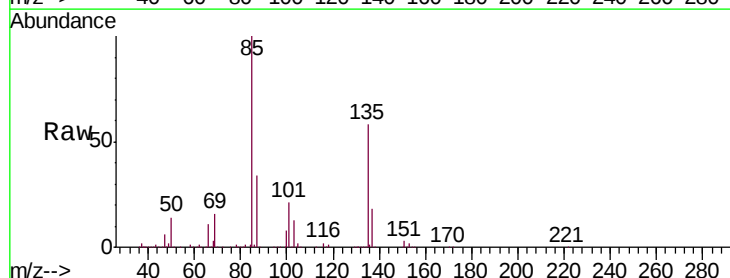
Acq: 17 Sep 2019 11:44

Tgt Ion: 85 Resp: 1405475

Ion Ratio Lower Upper

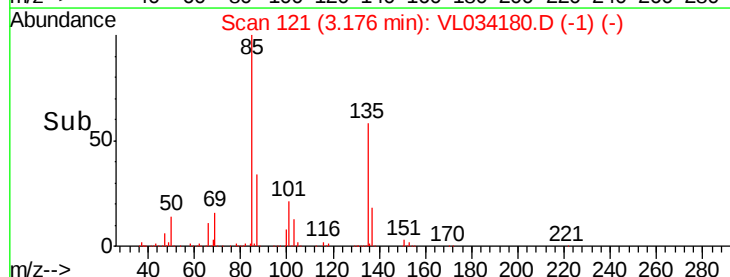
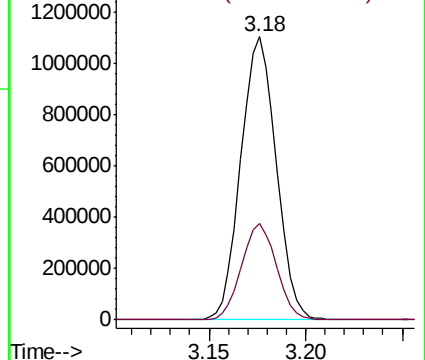
85 100

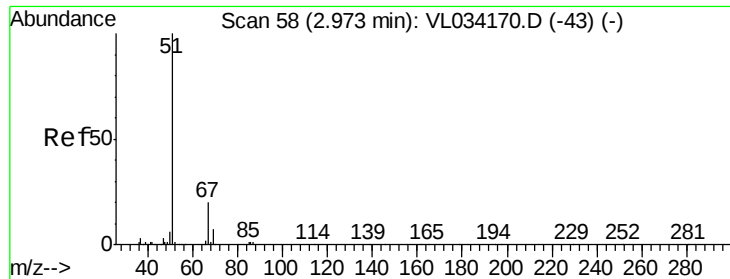
87 34.0 27.2 40.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.282 ppbv

RT: 2.95 min Scan# 50

Delta R.T. -0.03 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

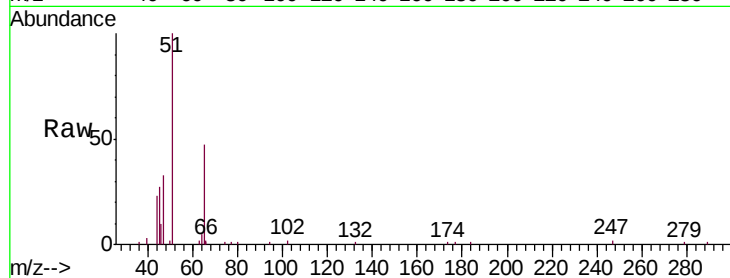
E049-1100DL

Tgt Ion: 51 Resp: 38024

Ion Ratio Lower Upper

51 100

67 1.3 14.8 22.2#



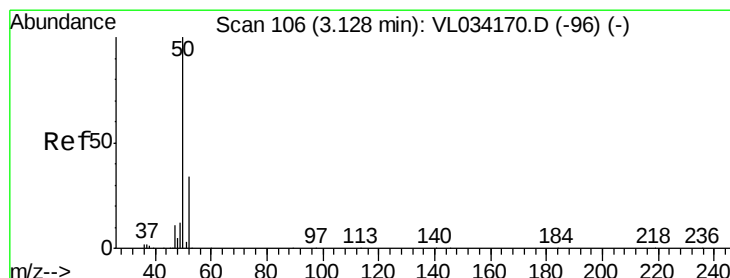
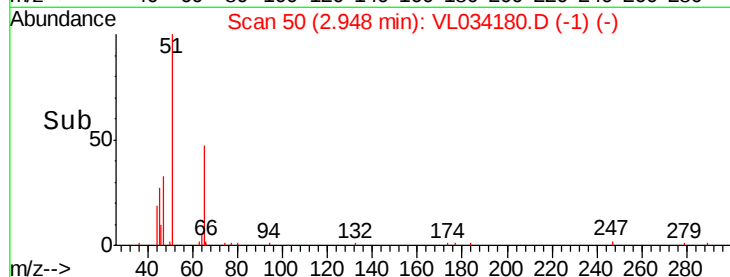
Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

2.95

Time-->

Chromatogram showing abundance versus time (2.85 to 3.05 min). A major peak is labeled at 2.95 min.



#4

Chloromethane

Concen: 2.601 ppbv

RT: 3.18 min Scan# 121

Delta R.T. 0.05 min

Lab File: VL034180.D

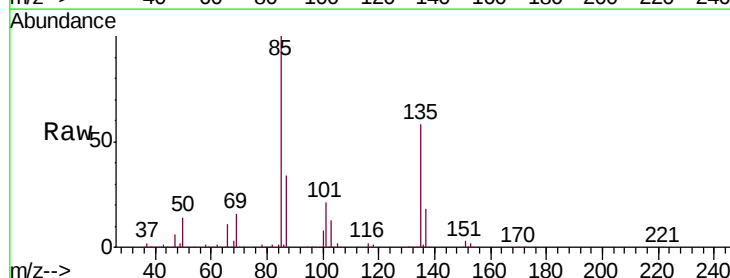
Acq: 17 Sep 2019 11:44

Tgt Ion: 50 Resp: 206122

Ion Ratio Lower Upper

50 100

52 0.0 27.1 40.7#



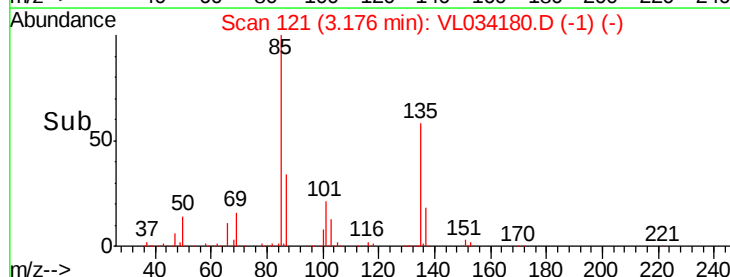
Abundance Ion 50.10 (49.80 to 50.80): VL0

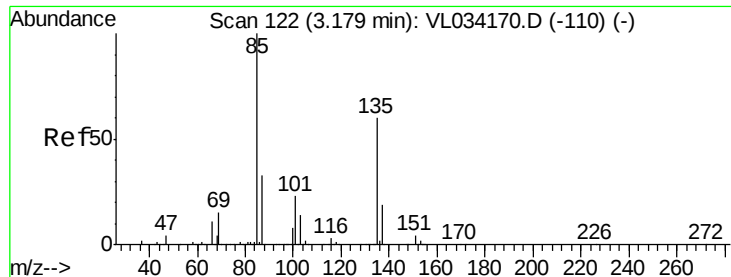
Ion 52.10 (51.80 to 52.80): VL0

3.18

Time-->

Chromatogram showing abundance versus time (3.15 to 3.20 min). A major peak is labeled at 3.18 min.





#8

Dichlorotetrafluoroethane

Concen: 9.373 ppbv

RT: 3.18 min Scan# 121

Delta R.T. -0.00 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

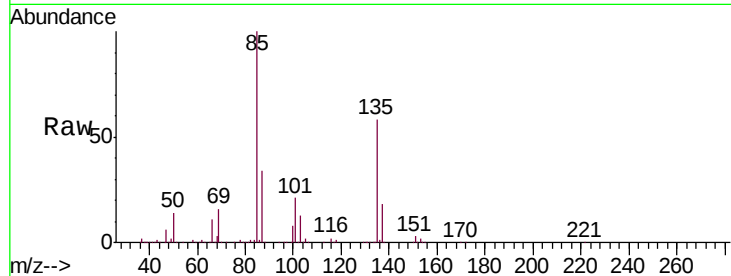
E049-1100DL

Tgt Ion: 85 Resp: 1405475

Ion Ratio Lower Upper

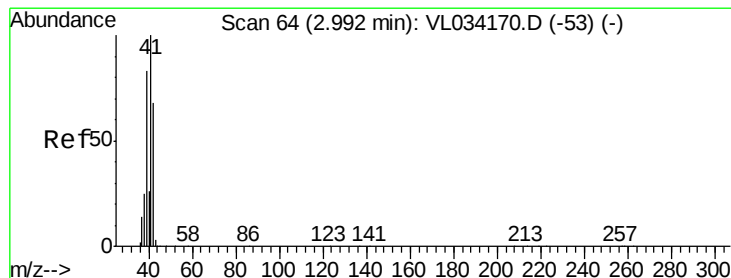
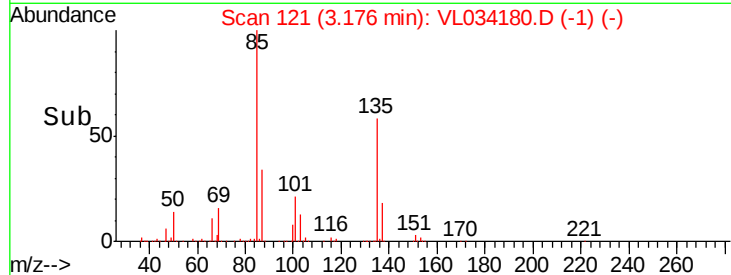
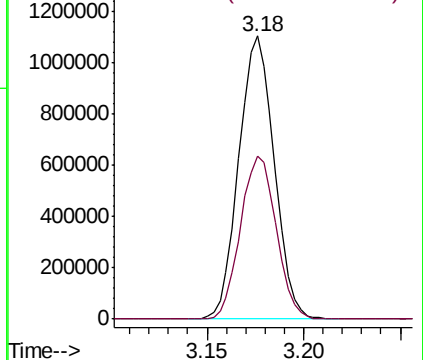
85 100

135 58.5 47.3 70.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): VL0



#9

Propene

Concen: 0.161 ppbv

RT: 3.20 min Scan# 127

Delta R.T. 0.20 min

Lab File: VL034180.D

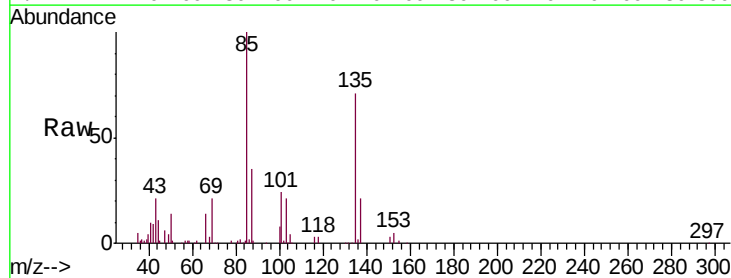
Acq: 17 Sep 2019 11:44

Tgt Ion: 41 Resp: 10724

Ion Ratio Lower Upper

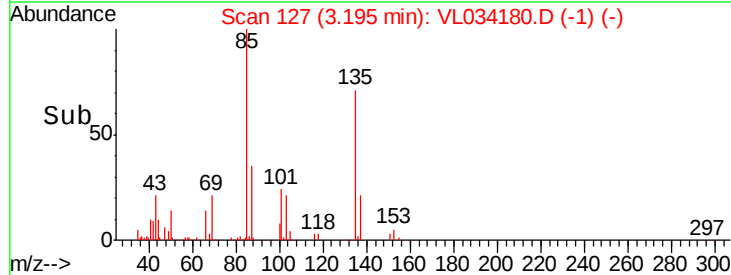
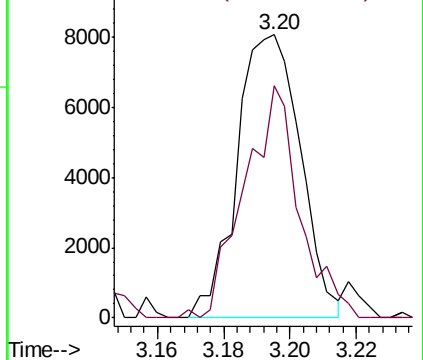
41 100

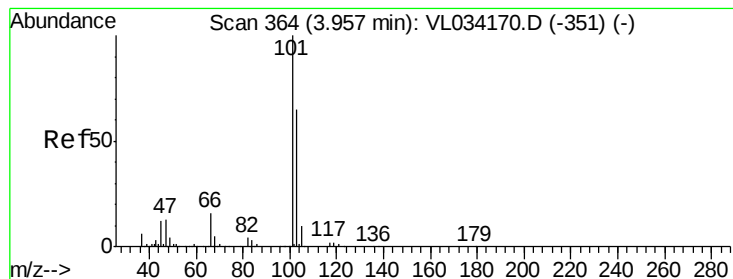
42 71.2 55.8 83.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#11

Trichlorofluoromethane

Concen: 13.254 ppbv

RT: 3.95 min Scan# 362

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

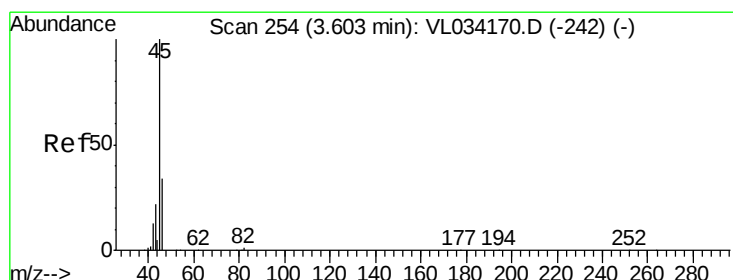
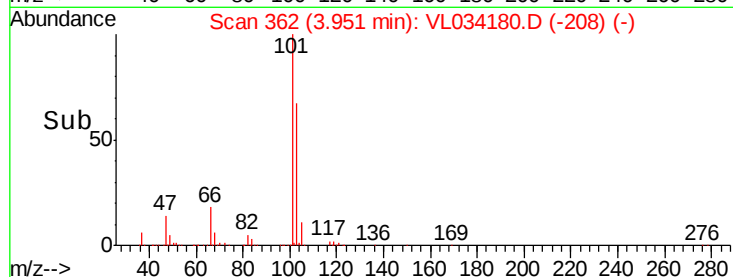
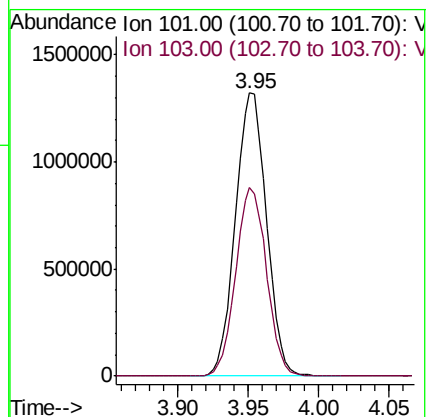
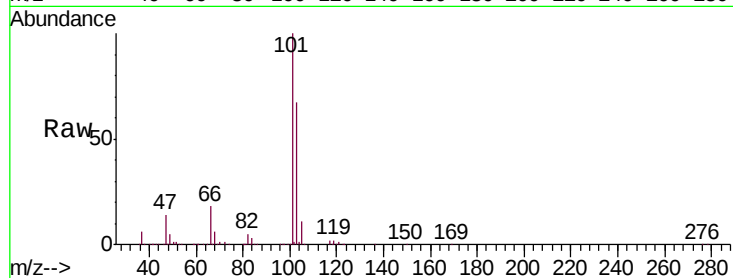
E049-1100DL

Tgt Ion:101 Resp: 2049756

Ion Ratio Lower Upper

101 100

103 66.7 52.1 78.1



#13

Ethanol

Concen: 0.206 ppbv

RT: 3.61 min Scan# 256

Delta R.T. 0.01 min

Lab File: VL034180.D

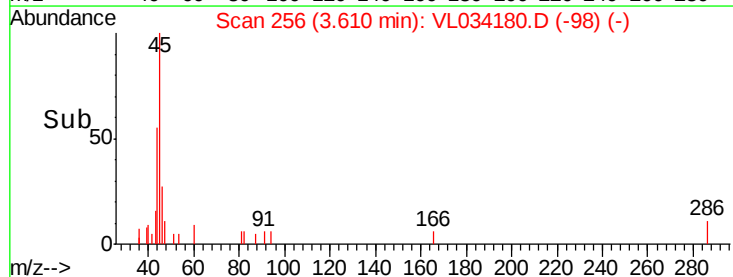
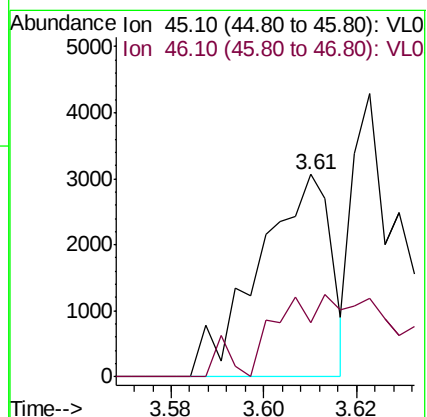
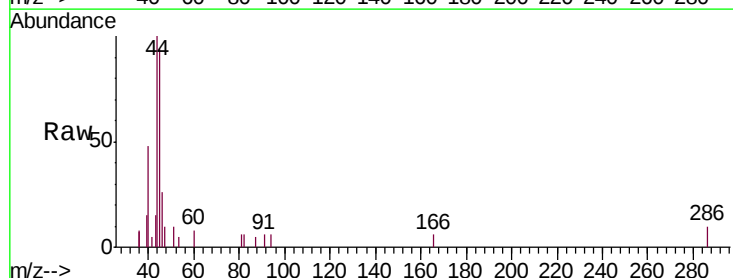
Acq: 17 Sep 2019 11:44

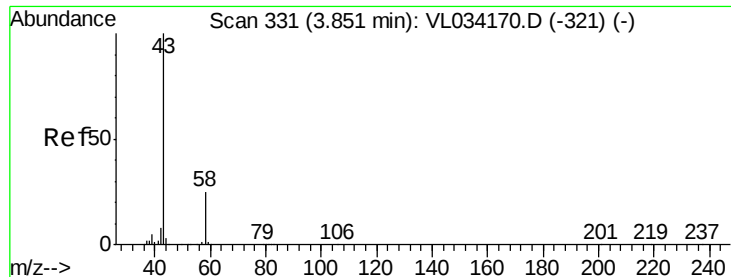
Tgt Ion: 45 Resp: 3321

Ion Ratio Lower Upper

45 100

46 81.8 15.5 61.9#





#15

Acetone

Concen: 0.374 ppbv

RT: 3.86 min Scan# 334

Delta R.T. 0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

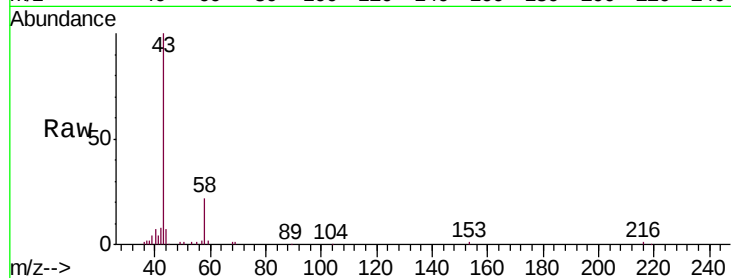
E049-1100DL

Tgt Ion: 43 Resp: 57669

Ion Ratio Lower Upper

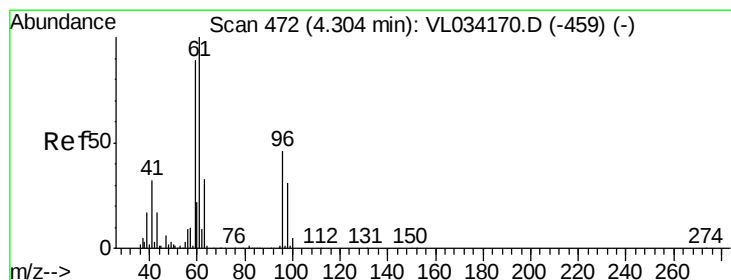
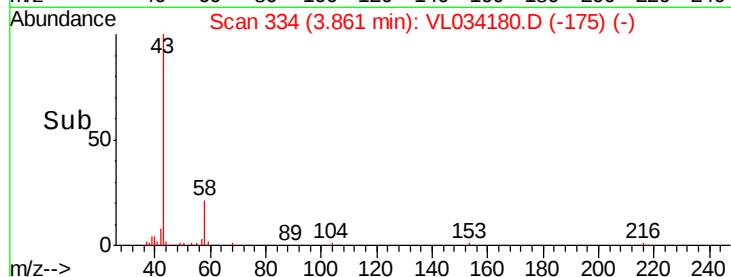
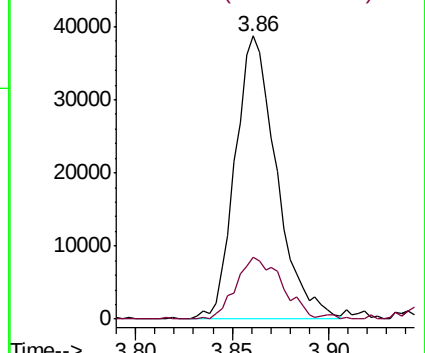
43 100

58 24.5 20.5 30.7



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#17

tert-Butyl alcohol

Concen: 0.480 ppbv

RT: 4.29 min Scan# 469

Delta R.T. -0.01 min

Lab File: VL034180.D

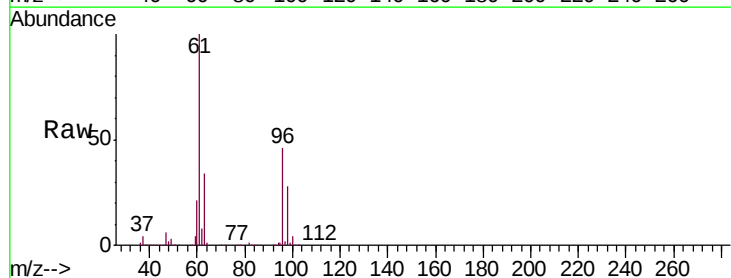
Acq: 17 Sep 2019 11:44

Tgt Ion: 59 Resp: 46919

Ion Ratio Lower Upper

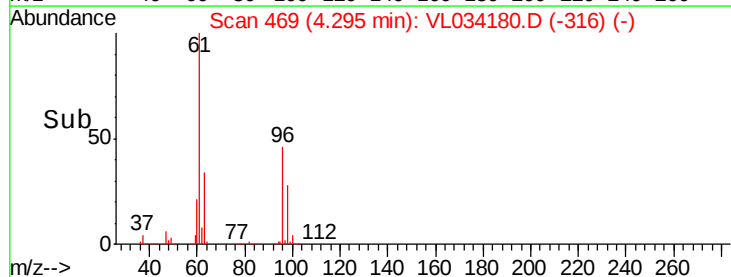
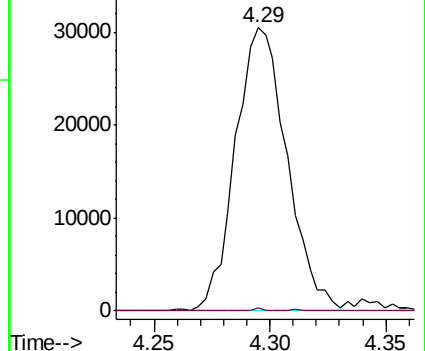
59 100

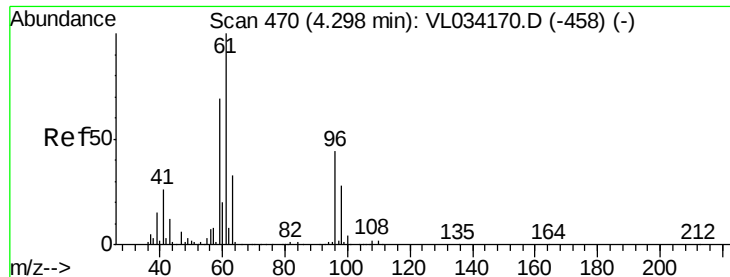
57 0.2 8.7 13.1#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#18

1,1-Dichloroethene

Concen: 11.973 ppbv

RT: 4.29 min Scan# 469

Delta R.T. -0.00 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

E049-1100DL

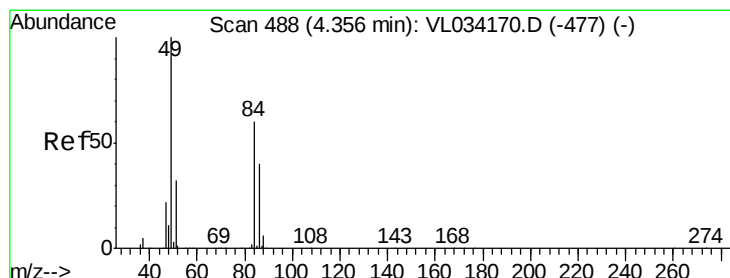
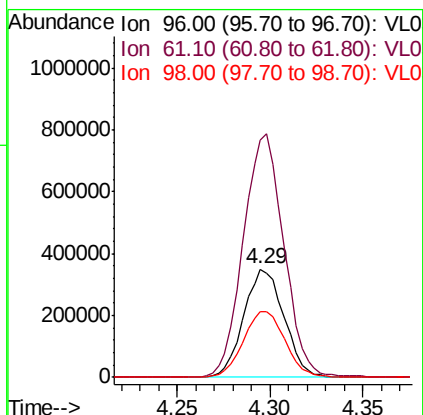
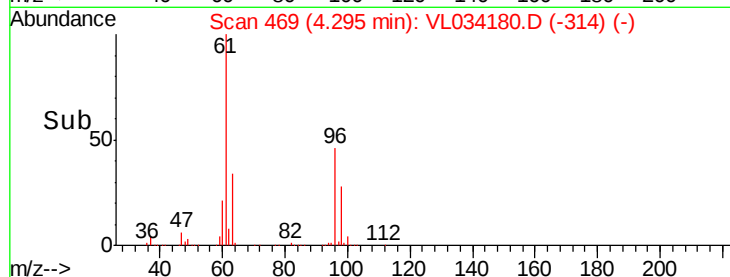
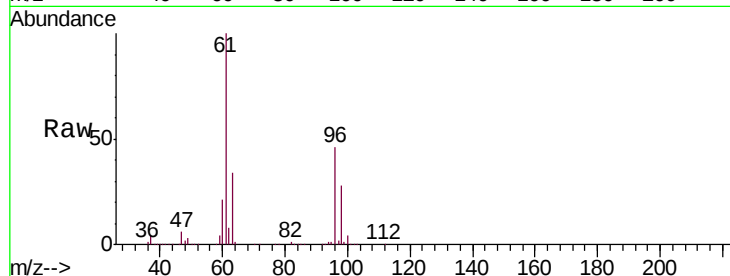
Tgt Ion: 96 Resp: 528540

Ion Ratio Lower Upper

96 100

61 219.5 183.3 274.9

98 61.3 51.4 77.2



#20

Methylene Chloride

Concen: 0.665 ppbv

RT: 4.35 min Scan# 487

Delta R.T. -0.00 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Tgt Ion: 84 Resp: 29566

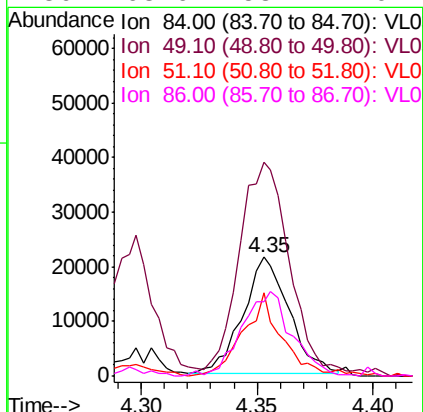
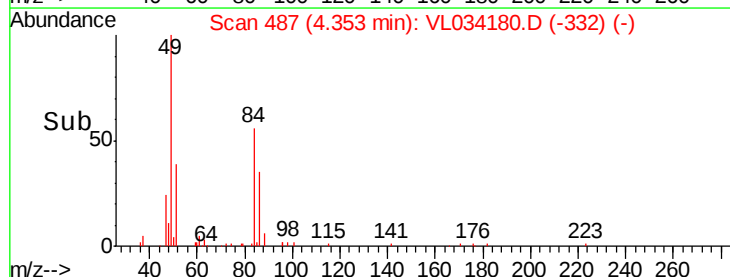
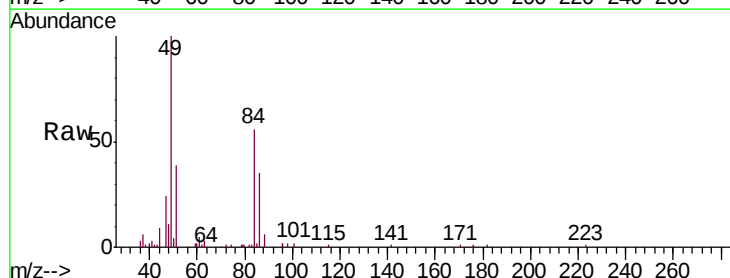
Ion Ratio Lower Upper

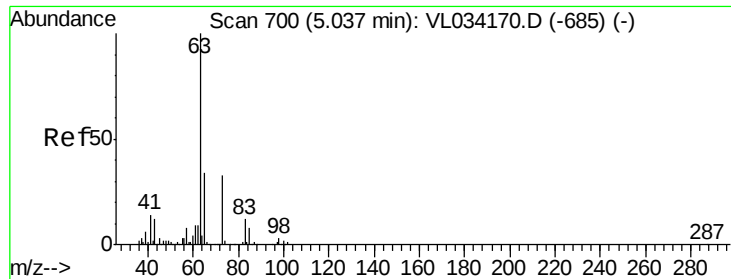
84 100

49 176.3 133.8 200.8

51 71.4 43.6 65.4#

86 63.6 53.1 79.7





#24

1,1-Dichloroethane

Concen: 13.164 ppbv

RT: 5.03 min Scan# 697

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

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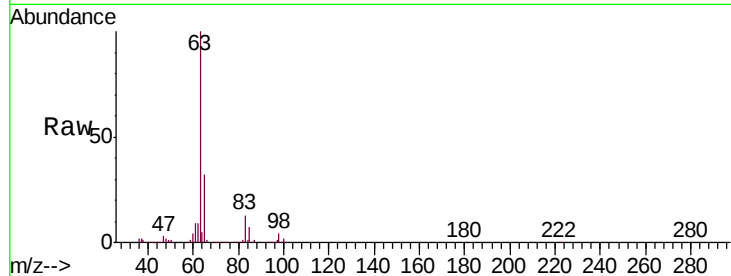
Tgt Ion: 63 Resp: 2013627

Ion Ratio Lower Upper

63 100

98 3.6 1.8 5.3

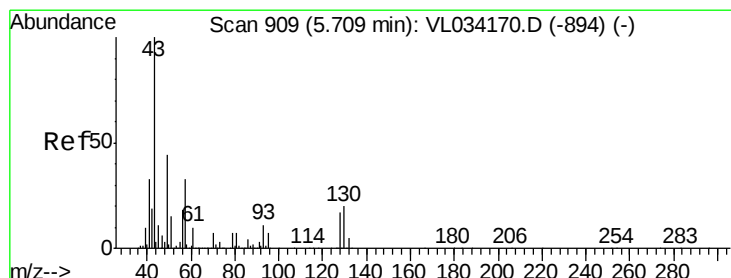
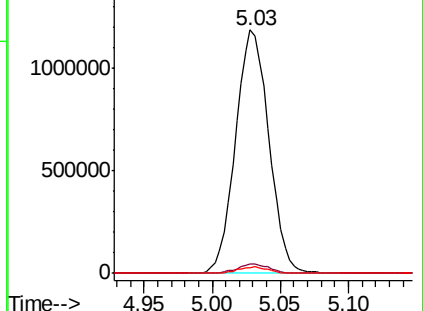
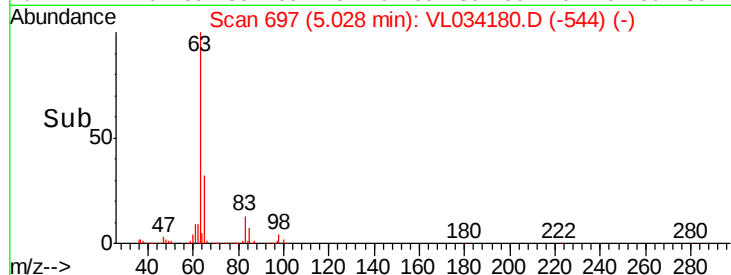
100 2.5 1.0 3.0



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0



#25

Ethyl Acetate

Concen: 0.311 ppbv

RT: 5.71 min Scan# 910

Delta R.T. 0.00 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Tgt Ion: 43 Resp: 90523

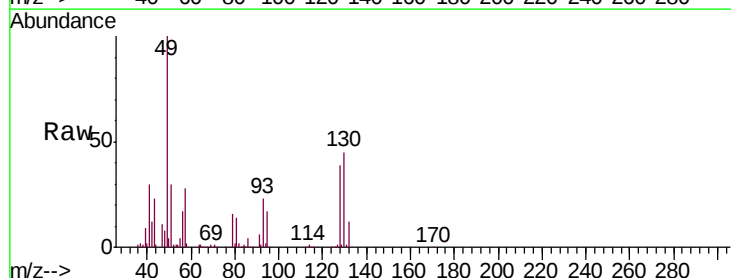
Ion Ratio Lower Upper

43 100

45 0.5 8.4 12.6#

61 0.8 7.2 10.8#

70 1.1 5.3 7.9#

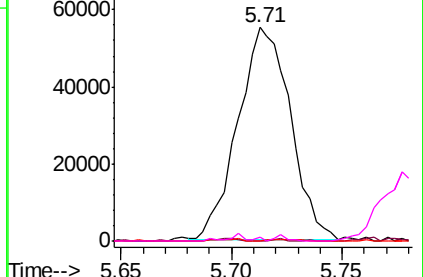
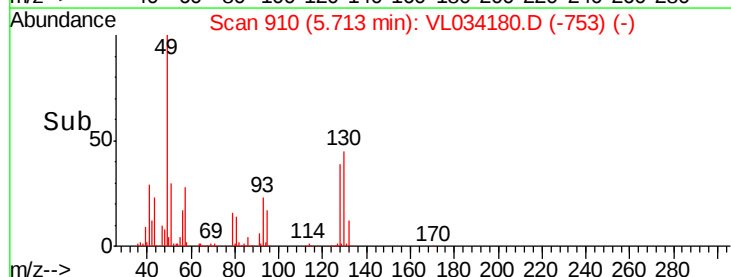


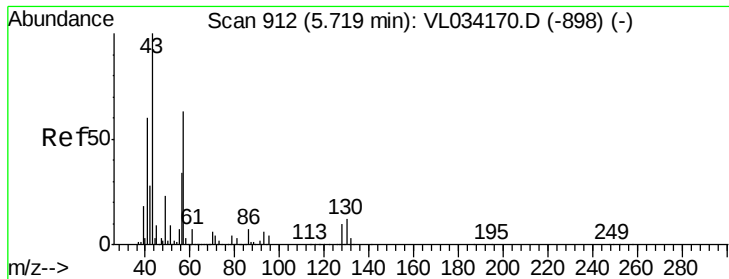
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0

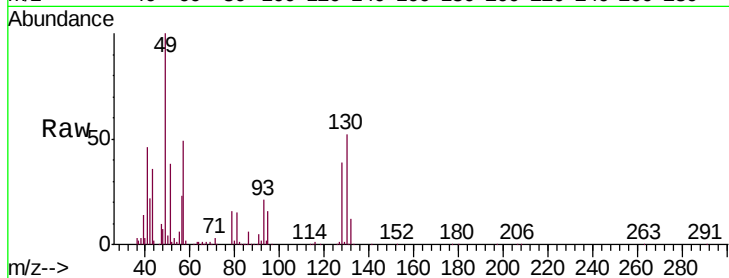




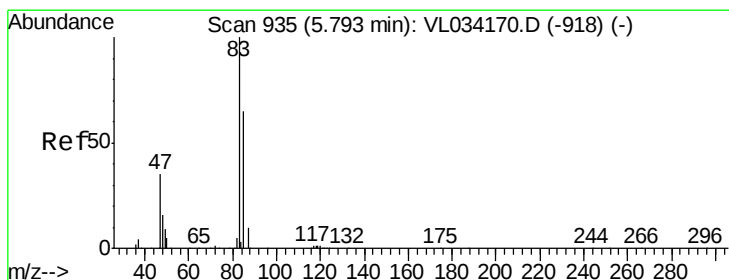
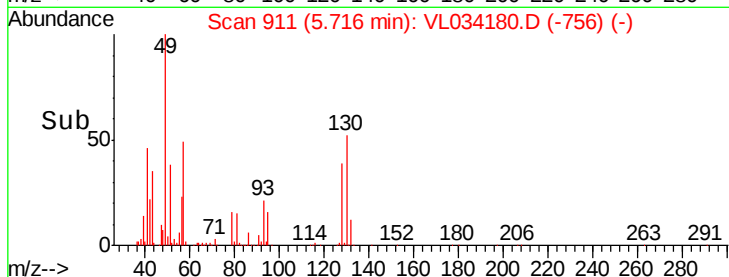
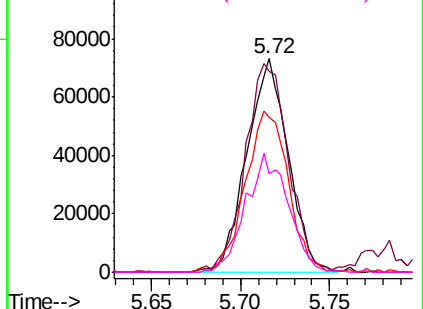
#26
Hexane
Concen: 0.977 ppbv
RT: 5.72 min Scan# 911
Delta R.T. -0.00 min
Lab File: VL034180.D
Acq: 17 Sep 2019 11:44

Instrument :
MSVOA_L
ClientSampleId :
E049-1100DL

Tgt Ion: 57 Resp: 118528
Ion Ratio Lower Upper
57 100
41 102.3 78.5 117.7
43 78.7 189.5 284.3#
56 56.8 43.2 64.8

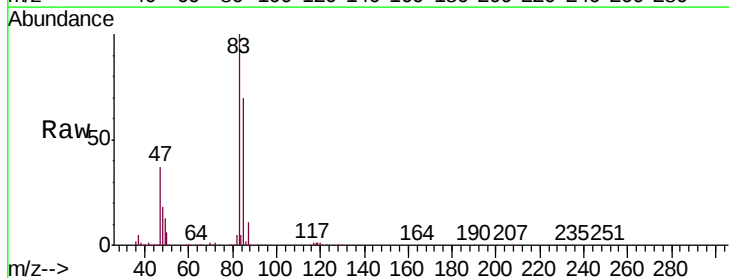


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

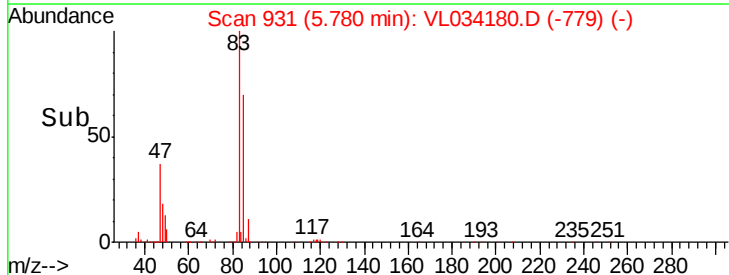
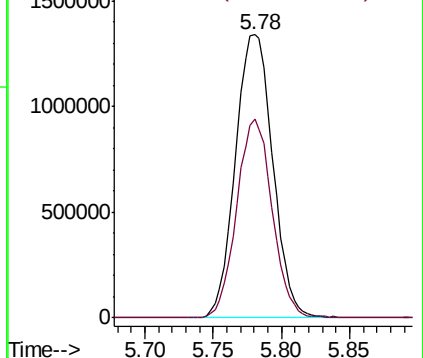


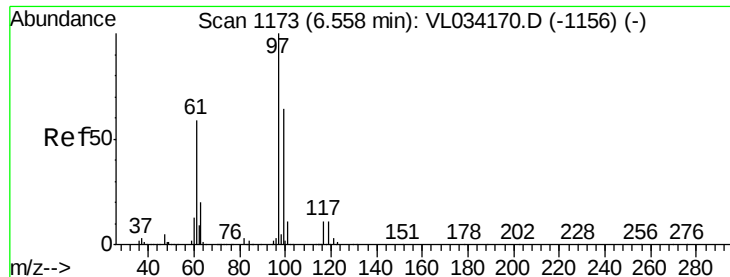
#29
Chloroform
Concen: 14.746 ppbv
RT: 5.78 min Scan# 931
Delta R.T. -0.01 min
Lab File: VL034180.D
Acq: 17 Sep 2019 11:44

Tgt Ion: 83 Resp: 2555313
Ion Ratio Lower Upper
83 100
85 70.2 52.3 78.5



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0





#32

1,1,1-Trichloroethane

Concen: 0.086 ppbv

RT: 6.55 min Scan# 1170

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

E049-1100DL

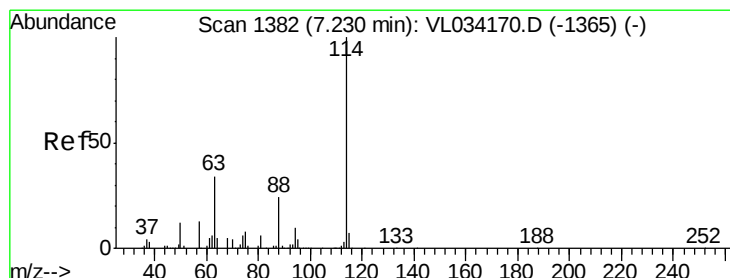
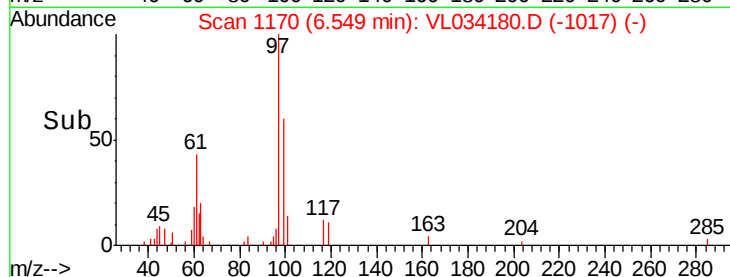
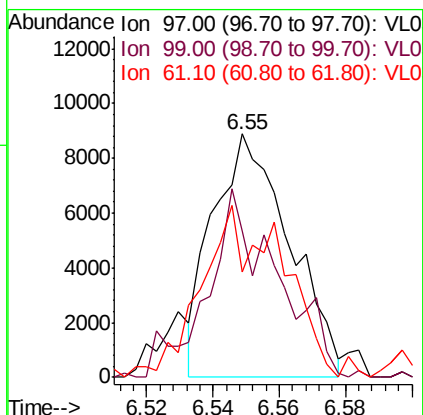
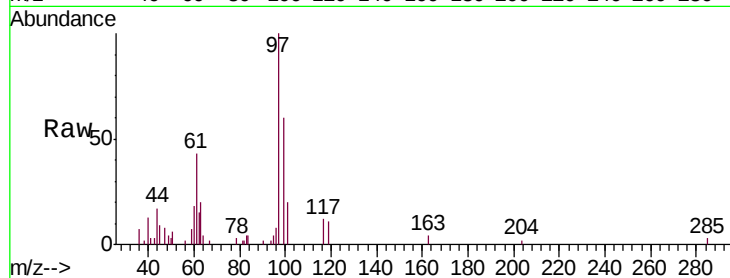
Tgt Ion: 97 Resp: 14360

Ion Ratio Lower Upper

97 100

99 70.9 51.4 77.2

61 79.2 48.4 72.6#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.22 min Scan# 1379

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

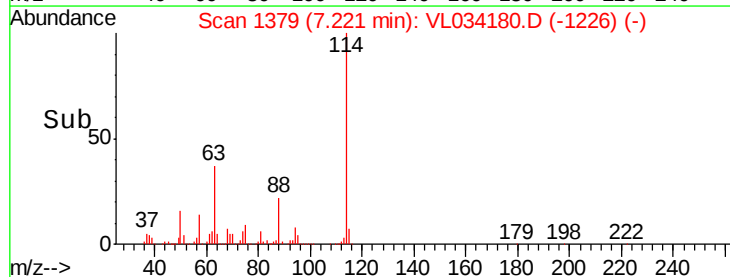
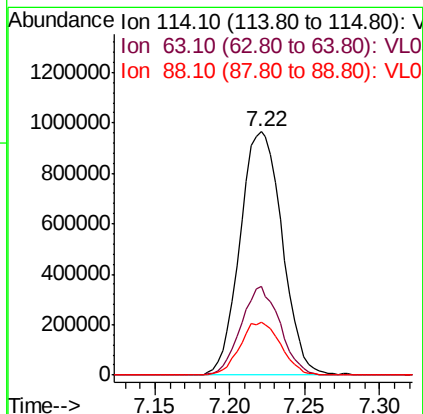
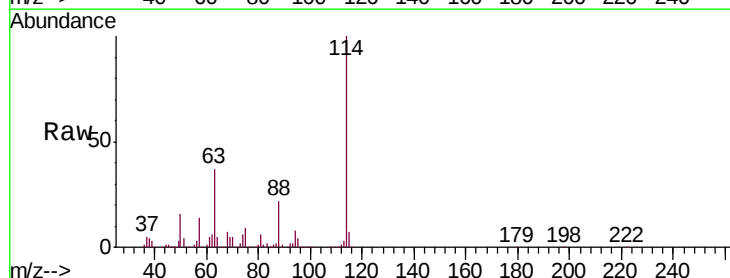
Tgt Ion: 114 Resp: 1891674

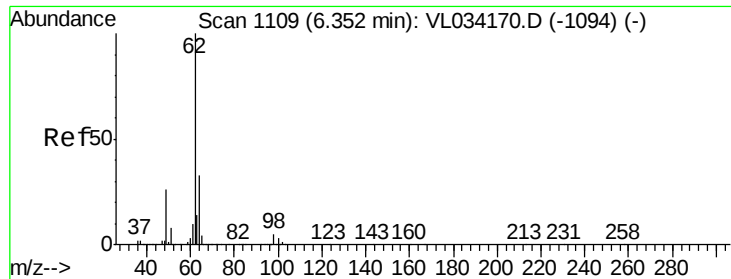
Ion Ratio Lower Upper

114 100

63 33.8 27.8 41.6

88 21.1 17.1 25.7

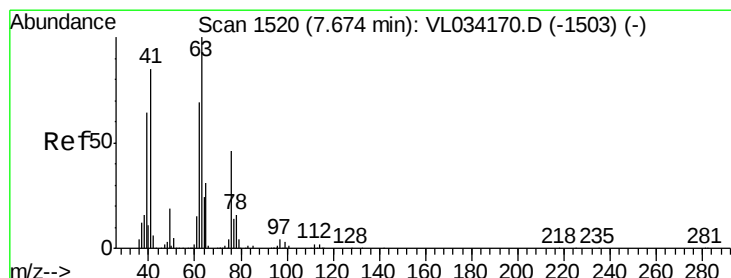
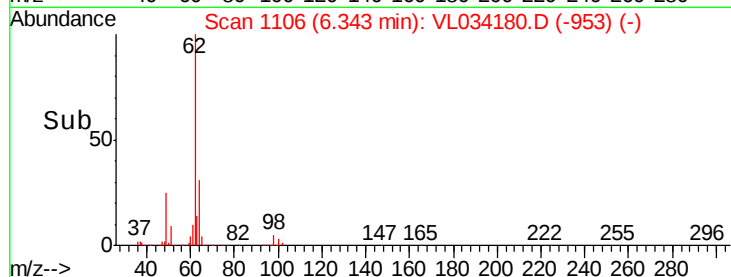
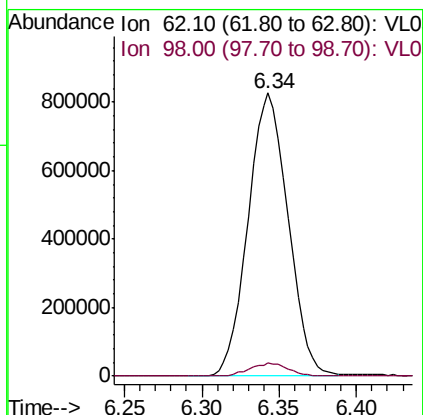
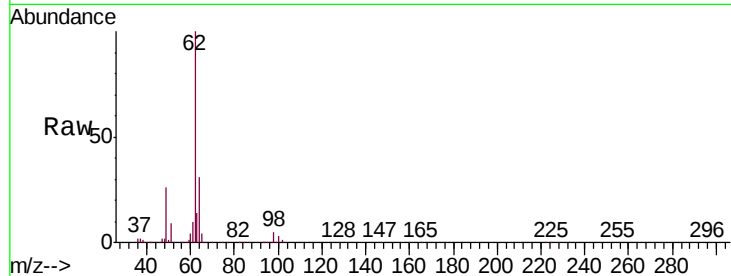




#37
 1,2-Dichloroethane
 Concen: 10.022 ppbv
 RT: 6.34 min Scan# 1106
 Delta R.T. -0.01 min
 Lab File: VL034180.D
 Acq: 17 Sep 2019 11:44

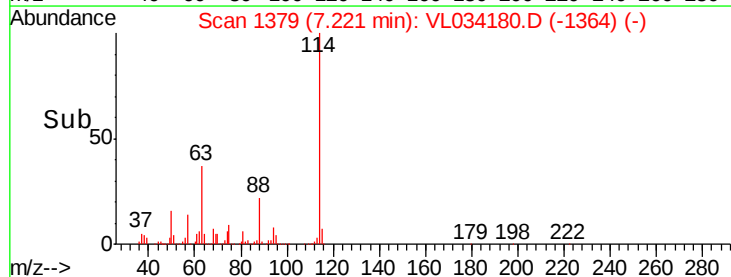
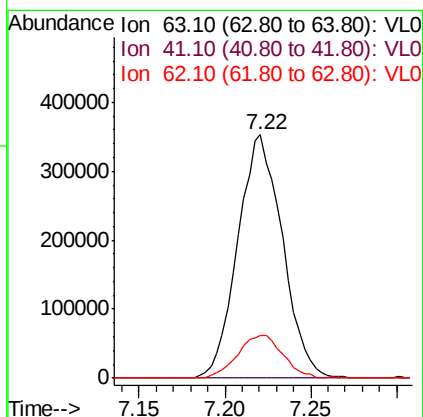
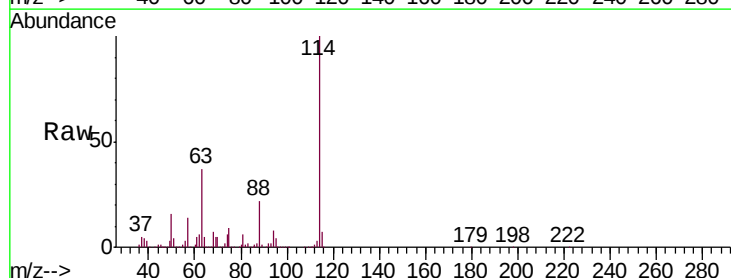
Instrument :
 MSVOA_L
 ClientSampleId :
 E049-1100DL

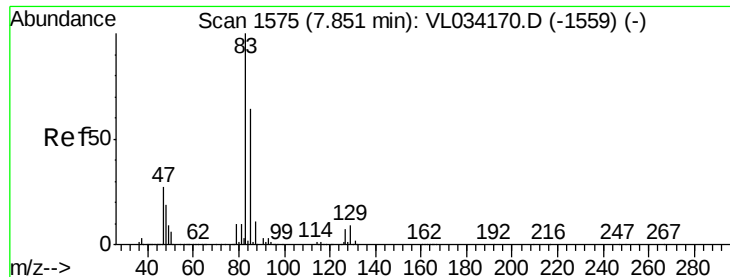
Tgt Ion: 62 Resp: 1489300
 Ion Ratio Lower Upper
 62 100
 98 4.5 3.8 5.8



#39
 1,2-Dichloropropane
 Concen: 6.785 ppbv
 RT: 7.22 min Scan# 1379
 Delta R.T. -0.45 min
 Lab File: VL034180.D
 Acq: 17 Sep 2019 11:44

Tgt Ion: 63 Resp: 636913
 Ion Ratio Lower Upper
 63 100
 41 0.0 68.4 102.6#
 62 17.1 55.4 83.2#





#42

Bromodichloromethane

Concen: 11.326 ppbv

RT: 7.84 min Scan# 1572

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

E049-1100DL

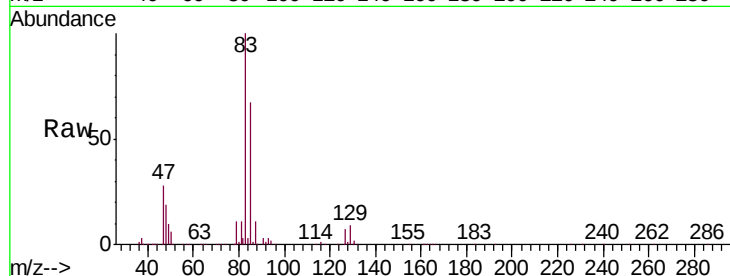
Tgt Ion: 83 Resp: 2019937

Ion Ratio Lower Upper

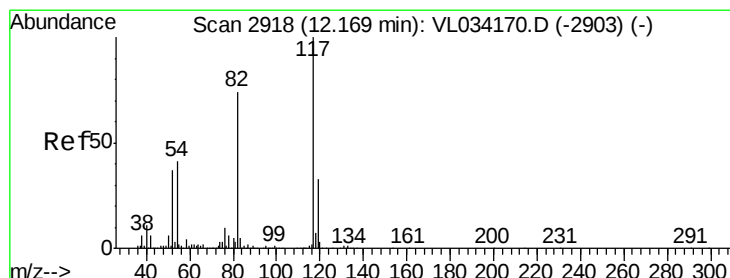
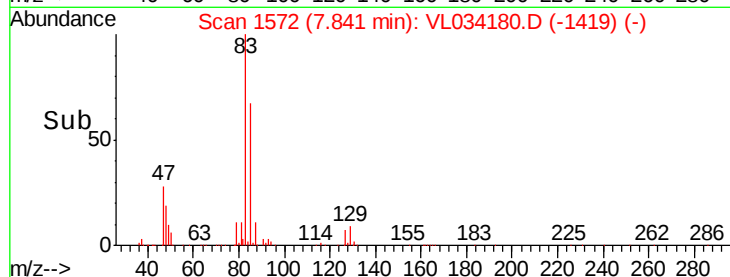
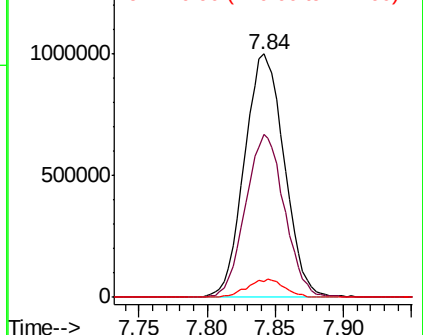
83 100

85 67.1 51.4 77.0

127 6.7 5.5 8.3



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0
Ion 126.90 (126.60 to 127.60): V



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.16 min Scan# 2915

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

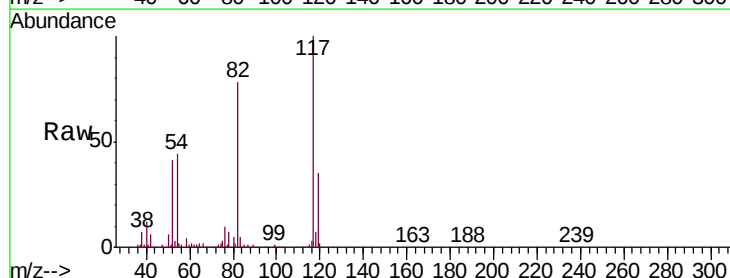
Tgt Ion: 117 Resp: 2021482

Ion Ratio Lower Upper

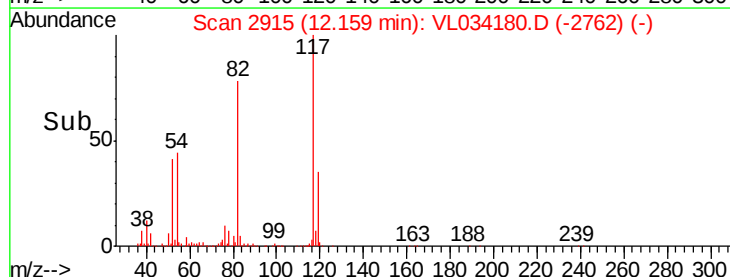
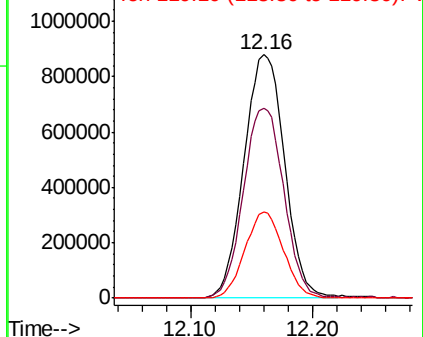
117 100

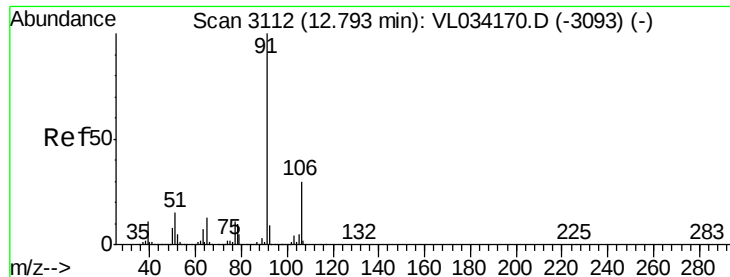
82 78.4 58.2 87.4

119 34.0 23.7 35.5



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: 14.890 ppbv

RT: 12.79 min Scan# 3110

Delta R.T. -0.01 min

Lab File: VL034180.D

Acq: 17 Sep 2019 11:44

Instrument :

MSVOA_L

ClientSampleId :

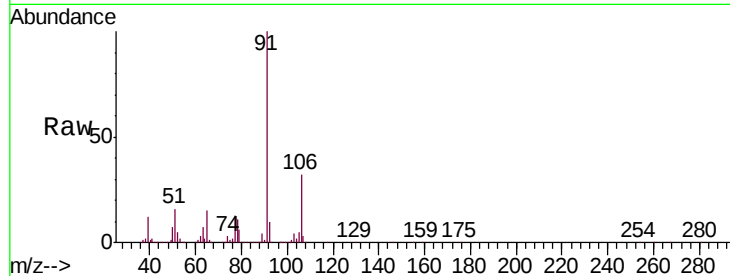
E049-1100DL

Tgt Ion: 91 Resp: 4856603

Ion Ratio Lower Upper

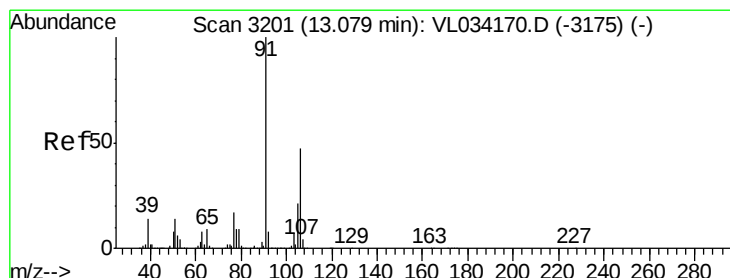
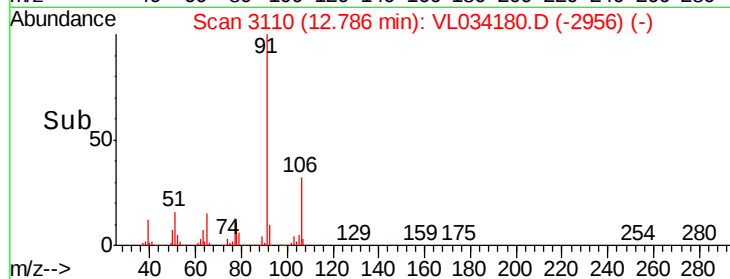
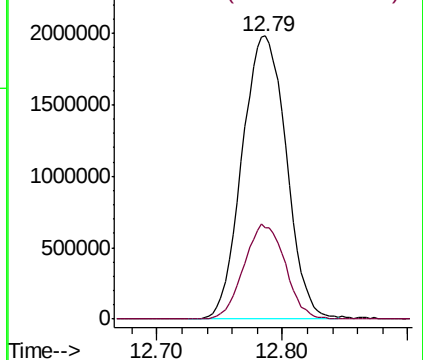
91 100

106 32.4 24.2 36.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 7.077 ppbv

RT: 13.04 min Scan# 3189

Delta R.T. -0.04 min

Lab File: VL034180.D

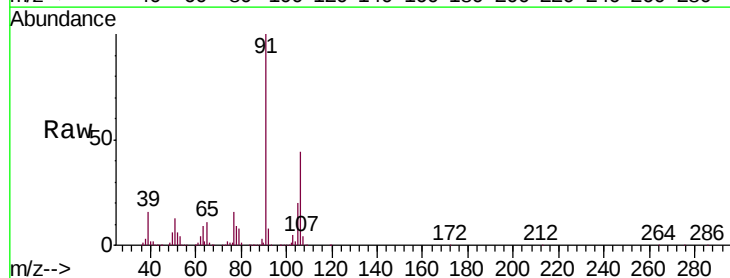
Acq: 17 Sep 2019 11:44

Tgt Ion: 91 Resp: 1911957

Ion Ratio Lower Upper

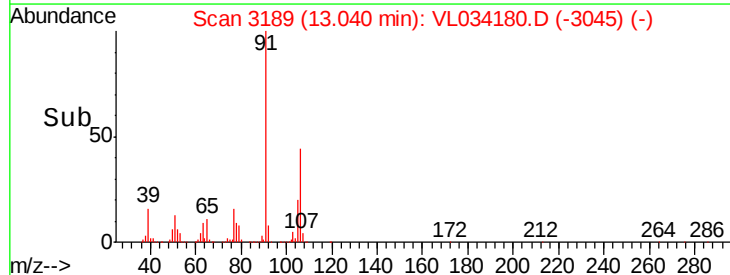
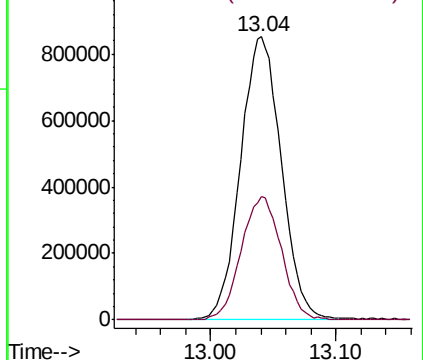
91 100

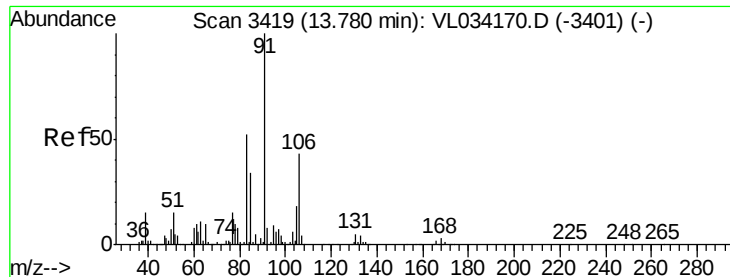
106 43.6 35.5 53.3



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

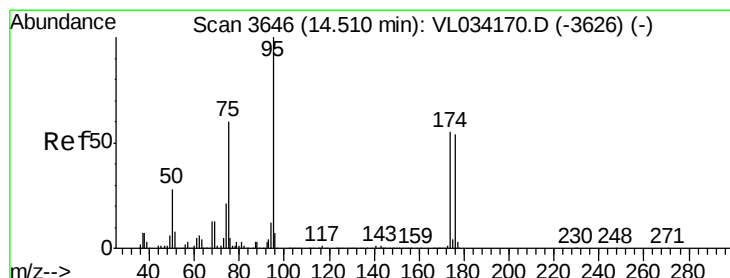
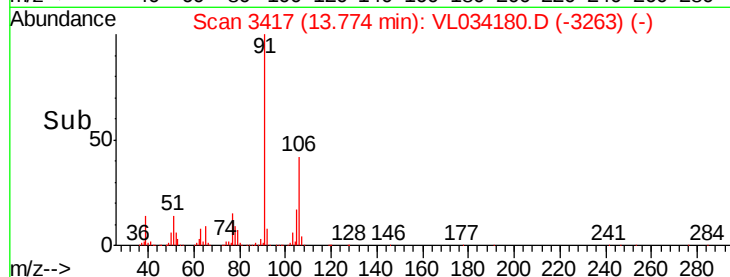
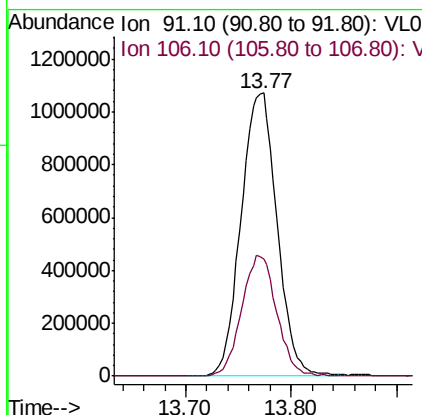
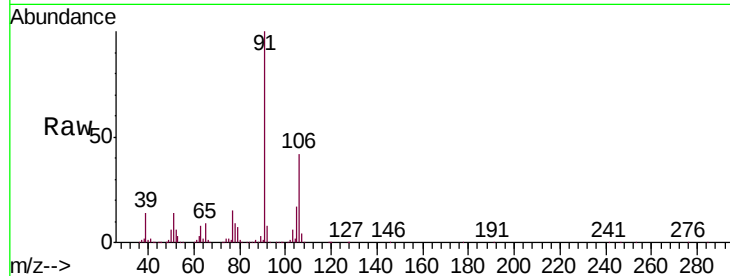




#60
o-Xylene
Concen: 9.403 ppbv
RT: 13.77 min Scan# 3417
Delta R.T. -0.01 min
Lab File: VL034180.D
Acq: 17 Sep 2019 11:44

Instrument :
MSVOA_L
ClientSampleId :
E049-1100DL

Tgt Ion: 91 Resp: 2540124
Ion Ratio Lower Upper
91 100
106 41.8 21.2 63.6



#68
1-Bromo-4-Fluorobenzene
Concen: 11.200 ppbv
RT: 14.50 min Scan# 3643
Delta R.T. -0.01 min
Lab File: VL034180.D
Acq: 17 Sep 2019 11:44

Tgt Ion: 95 Resp: 1967361
Ion Ratio Lower Upper
95 100
174 57.3 45.1 67.7
175 4.0 3.3 4.9

