

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL021419\
 Data File : VL033207.D
 Acq On : 14 Feb 2019 20:57
 Operator : SY/AP
 Sample : K1483-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 21 00:56:39 2019

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL020519AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 20 06:00:52 2019

QLast Update : Wed Feb 20 06:00:52 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	968073	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2113950	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.24	117	2135182	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	1710383	10.28	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.80%

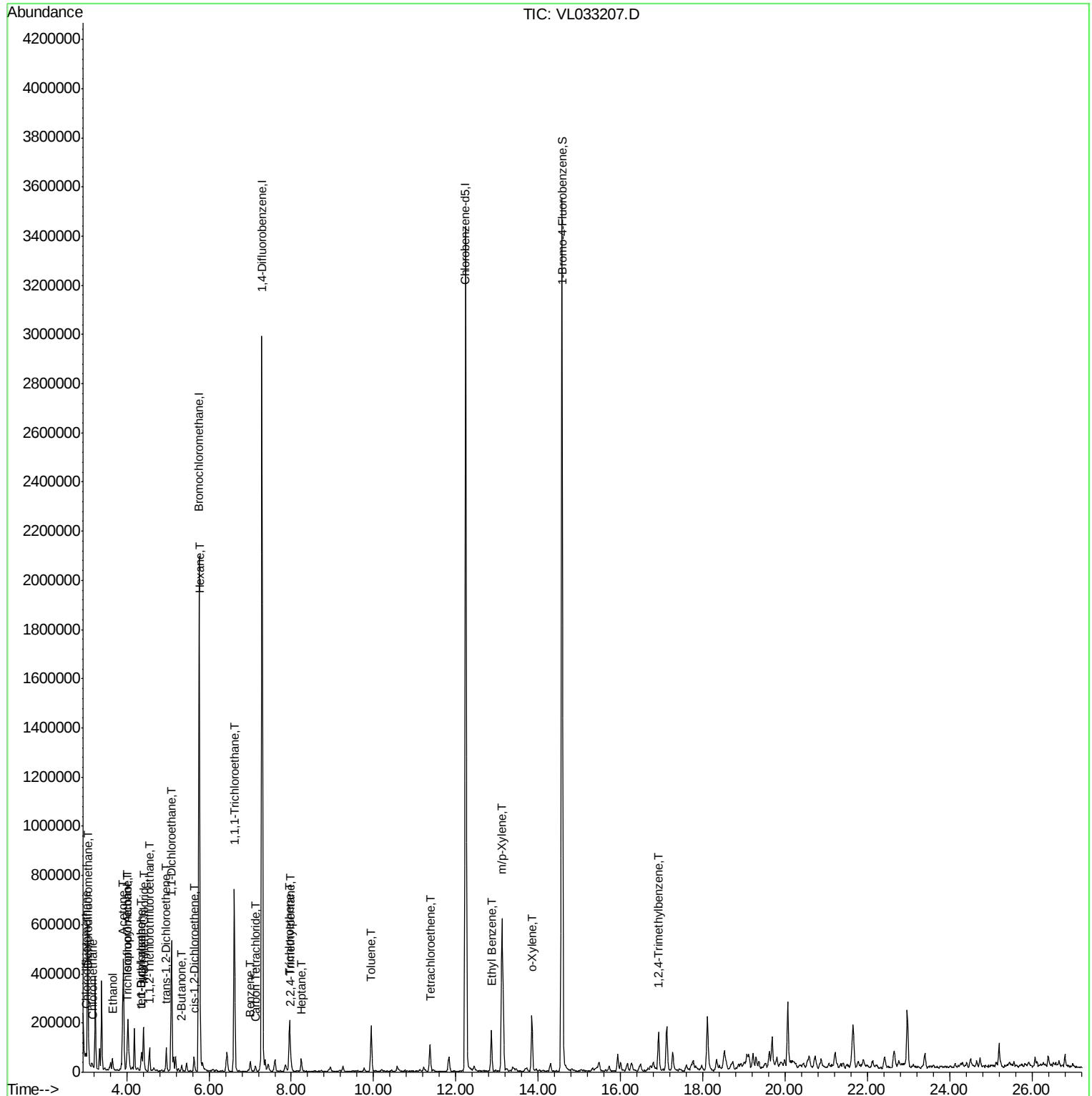
Target Compounds

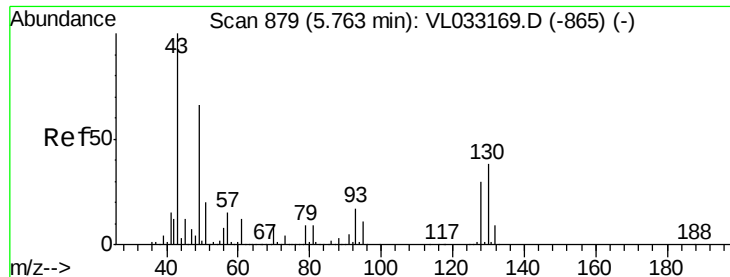
						Ovalue
2) Dichlorodifluoromethane	3.08	85	62163	0.336	ppbv	96
3) Chlorodifluoromethane	3.01	51	32718m	0.281	ppbv	
4) Chloromethane	3.17	50	9286m	0.151	ppbv	
10) Heptane	8.25	43	18861	0.111	ppbv	100
11) Trichlorofluoromethane	4.00	101	45287	0.302	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.55	101	32176	0.310	ppbv	96
13) Ethanol	3.65	45	49114m	2.567	ppbv	
15) Acetone	3.90	43	267229m	2.450	ppbv	
17) tert-Butyl alcohol	4.37	59	33326m	1.591	ppbv	
18) 1,1-Dichloroethene	4.35	96	17781	0.383	ppbv #	91
19) Isopropyl Alcohol	4.03	45	237748m	3.214	ppbv	
20) Methylene Chloride	4.40	84	57854	1.334	ppbv	89
22) trans-1,2-Dichloroethene	4.96	96	27081	0.600	ppbv	92
24) 1,1-Dichloroethane	5.09	63	433130	3.240	ppbv	99
26) Hexane	5.78	57	87363	0.759	ppbv #	42
31) cis-1,2-Dichloroethene	5.63	61	32913	0.286	ppbv #	81
32) 1,1,1-Trichloroethane	6.62	97	454502	2.340	ppbv	97
34) 2-Butanone	5.34	43	30081m	0.224	ppbv	
35) Carbon Tetrachloride	7.14	117	9719m	0.060	ppbv	
36) Benzene	7.00	78	30328	0.142	ppbv	94
38) Trichloroethene	7.96	130	60721	0.663	ppbv	95
44) 2,2,4-Trimethylpentane	7.99	57	38862	0.107	ppbv #	78
52) Tetrachloroethene	11.37	164	22673m	0.275	ppbv	
53) Toluene	9.95	91	128860m	0.508	ppbv	
58) Ethyl Benzene	12.86	91	135977	0.388	ppbv	95
59) m/p-Xylene	13.12	91	656814	2.253	ppbv	97
60) o-Xylene	13.85	91	168653	0.593	ppbv	97
74) 1,2,4-Trimethylbenzene	16.92	105	92929m	0.286	ppbv	

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

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QLast Update : Wed Feb 20 06:00:52 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

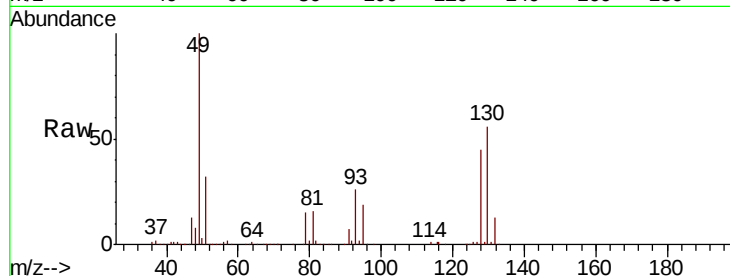
Tot Ion: 49 Resp: 968073

Ion Ratio Lower Upper

49 100

128 45.6 23.6 71.0

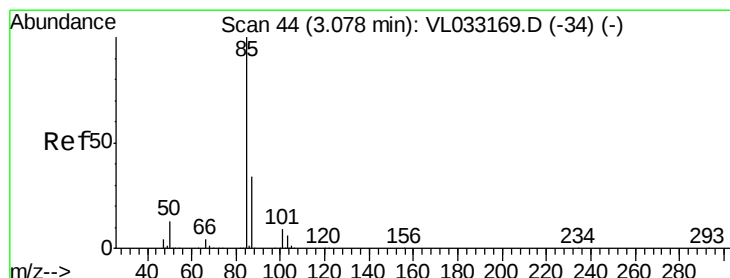
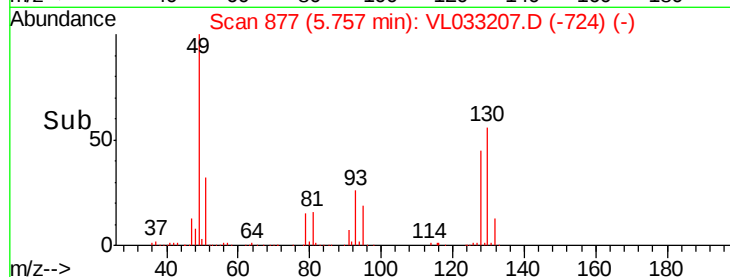
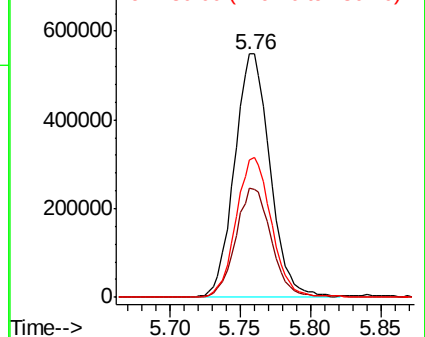
130 57.7 30.3 91.0



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: 0.336 ppbv

RT: 3.08 min Scan# 43

Delta R.T. -0.00 min

Lab File: VL033207.D

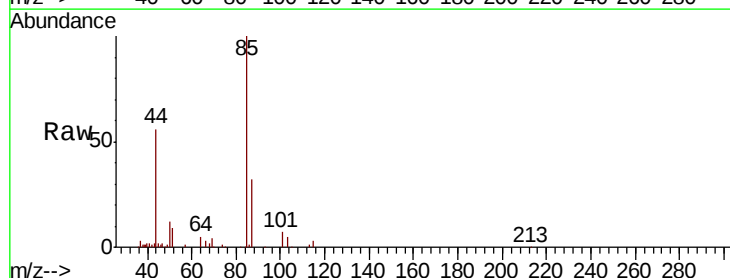
Acq: 14 Feb 2019 20:57

Tgt Ion: 85 Resp: 62163

Ion Ratio Lower Upper

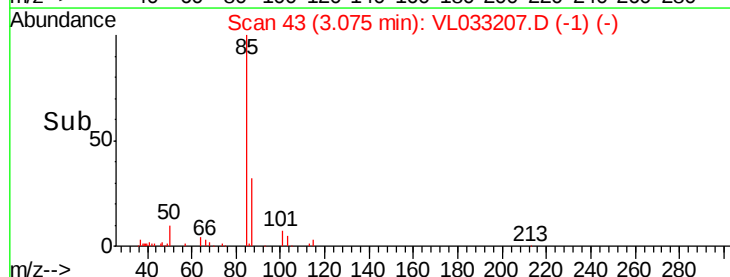
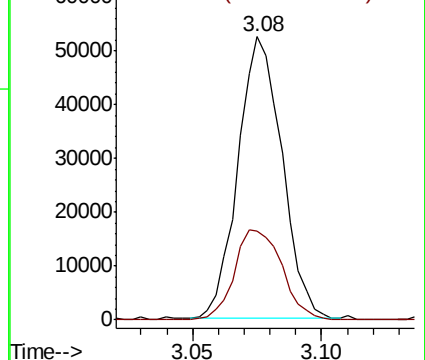
85 100

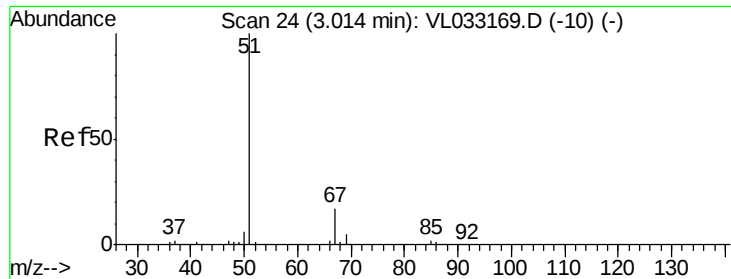
87 31.7 27.4 41.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

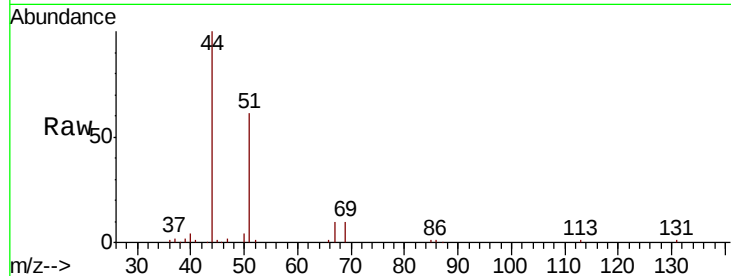




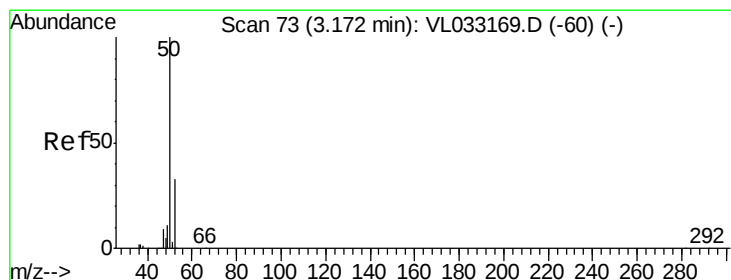
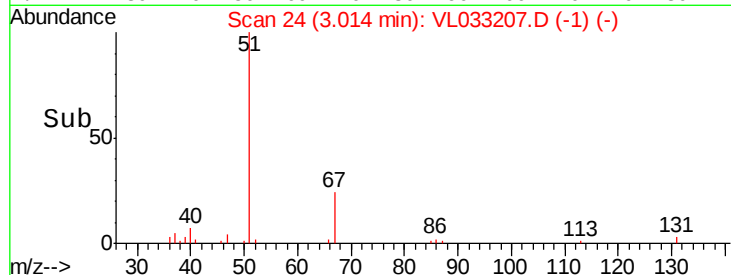
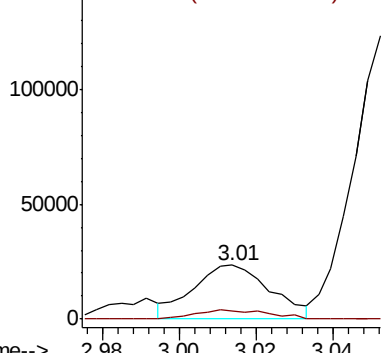
#3

Chlorodifluoromethane
 Concen: 0.281 ppbv m
 RT: 3.01 min Scan# 24
 Delta R.T. -0.00 min
 Lab File: VL033207.D
 Acq: 14 Feb 2019 20:57

Tot Ion: 51 Resp: 32718
 Ion Ratio Lower Upper
 51 100
 67 0.8 14.0 21.0#



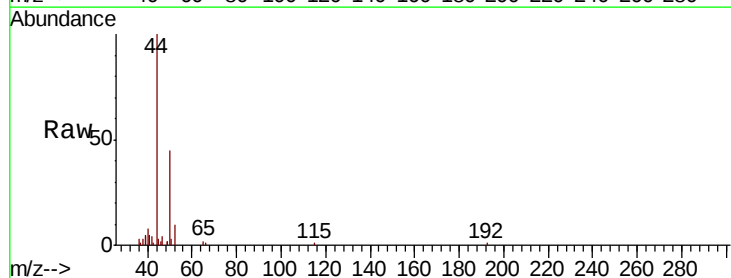
Abundance Ion 51.00 (50.70 to 51.70): VL0
 Ion 67.00 (66.70 to 67.70): VL0



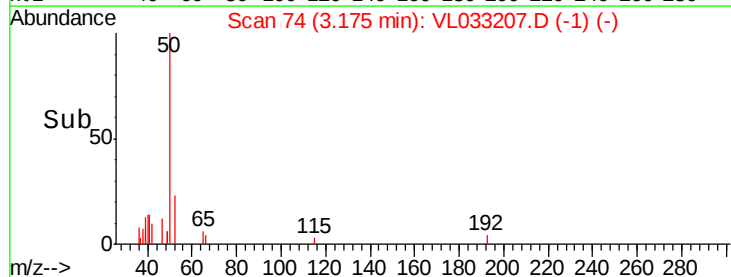
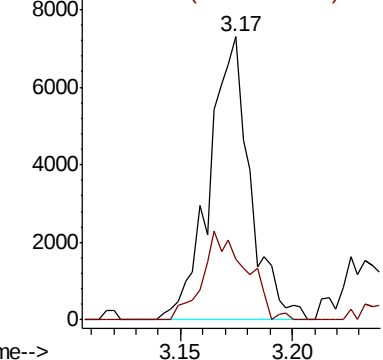
#4

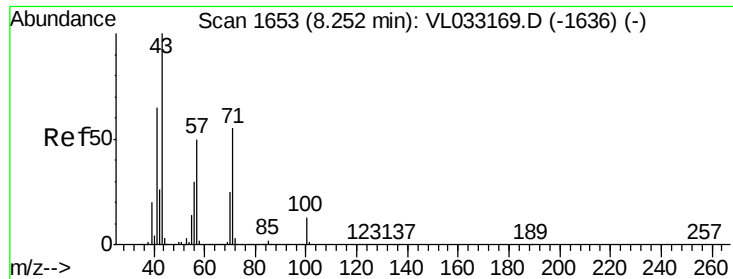
Chloromethane
 Concen: 0.151 ppbv m
 RT: 3.17 min Scan# 74
 Delta R.T. 0.00 min
 Lab File: VL033207.D
 Acq: 14 Feb 2019 20:57

Tgt Ion: 50 Resp: 9286
 Ion Ratio Lower Upper
 50 100
 52 21.5 26.5 39.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0
 Ion 52.10 (51.80 to 52.80): VL0





#10

Heptane

Concen: 0.111 ppbv

RT: 8.25 min Scan# 1651

Delta R.T. -0.01 min

Lab File: VL033207.D

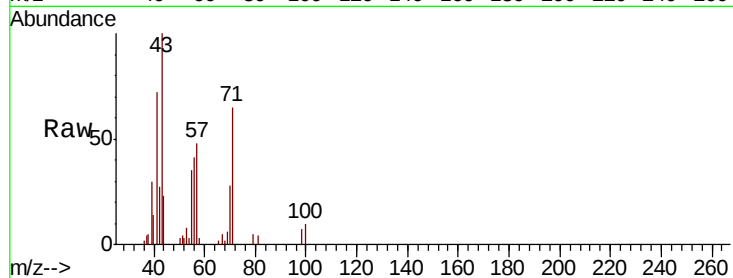
Acq: 14 Feb 2019 20:57

Tot Ion: 43 Resp: 18861

Ion Ratio Lower Upper

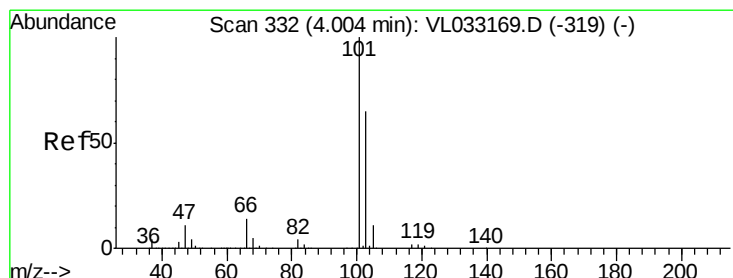
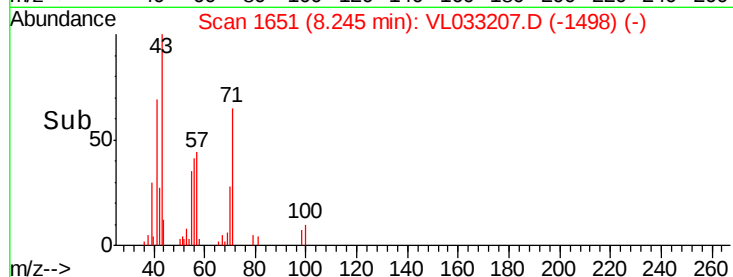
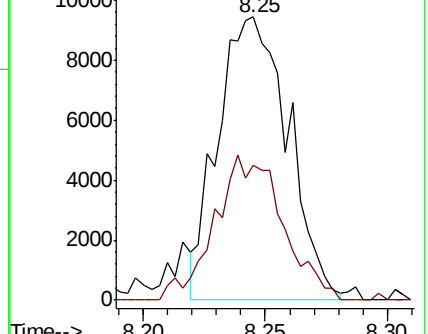
43 100

57 49.2 39.5 59.3



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#11

Trichlorofluoromethane

Concen: 0.302 ppbv

RT: 4.00 min Scan# 331

Delta R.T. -0.00 min

Lab File: VL033207.D

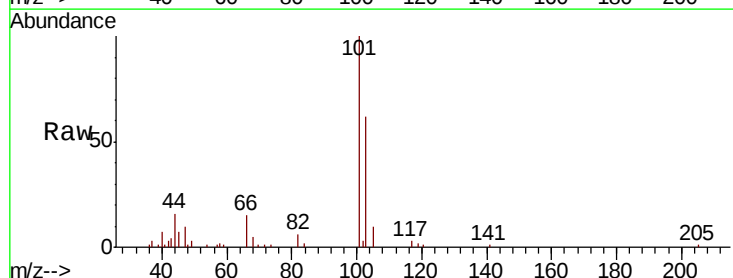
Acq: 14 Feb 2019 20:57

Tgt Ion:101 Resp: 45287

Ion Ratio Lower Upper

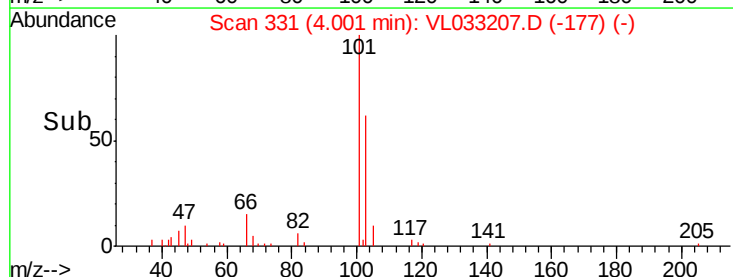
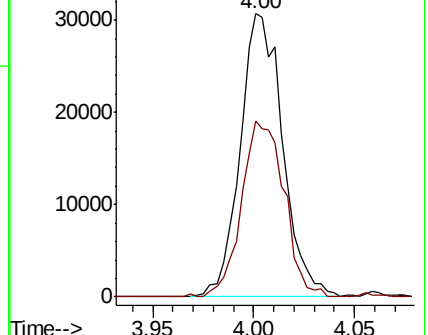
101 100

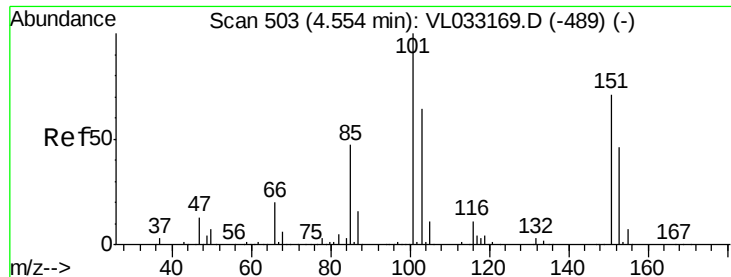
103 62.0 51.7 77.5



Abundance Ion 101.00 (100.70 to 101.70): V

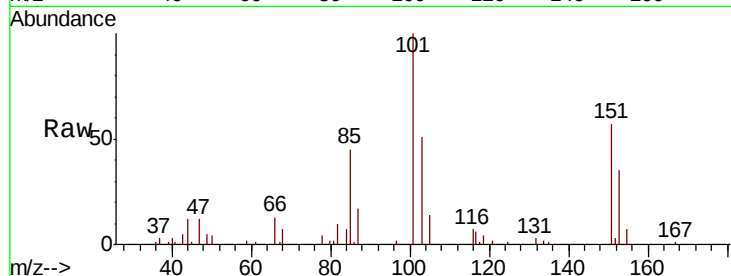
Ion 103.00 (102.70 to 103.70): V



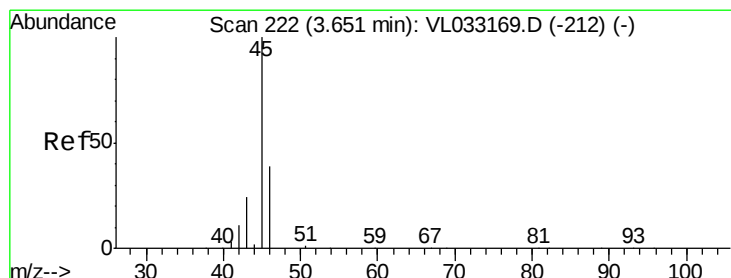
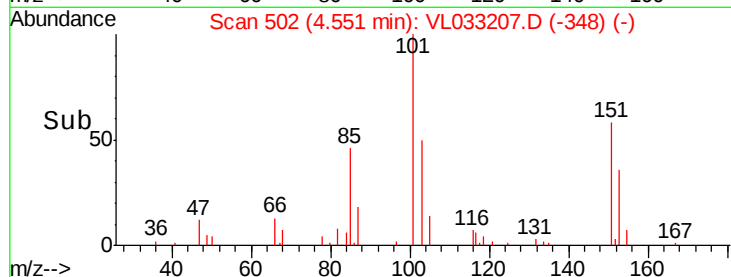
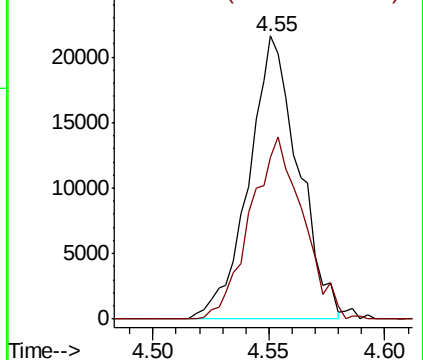


#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.310 ppbv
 RT: 4.55 min Scan# 502
 Delta R.T. -0.00 min
 Lab File: VL033207.D
 Acq: 14 Feb 2019 20:57

Tot Ion: 101 Resp: 32176
 Ion Ratio Lower Upper
 101 100
 151 68.4 57.4 86.0

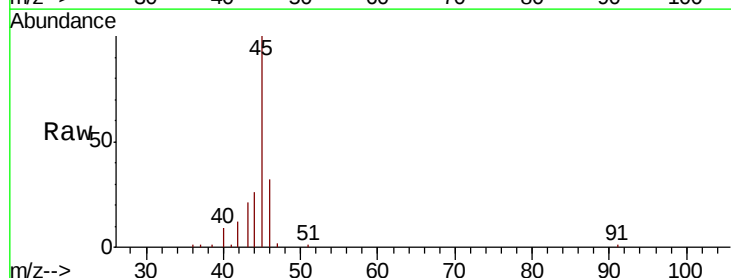


Abundance Ion 101.00 (100.70 to 101.70): V
 Ion 151.00 (150.70 to 151.70): V

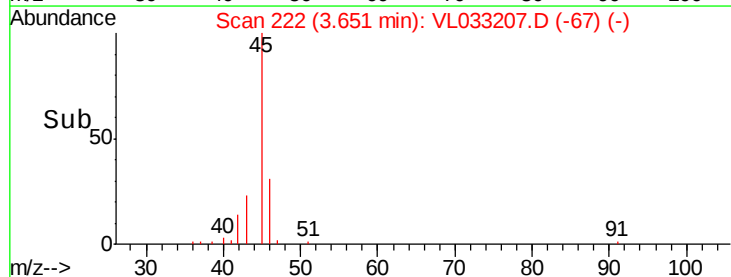
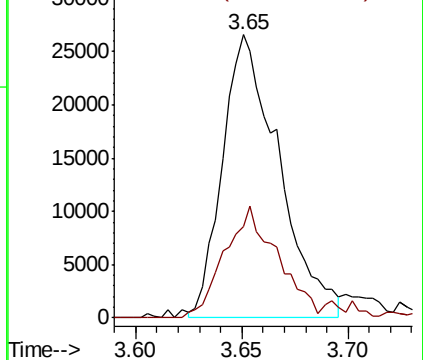


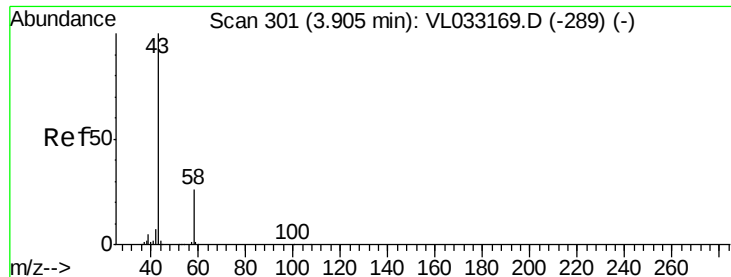
#13
 Ethanol
 Concen: 2.567 ppbv m
 RT: 3.65 min Scan# 222
 Delta R.T. -0.00 min
 Lab File: VL033207.D
 Acq: 14 Feb 2019 20:57

Tgt Ion: 45 Resp: 49114
 Ion Ratio Lower Upper
 45 100
 46 40.7 15.0 60.2



Abundance Ion 45.10 (44.80 to 45.80): VL0
 Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 2.450 ppbv m

RT: 3.90 min Scan# 301

Delta R.T. -0.00 min

Lab File: VL033207.D

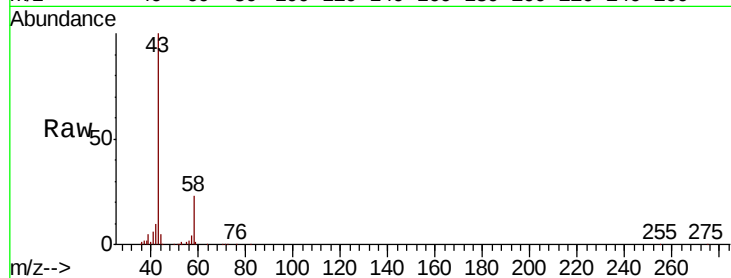
Acq: 14 Feb 2019 20:57

Tot Ion: 43 Resp: 267229

Ion Ratio Lower Upper

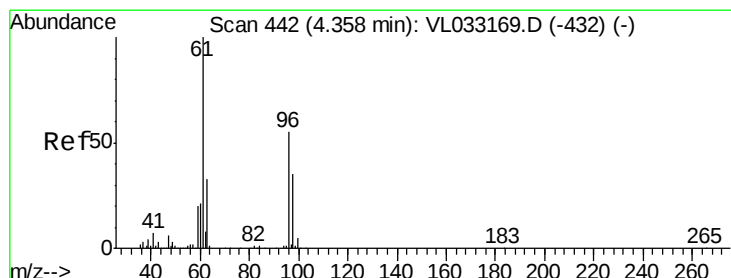
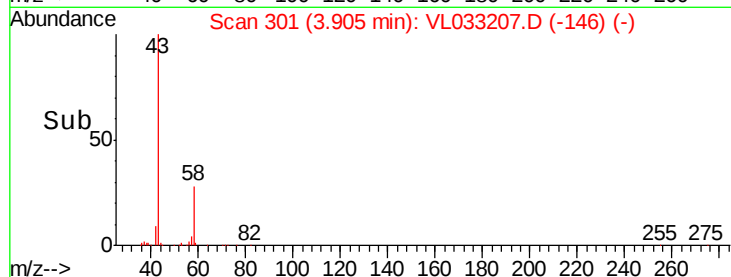
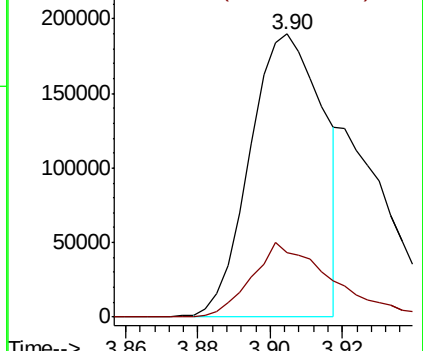
43 100

58 29.3 21.1 31.7



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#17

tert-Butyl alcohol

Concen: 1.591 ppbv m

RT: 4.37 min Scan# 445

Delta R.T. 0.01 min

Lab File: VL033207.D

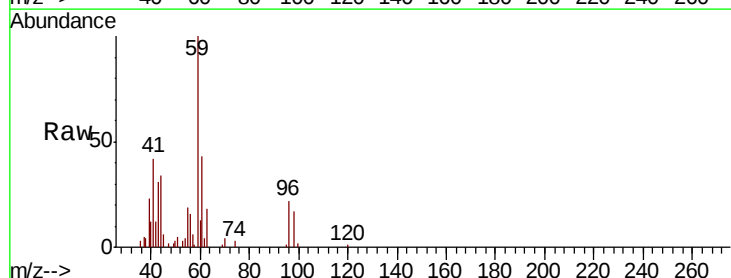
Acq: 14 Feb 2019 20:57

Tgt Ion: 59 Resp: 33326

Ion Ratio Lower Upper

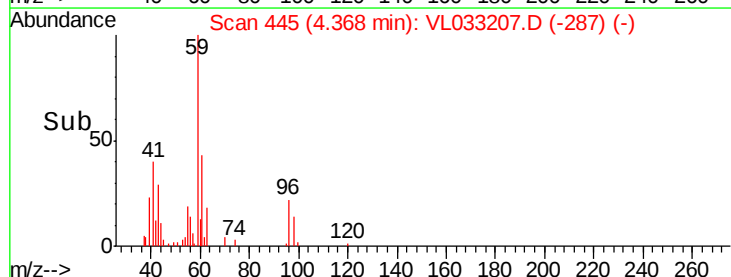
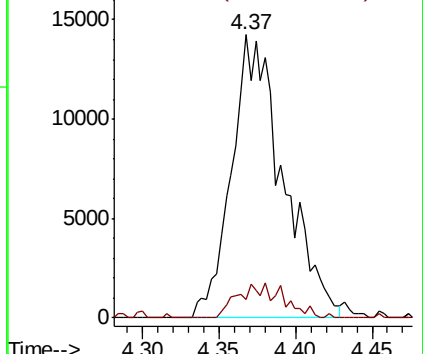
59 100

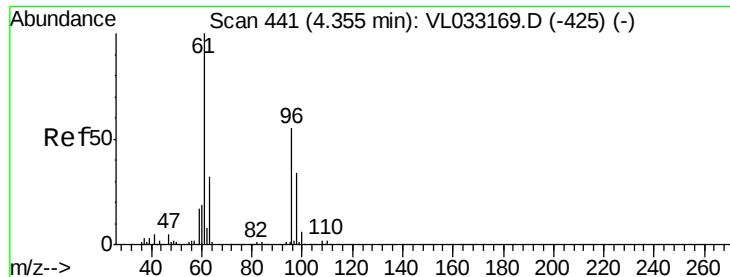
57 0.0 7.6 11.4#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#18

1,1-Dichloroethene

Concen: 0.383 ppbv

RT: 4.35 min Scan# 440

Delta R.T. -0.00 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

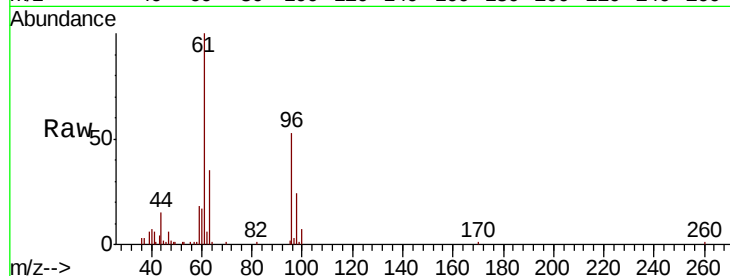
Tot Ion: 96 Resp: 17781

Ion Ratio Lower Upper

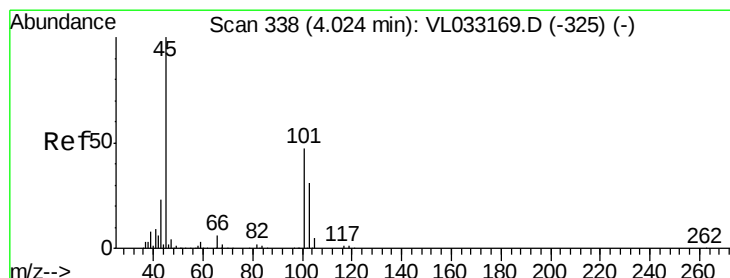
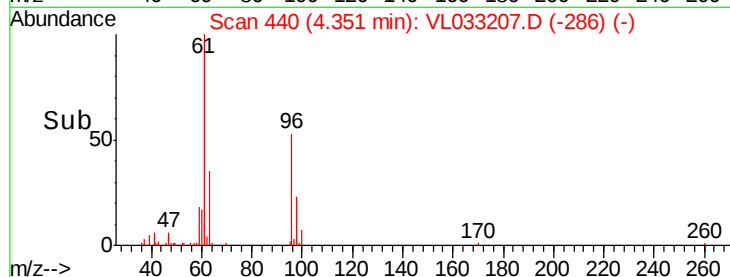
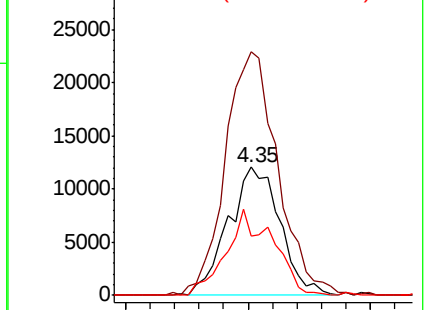
96 100

61 187.9 145.0 217.6

98 46.3 50.0 75.0#



Abundance Ion 96.00 (95.70 to 96.70): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 98.00 (97.70 to 98.70): VL0



#19

Isopropyl Alcohol

Concen: 3.214 ppbv m

RT: 4.03 min Scan# 339

Delta R.T. 0.00 min

Lab File: VL033207.D

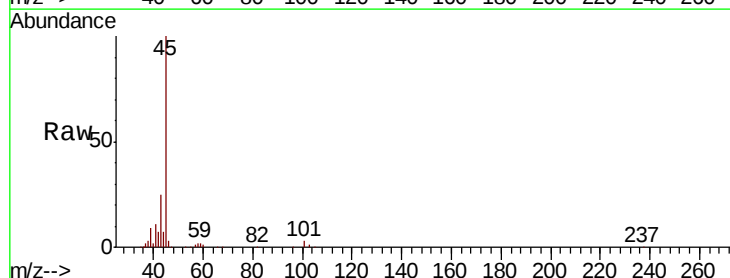
Acq: 14 Feb 2019 20:57

Tgt Ion: 45 Resp: 237748

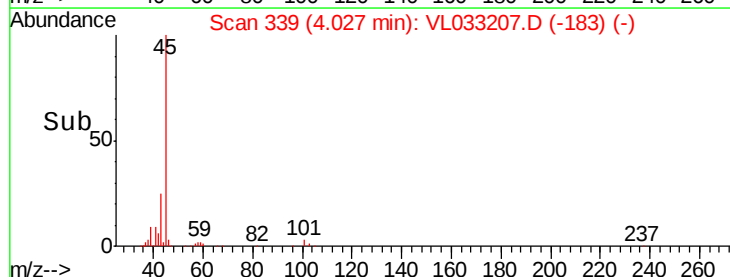
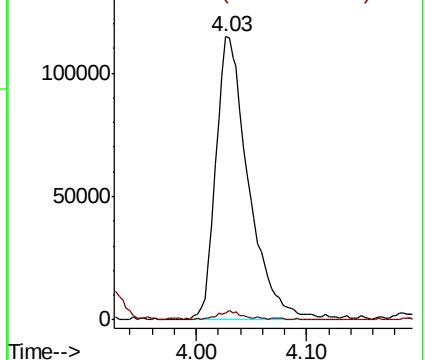
Ion Ratio Lower Upper

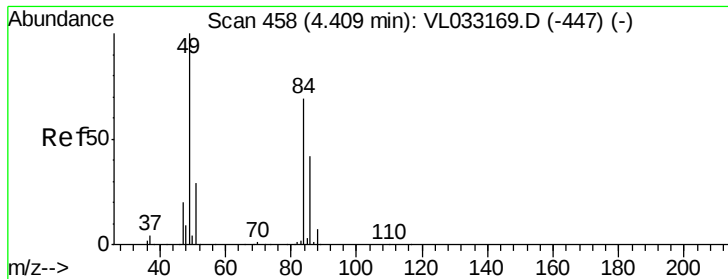
45 100

58 3.4 1.5 2.3#



Abundance Ion 45.10 (44.80 to 45.80): VL0
Ion 58.10 (57.80 to 58.80): VL0





#20

Methylene Chloride

Concen: 1.334 ppbv

RT: 4.40 min Scan# 456

Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

Tot Ion: 84 Resp: 57854

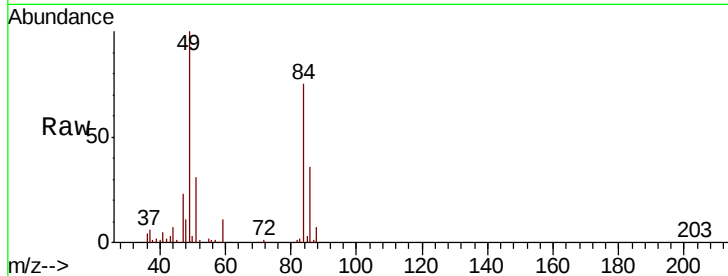
Ion	Ratio	Lower	Upper
84	100		
49	131.4	115.8	173.8
51	39.5	33.0	49.6
86	48.5	48.2	72.2

84 100

49 131.4 115.8 173.8

51 39.5 33.0 49.6

86 48.5 48.2 72.2

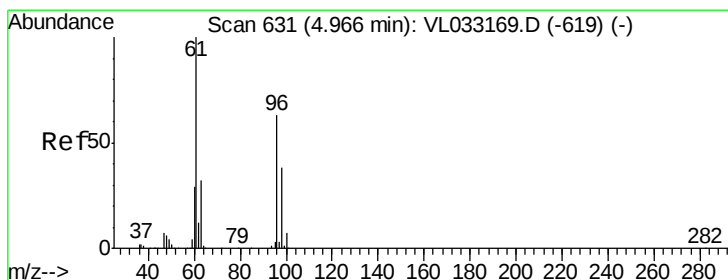
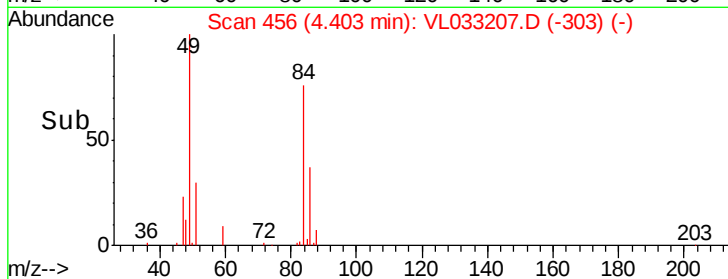
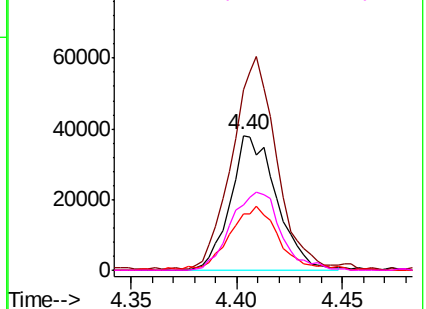


Abundance Ion 84.00 (83.70 to 84.70): VL0

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



#22

trans-1,2-Dichloroethene

Concen: 0.600 ppbv

RT: 4.96 min Scan# 630

Delta R.T. -0.00 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

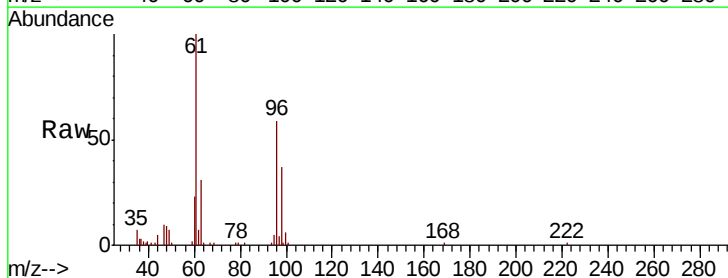
Tgt Ion: 96 Resp: 27081

Ion	Ratio	Lower	Upper
96	100		
61	170.4	126.4	189.6
98	63.8	48.4	72.6

96 100

61 170.4 126.4 189.6

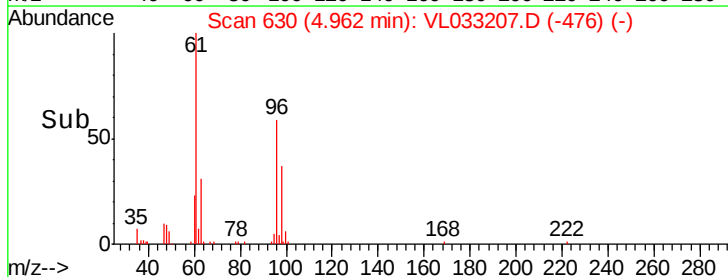
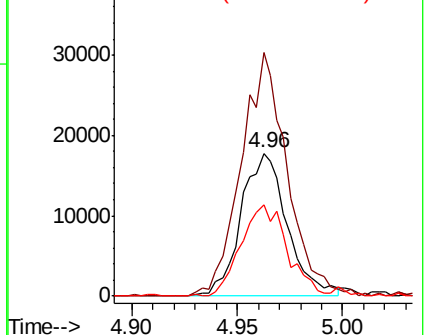
98 63.8 48.4 72.6

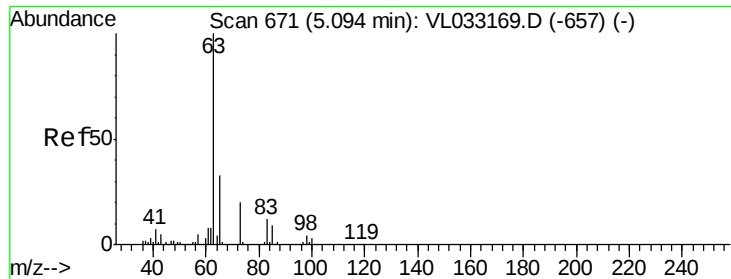


Abundance Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0





#24

1,1-Dichloroethane

Concen: 3.240 ppbv

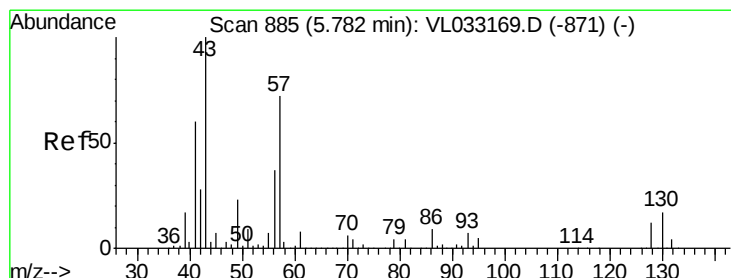
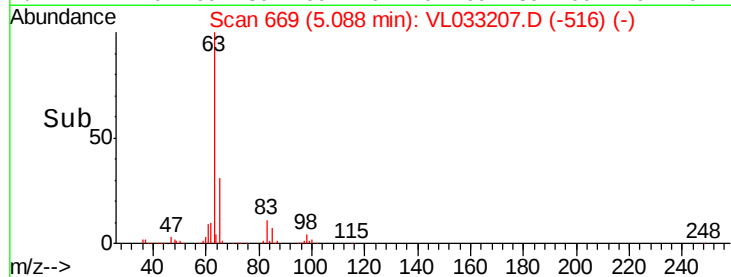
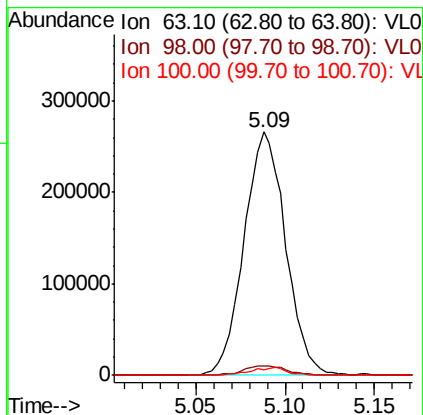
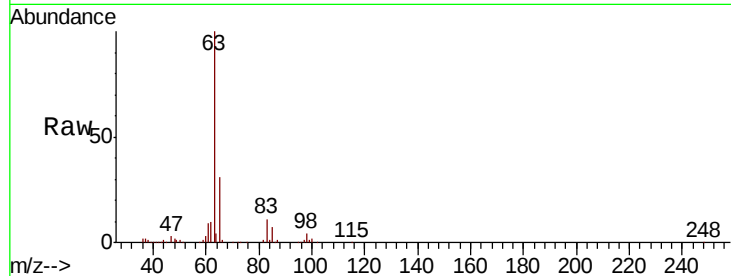
RT: 5.09 min Scan# 669

Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

Tot Ion:	63	Resp:	433130
Ion	Ratio	Lower	Upper
63	100		
98	3.8	2.1	6.5
100	2.4	1.4	4.2



#26

Hexane

Concen: 0.759 ppbv

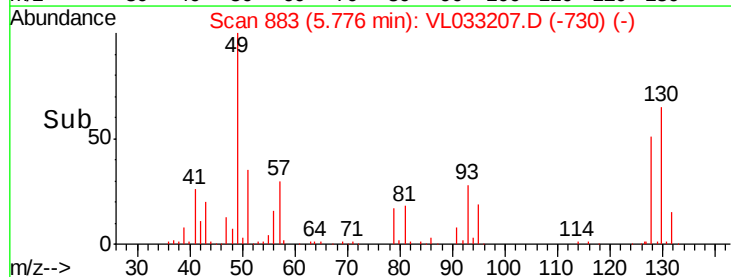
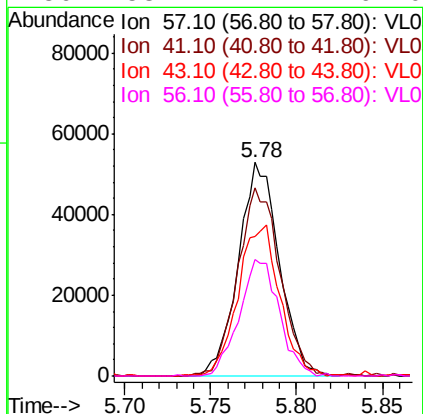
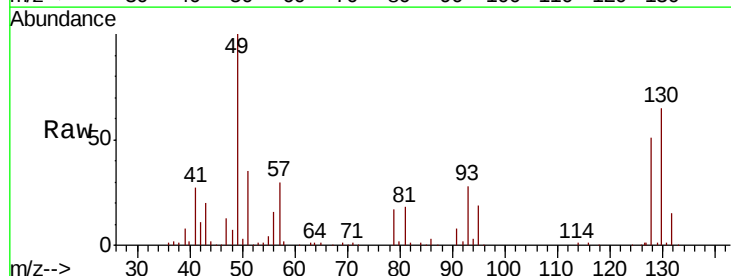
RT: 5.78 min Scan# 883

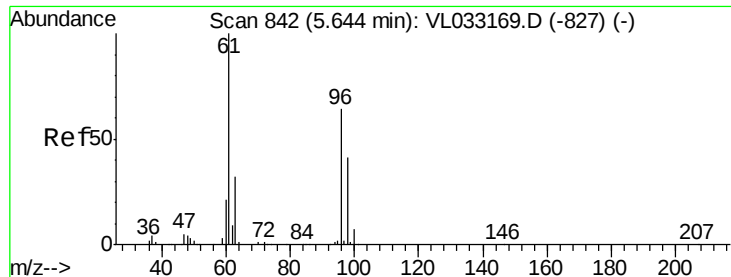
Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

Tgt Ion:	57	Resp:	87363
Ion	Ratio	Lower	Upper
57	100		
41	91.9	69.4	104.2
43	72.7	176.7	265.1#
56	53.4	41.4	62.0

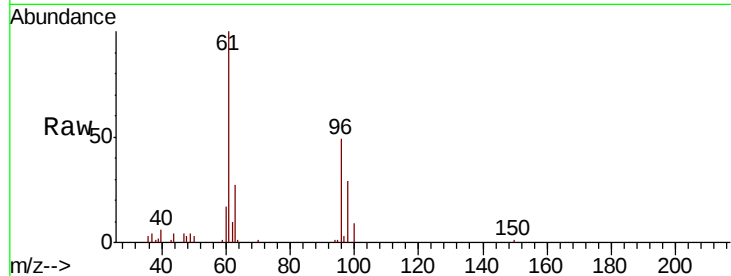




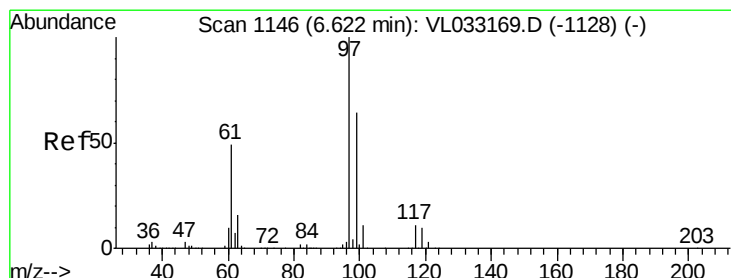
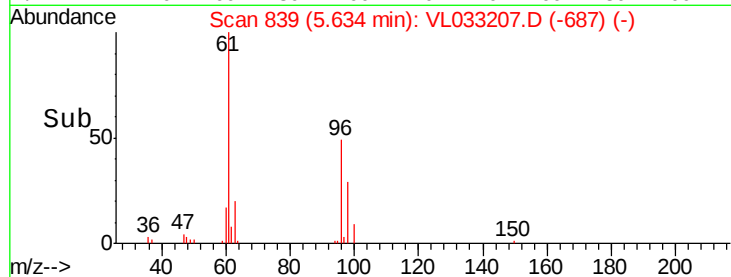
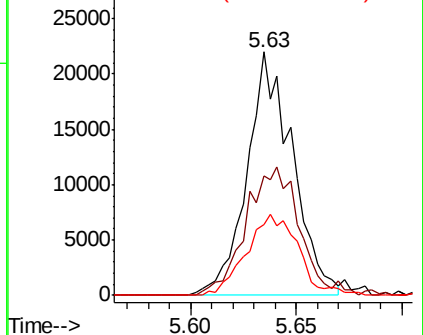
#31

cis-1,2-Dichloroethene
Concen: 0.286 ppbv
RT: 5.63 min Scan# 839
Delta R.T. -0.01 min
Lab File: VL033207.D
Acq: 14 Feb 2019 20:57

Tot Ion	Ratio	Lower	Upper
61	100		
96	48.8	51.2	76.8#
98	29.0	32.8	49.2#



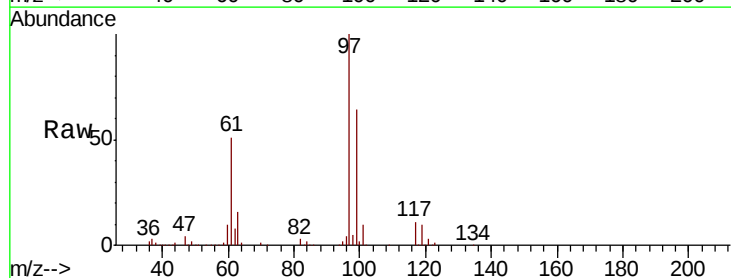
Abundance Ion 61.10 (60.80 to 61.80): VL0
Ion 96.00 (95.70 to 96.70): VL0
Ion 98.00 (97.70 to 98.70): VL0



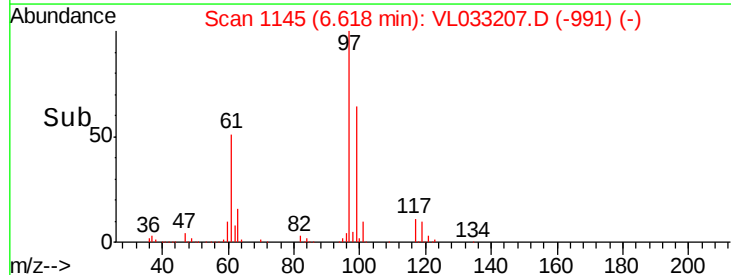
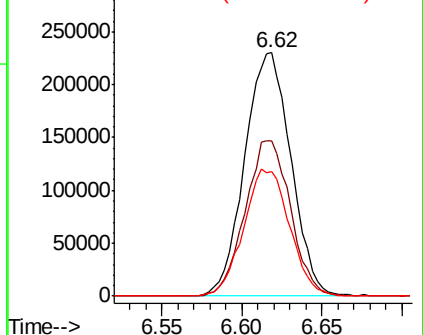
#32

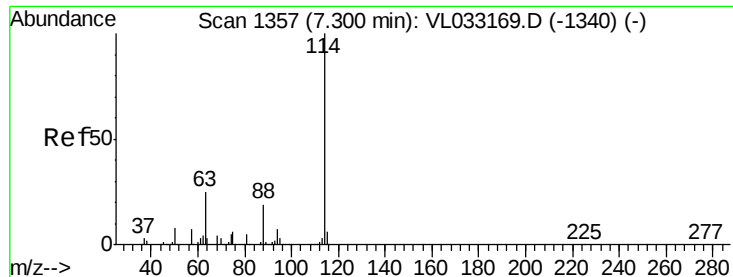
1,1,1-Trichloroethane
Concen: 2.340 ppbv
RT: 6.62 min Scan# 1145
Delta R.T. -0.00 min
Lab File: VL033207.D
Acq: 14 Feb 2019 20:57

Tgt Ion	Ratio	Lower	Upper
97	100		
99	62.9	51.4	77.2
61	52.0	38.8	58.2



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 99.00 (98.70 to 99.70): VL0
Ion 61.10 (60.80 to 61.80): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.29 min Scan# 1353

Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

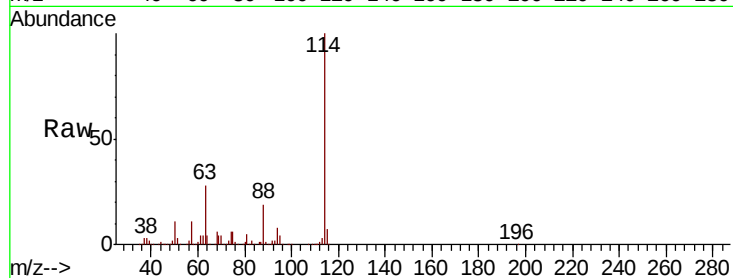
Tot Ion:114 Resp: 2113950

Ion Ratio Lower Upper

114 100

63 27.5 20.8 31.2

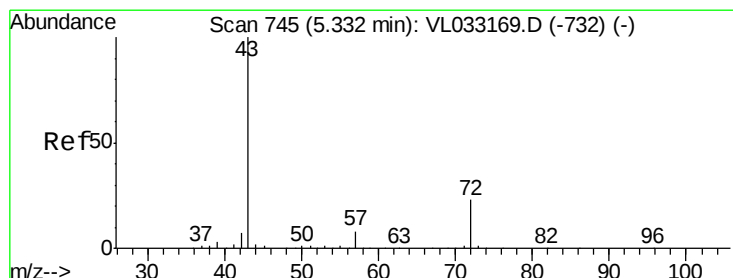
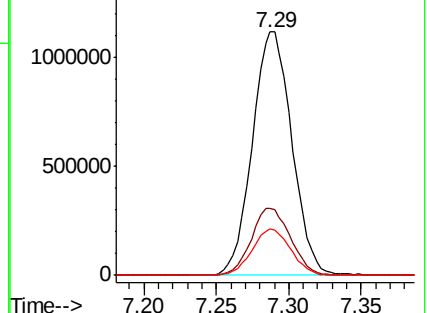
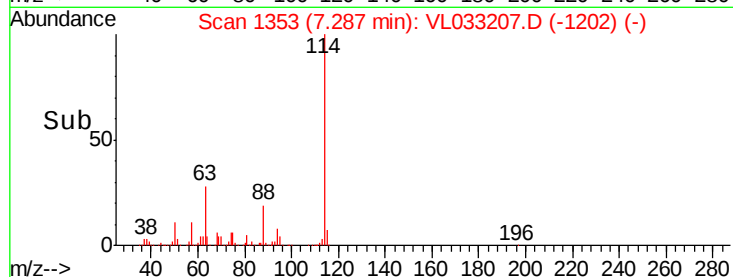
88 18.7 14.6 22.0



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.224 ppbv m

RT: 5.34 min Scan# 747

Delta R.T. 0.01 min

Lab File: VL033207.D

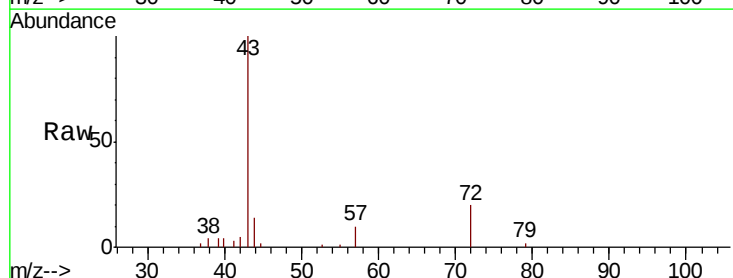
Acq: 14 Feb 2019 20:57

Tgt Ion: 43 Resp: 30081

Ion Ratio Lower Upper

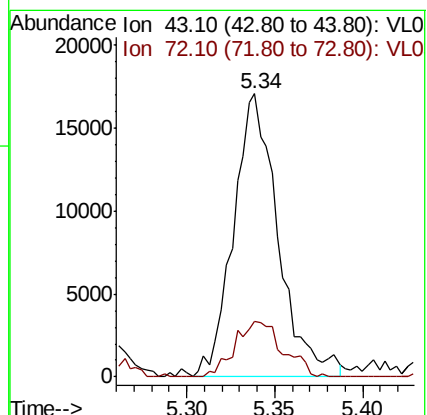
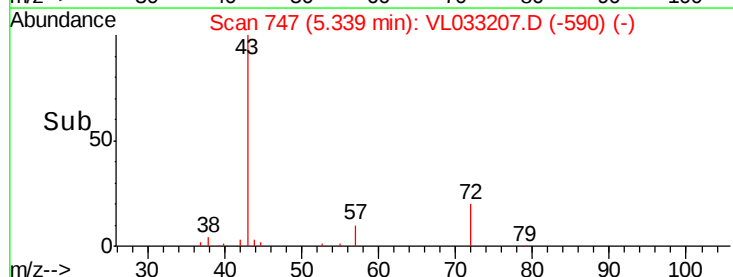
43 100

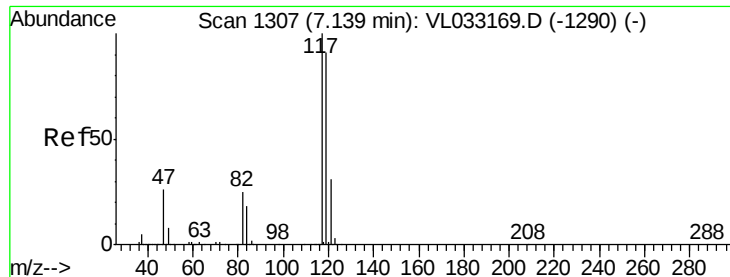
72 21.2 17.8 26.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.060 ppbv m

RT: 7.14 min Scan# 1307

Delta R.T. -0.00 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

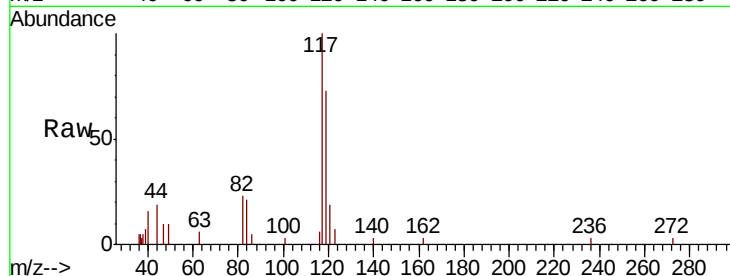
Tot Ion:117 Resp: 9719

Ion Ratio Lower Upper

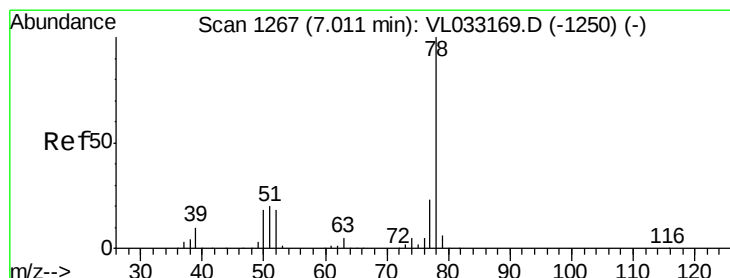
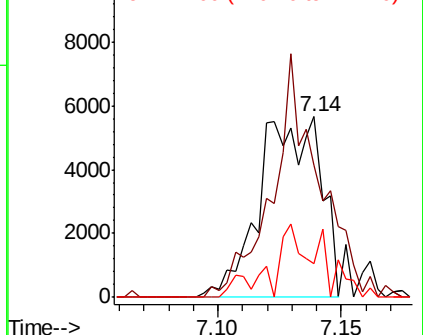
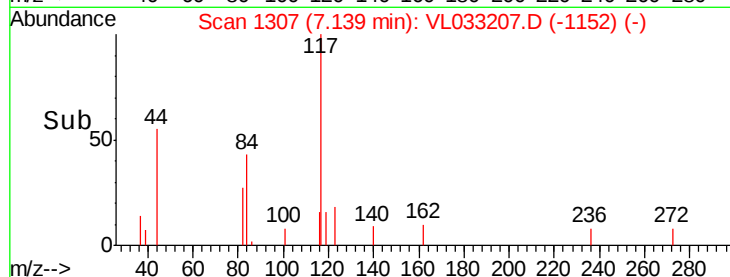
117 100

119 73.1 73.0 109.6

121 18.9 25.1 37.7#



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: 0.142 ppbv

RT: 7.00 min Scan# 1265

Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

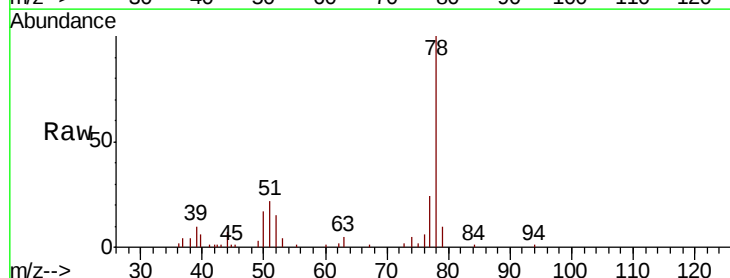
Tgt Ion: 78 Resp: 30328

Ion Ratio Lower Upper

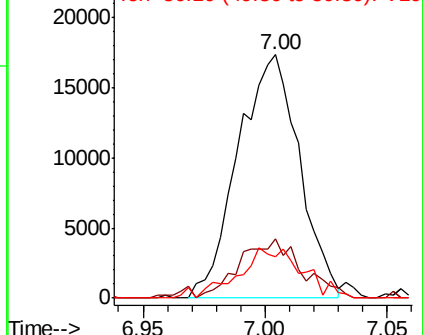
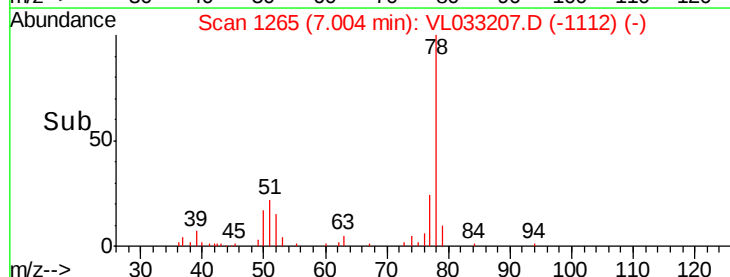
78 100

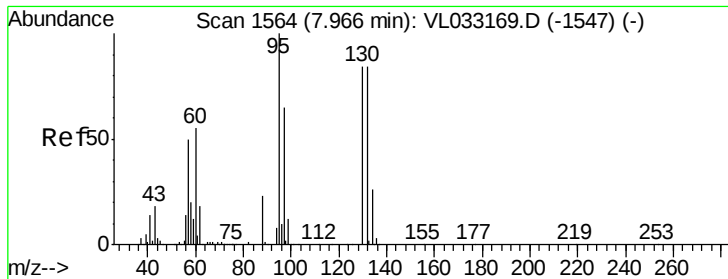
77 19.8 18.0 27.0

50 14.9 14.2 21.2



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





#38

Trichloroethene

Concen: 0.663 ppbv

RT: 7.96 min Scan# 1562

Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

Tot Ion:130 Resp: 60721

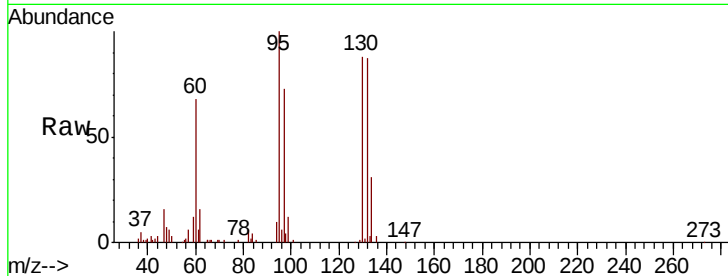
Ion Ratio Lower Upper

130 100

95 113.3 95.5 143.3

132 96.4 80.0 120.0

97 83.8 62.2 93.2

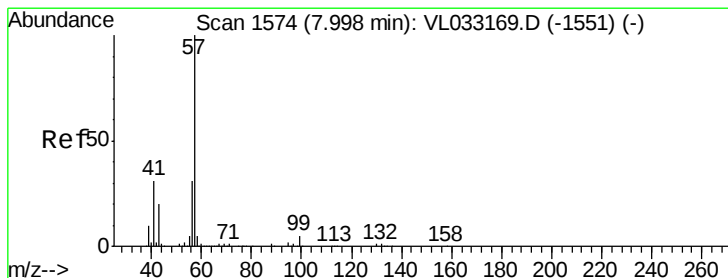
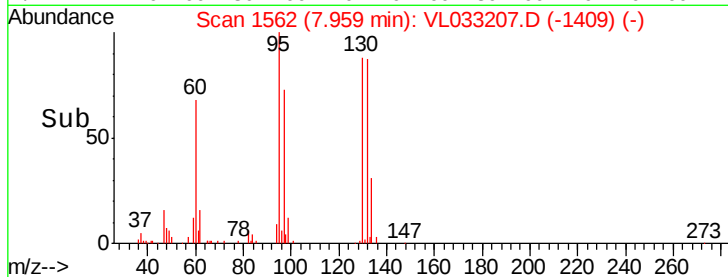
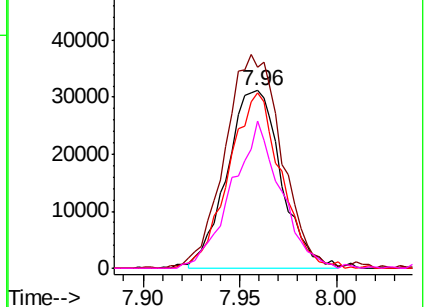


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.107 ppbv

RT: 7.99 min Scan# 1572

Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

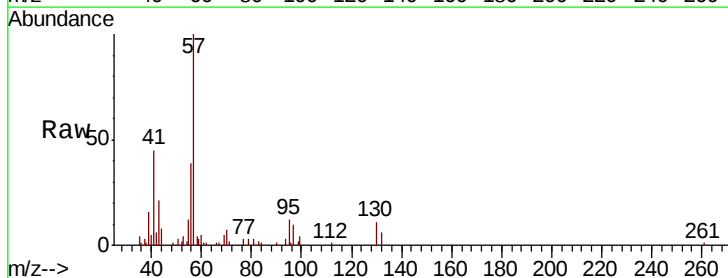
Tgt Ion: 57 Resp: 38862

Ion Ratio Lower Upper

57 100

41 46.1 25.2 37.8#

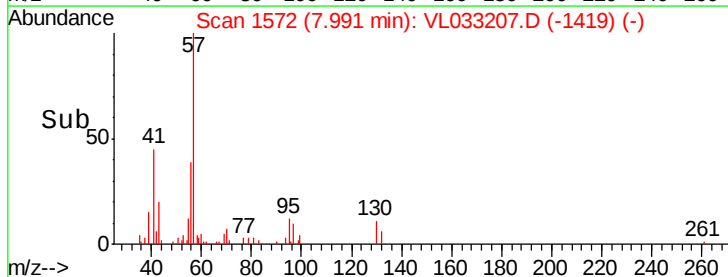
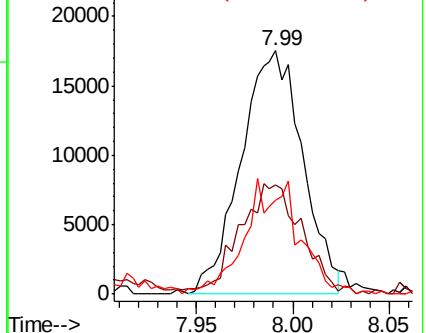
56 40.5 24.5 36.7#

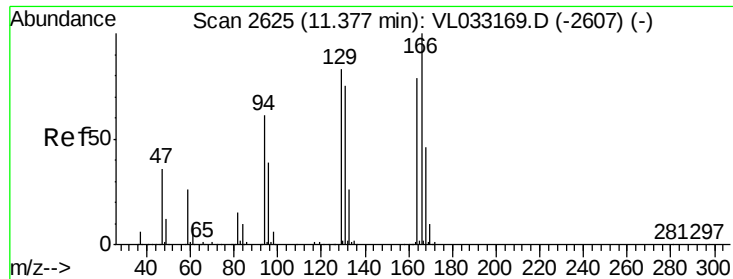


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 0.275 ppbv m

RT: 11.37 min Scan# 2624

Delta R.T. -0.00 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

Tot Ion:164 Resp: 22673

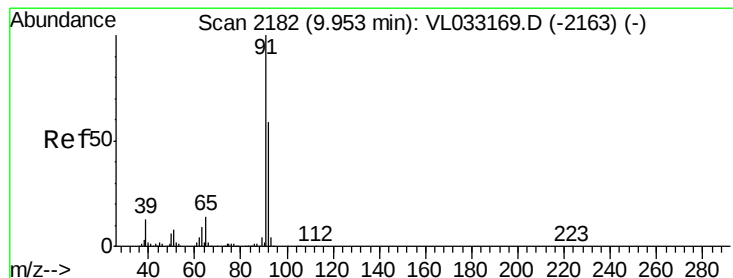
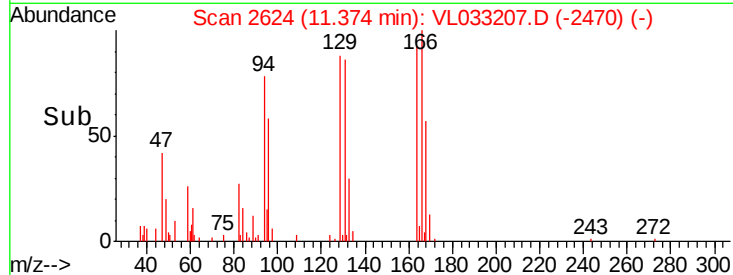
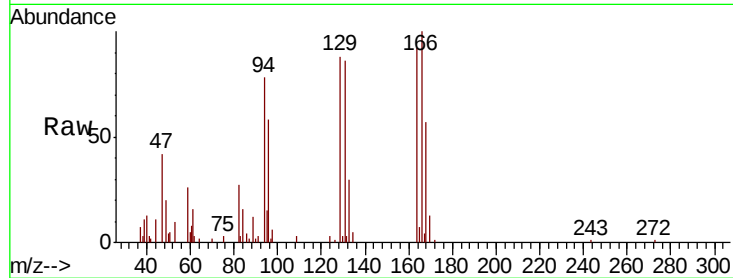
Ion	Ratio	Lower	Upper
164	100		
166	109.0	100.9	151.3
129	96.2	83.9	125.9
131	94.0	76.2	114.2

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: 0.508 ppbv m

RT: 9.95 min Scan# 2180

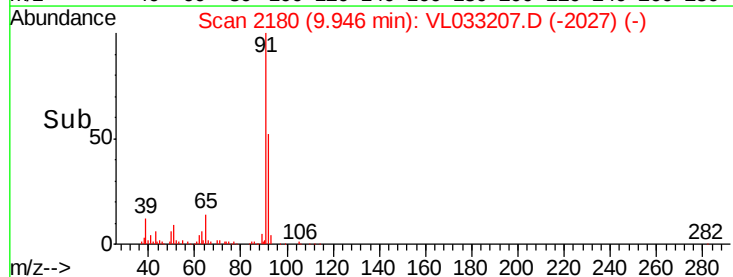
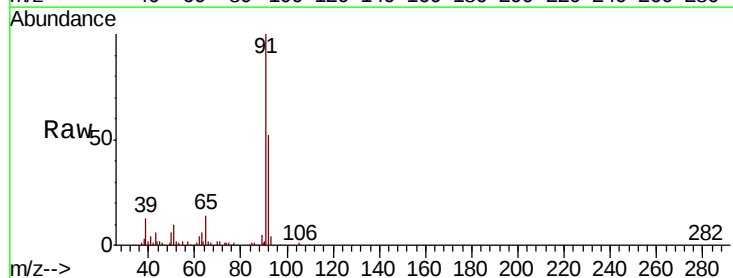
Delta R.T. -0.01 min

Lab File: VL033207.D

Acq: 14 Feb 2019 20:57

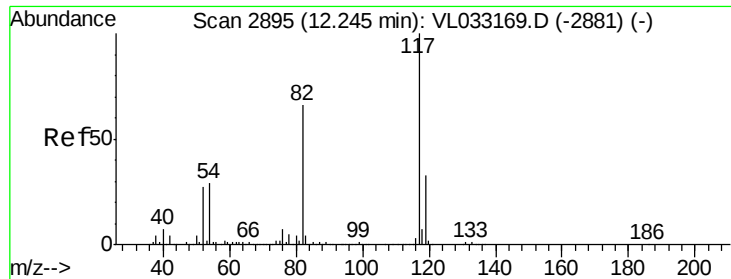
Tgt Ion: 91 Resp: 128860

Ion	Ratio	Lower	Upper
91	100		
92	0.0	48.0	72.0#



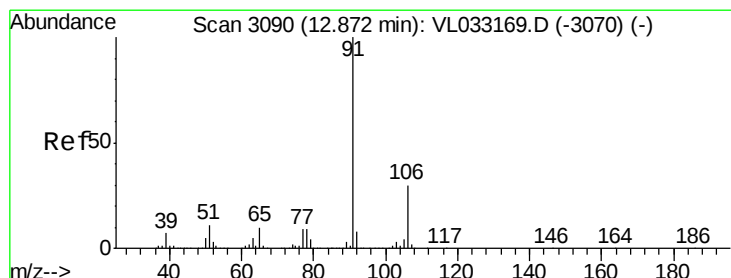
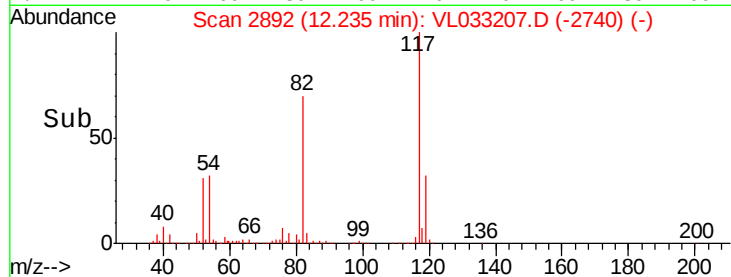
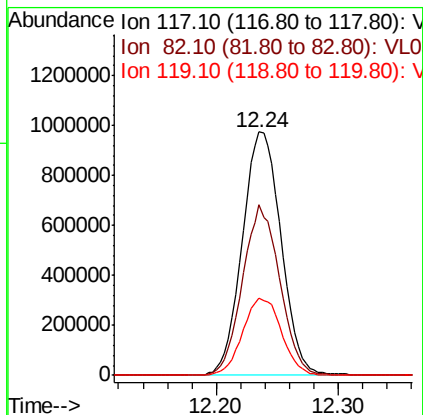
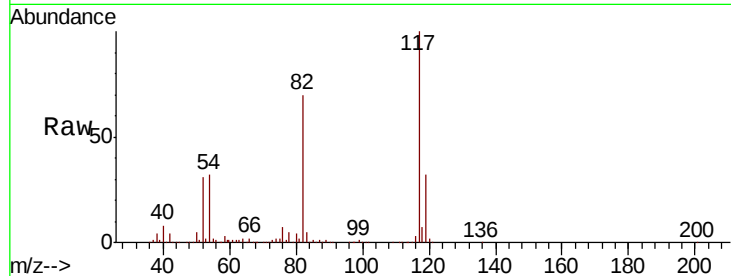
Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



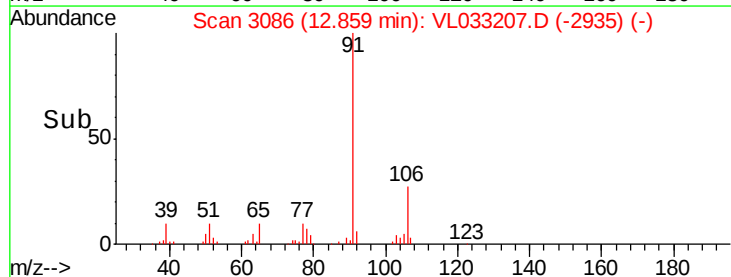
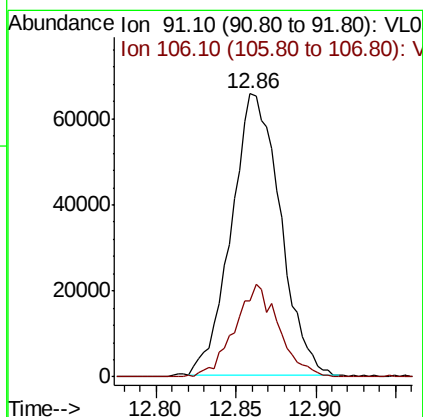
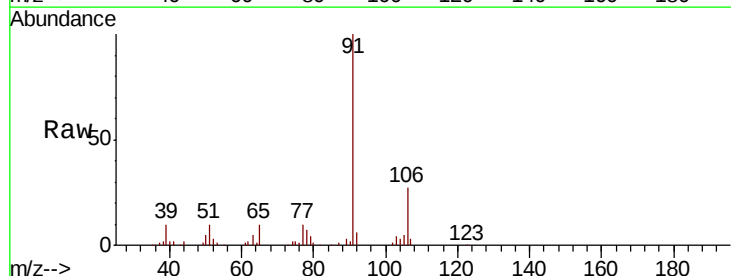
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2892
Delta R.T. -0.01 min
Lab File: VL033207.D
Acq: 14 Feb 2019 20:57

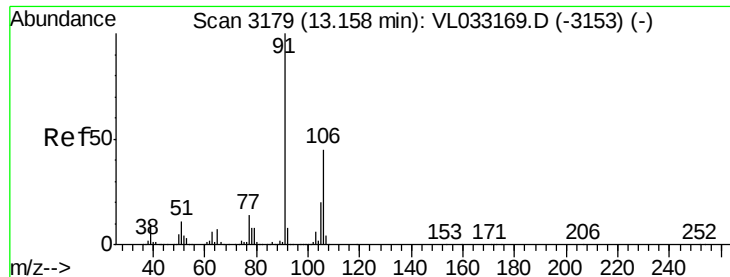
Tot Ion:117 Resp: 2135182
Ion Ratio Lower Upper
117 100
82 67.8 53.8 80.8
119 31.9 46.9 70.3#



#58
Ethyl Benzene
Concen: 0.388 ppbv
RT: 12.86 min Scan# 3086
Delta R.T. -0.01 min
Lab File: VL033207.D
Acq: 14 Feb 2019 20:57

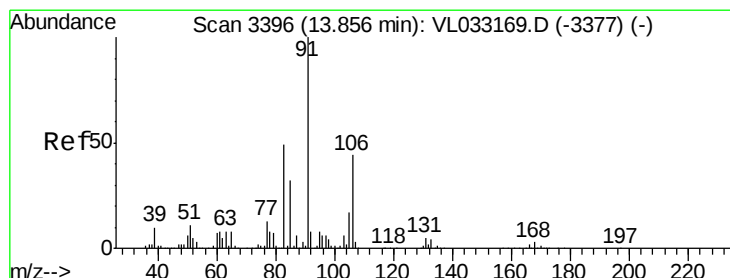
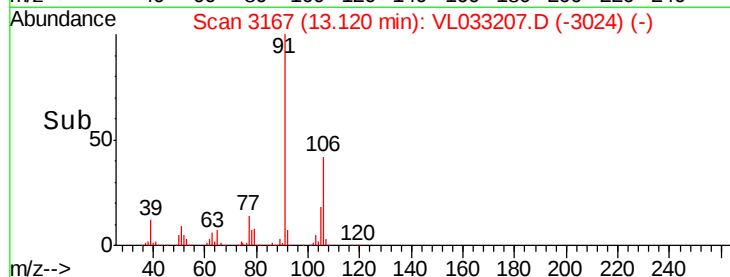
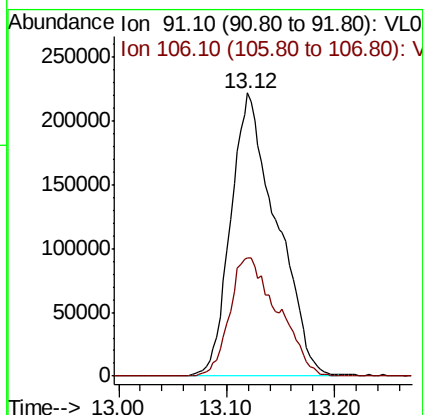
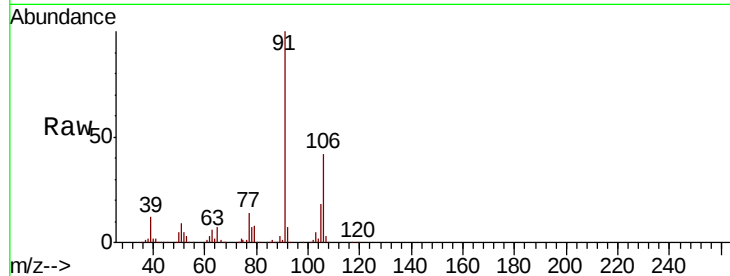
Tgt Ion: 91 Resp: 135977
Ion Ratio Lower Upper
91 100
106 26.9 23.8 35.8





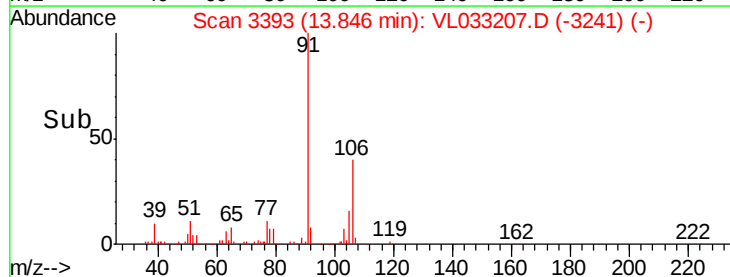
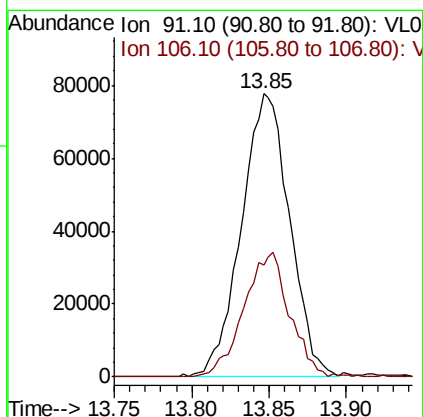
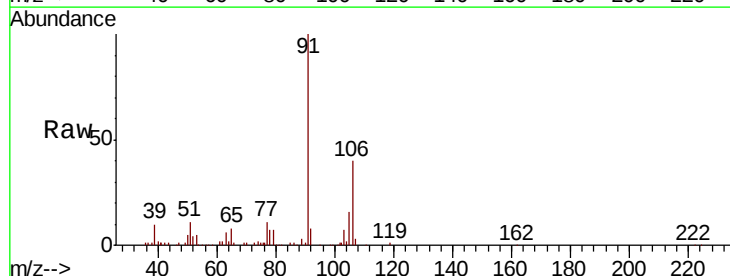
#59
m/p-Xylene
Concen: 2.253 ppbv
RT: 13.12 min Scan# 3167
Delta R.T. -0.04 min
Lab File: VL033207.D
Acq: 14 Feb 2019 20:57

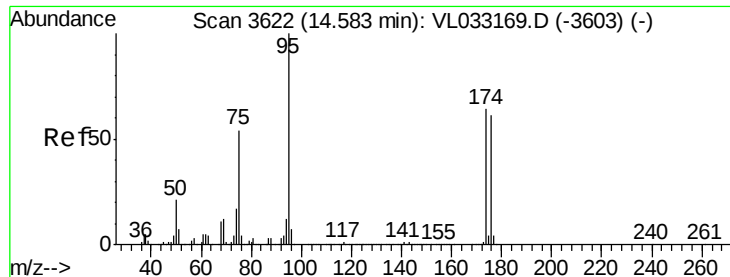
Tot Ion: 91 Resp: 656814
Ion Ratio Lower Upper
91 100
106 43.9 36.6 55.0



#60
o-Xylene
Concen: 0.593 ppbv
RT: 13.85 min Scan# 3393
Delta R.T. -0.01 min
Lab File: VL033207.D
Acq: 14 Feb 2019 20:57

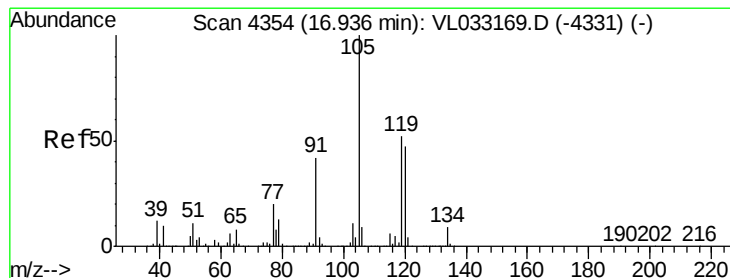
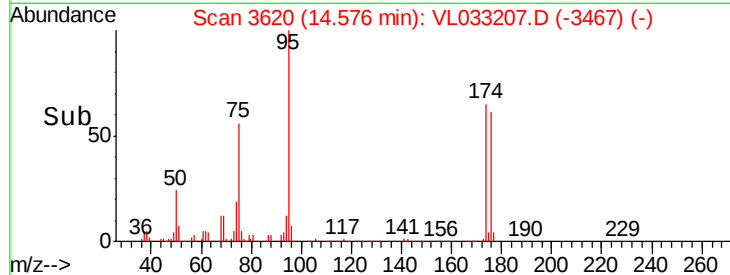
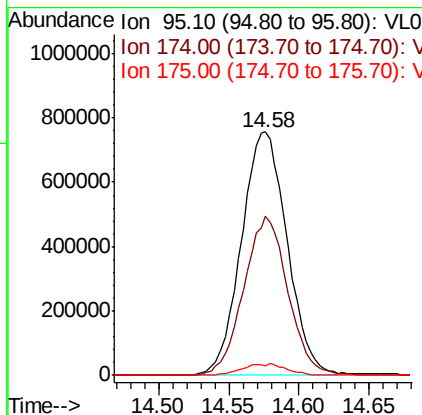
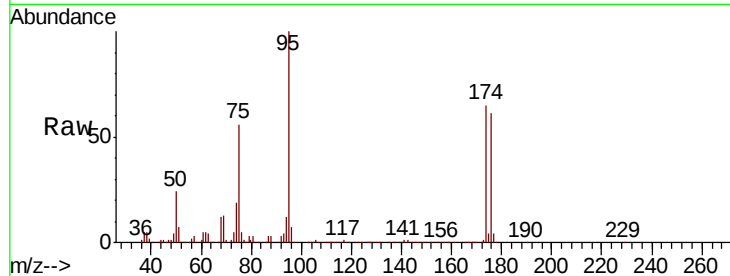
Tgt Ion: 91 Resp: 168653
Ion Ratio Lower Upper
91 100
106 41.8 21.8 65.3





#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.279 ppbv
 RT: 14.58 min Scan# 3620
 Delta R.T. -0.01 min
 Lab File: VL033207.D
 Acq: 14 Feb 2019 20:57

Tot Ion: 95 Resp: 1710383
 Ion Ratio Lower Upper
 95 100
 174 63.5 51.1 76.7
 175 4.6 3.8 5.6



#74
 1,2,4-Trimethylbenzene
 Concen: 0.286 ppbv m
 RT: 16.92 min Scan# 4349
 Delta R.T. -0.02 min
 Lab File: VL033207.D
 Acq: 14 Feb 2019 20:57

Tgt Ion: 105 Resp: 92929
 Ion Ratio Lower Upper
 105 100
 120 37.6 37.9 56.9#
 91 19.1 34.0 51.0#
 77 14.9 15.7 23.5#

