

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100719\
 Data File : VL034227.D
 Acq On : 7 Oct 2019 18:18
 Operator : SY/AP
 Sample : K5225-01DUP
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4DUP

Quant Time: Oct 09 02:21:14 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL091719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed 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	5.69	49	1179740	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.21	114	1949343	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.15	117	1959737	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.49	95	1761321	10.34	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.40%

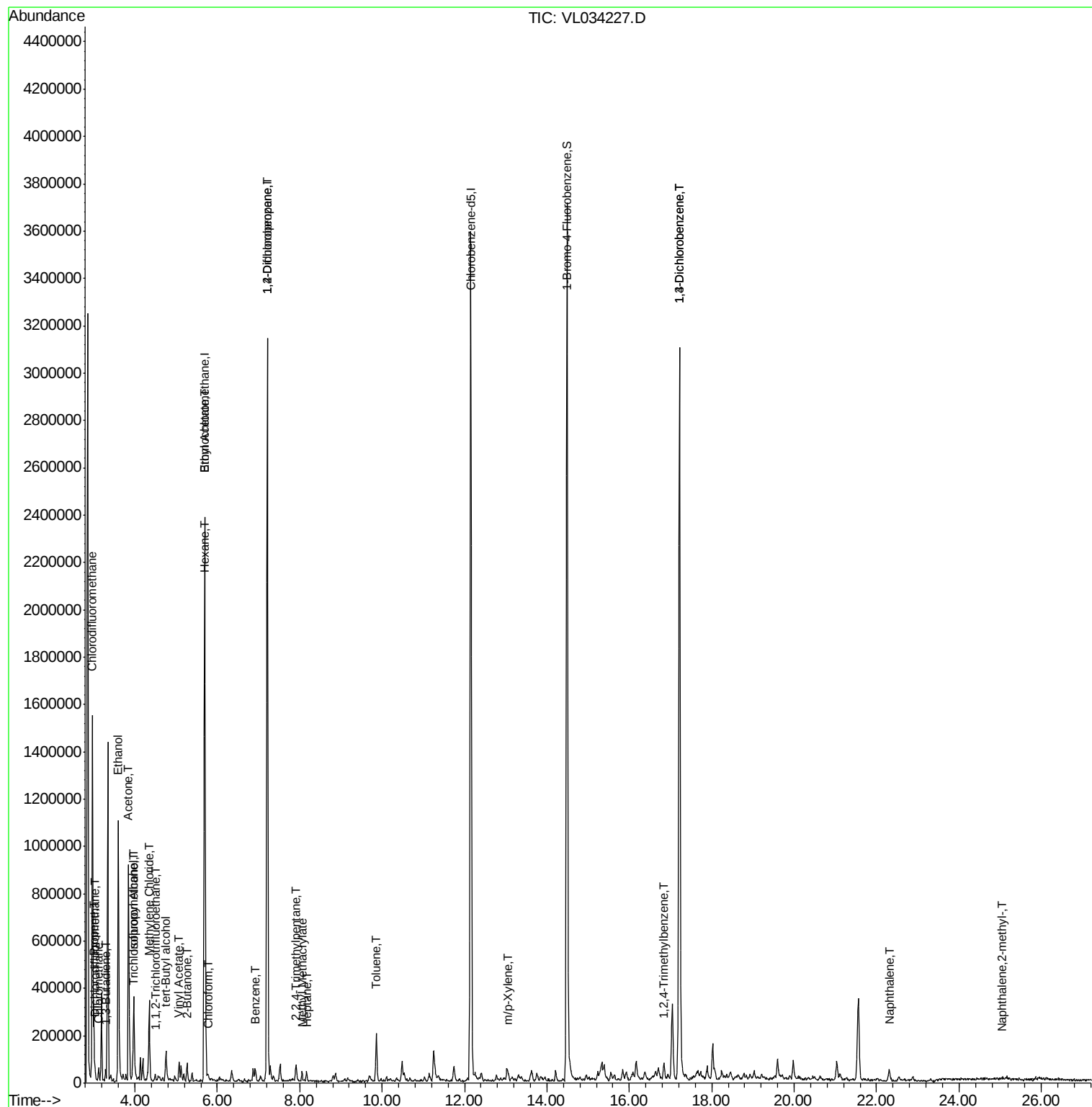
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.03	85	39541	0.227	ppbv	90
3) Chlorodifluoromethane	2.97	51	1389225	10.043	ppbv	99
4) Chloromethane	3.12	50	37036	0.456	ppbv	99
9) Propene	3.00	41	69974	1.025	ppbv #	74
10) Heptane	8.16	43	5978	0.034	ppbv #	30
11) Trichlorofluoromethane	3.95	101	48564	0.306	ppbv #	80
12) 1,1,2-Trichlorotrifluoroet	4.49	101	7987	0.077	ppbv	88
13) Ethanol	3.59	45	1092784	66.126	ppbv	99
15) Acetone	3.84	43	929570	5.879	ppbv	97
16) 1,3-Butadiene	3.29	39	11114	0.161	ppbv #	27
17) tert-Butyl alcohol	4.75	59	37484	0.374	ppbv	95
19) Isopropyl Alcohol	3.97	45	363875	3.742	ppbv #	98
20) Methylene Chloride	4.35	84	100018	2.194	ppbv	93
23) Vinyl Acetate	5.08	43	56098	0.241	ppbv #	76
25) Ethyl Acetate	5.70	43	100660	0.337	ppbv #	89
26) Hexane	5.71	57	73446	0.591	ppbv #	62
29) Chloroform	5.77	83	8636	0.049	ppbv	98
34) 2-Butanone	5.26	43	85566	0.430	ppbv	97
36) Benzene	6.92	78	30756	0.143	ppbv #	88
39) 1,2-Dichloropropane	7.21	63	642397	6.641	ppbv #	19
43) Methyl Methacrylate	8.06	69	6179	0.069	ppbv #	1
44) 2,2,4-Trimethylpentane	7.91	57	50603	0.122	ppbv #	82
53) Toluene	9.86	91	118723	0.505	ppbv	95
59) m/p-Xylene	13.06	91	8109	0.031	ppbv #	32
74) 1,2,4-Trimethylbenzene	16.84	105	21953	0.072	ppbv #	59
75) 1,3-Dichlorobenzene	17.22	146	1376418	8.452	ppbv	98
76) 1,4-Dichlorobenzene	17.22	146	1376418	8.253	ppbv	99
79) Naphthalene	22.30	128	19009	0.071	ppbv #	90
80) Naphthalene,2-methyl-	25.05	142	4566	0.037	ppbv	97

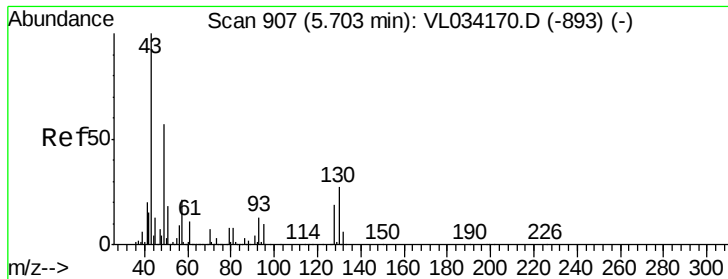
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Sep 18 12:53:31 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. -0.02 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Instrument :

MSVOA_L

ClientSampleId :

IA4DUP

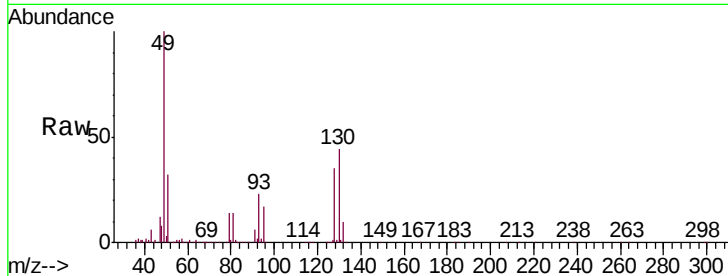
Tgt Ion: 49 Resp: 1179740

Ion Ratio Lower Upper

49 100

128 35.2 17.6 52.9

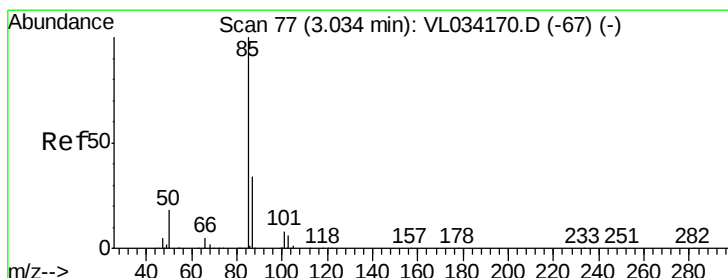
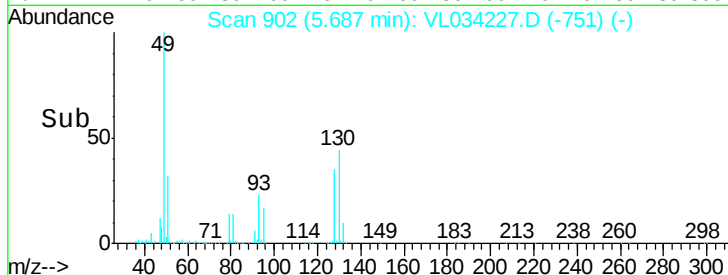
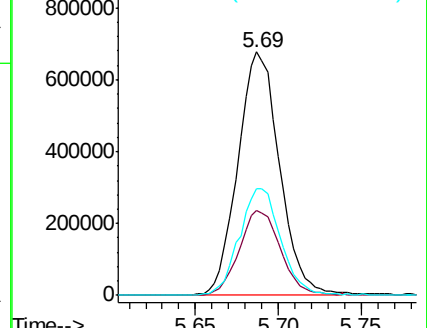
130 43.7 22.3 66.9



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: 0.227 ppbv

RT: 3.03 min Scan# 75

Delta R.T. -0.01 min

Lab File: VL034227.D

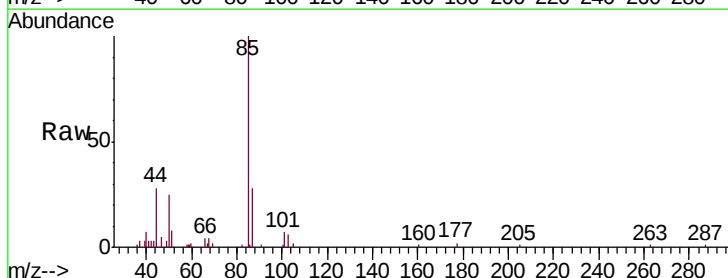
Acq: 7 Oct 2019 18:18

Tgt Ion: 85 Resp: 39541

Ion Ratio Lower Upper

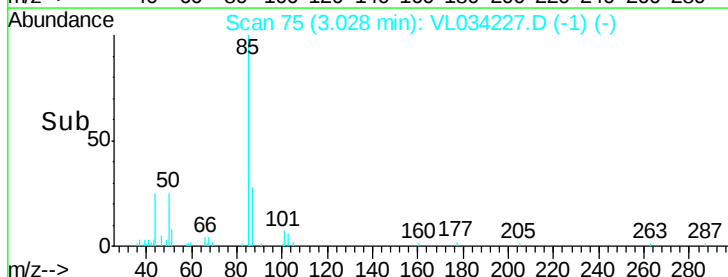
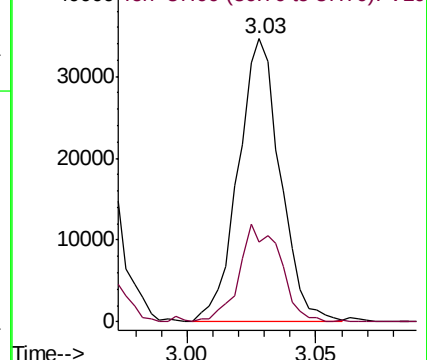
85 100

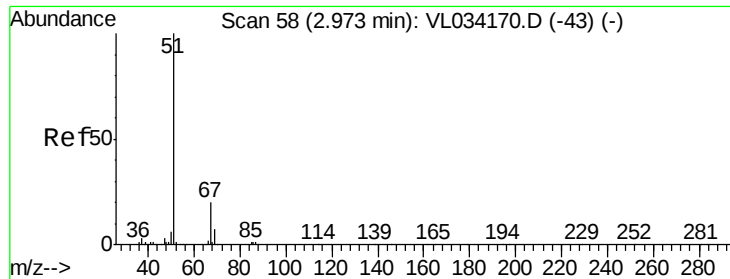
87 28.1 27.2 40.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

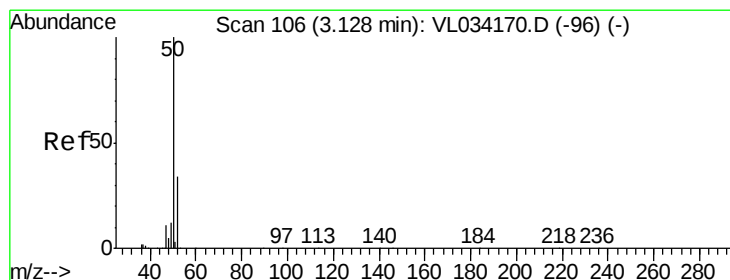
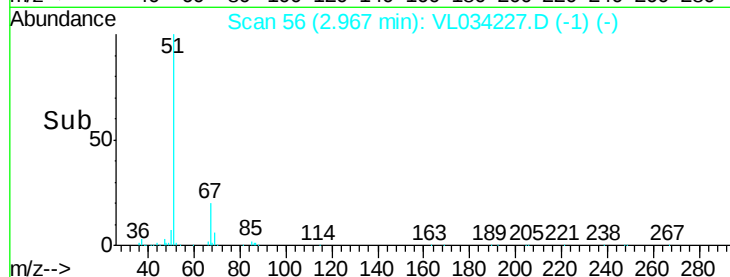
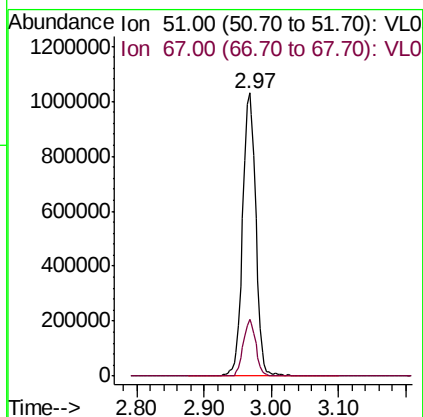
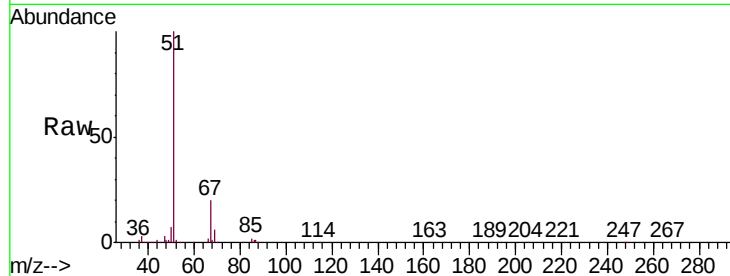




#3
 Chlorodifluoromethane
 Concen: 10.043 ppbv
 RT: 2.97 min Scan# 56
 Delta R.T. -0.01 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

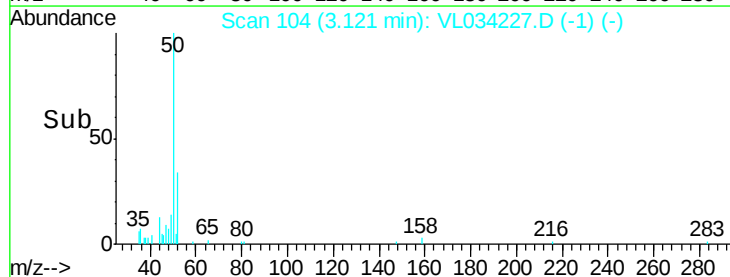
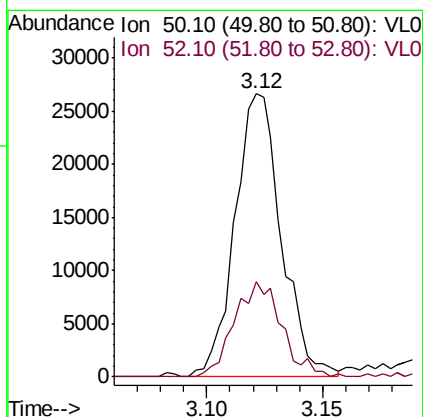
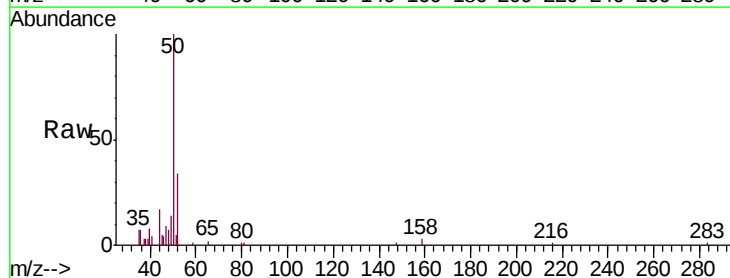
Instrument :
 MSVOA_L
 ClientSampleId :
 IA4DUP

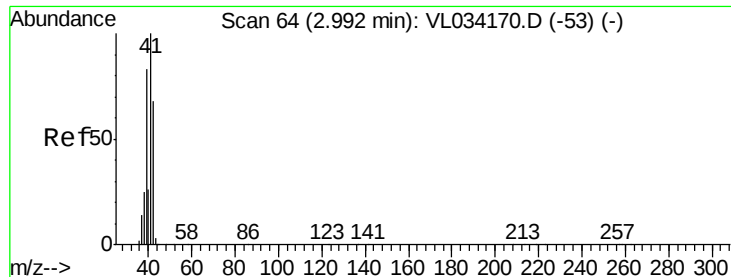
Tgt Ion: 51 Resp: 1389225
 Ion Ratio Lower Upper
 51 100
 67 19.0 14.8 22.2



#4
 Chloromethane
 Concen: 0.456 ppbv
 RT: 3.12 min Scan# 104
 Delta R.T. -0.01 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

Tgt Ion: 50 Resp: 37036
 Ion Ratio Lower Upper
 50 100
 52 34.2 27.1 40.7





#9

Propene

Concen: 1.025 ppbv

RT: 3.00 min Scan# 66

Delta R.T. 0.01 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Instrument :

MSVOA_L

ClientSampleId :

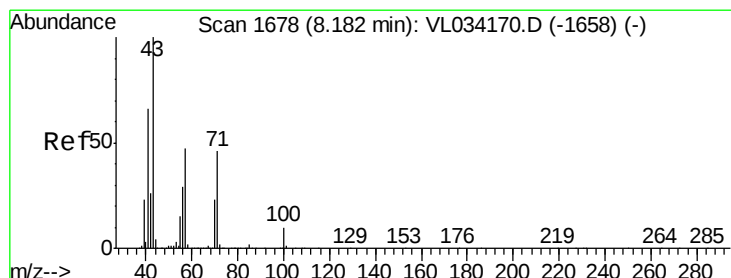
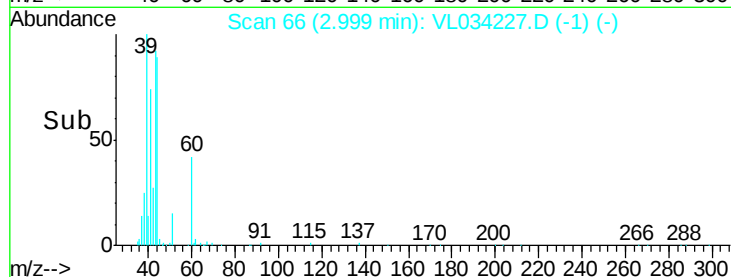
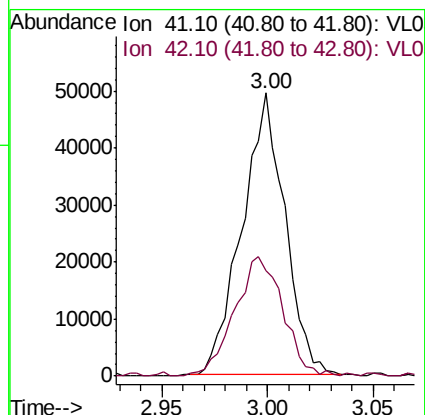
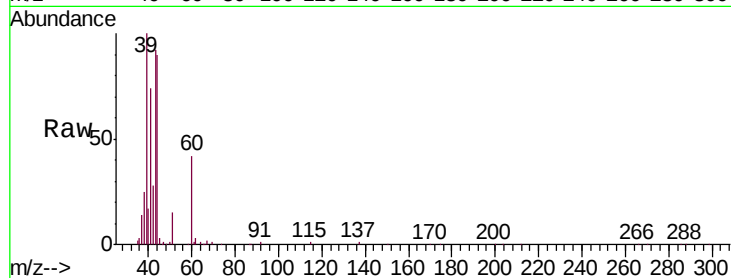
IA4DUP

Tgt Ion: 41 Resp: 69974

Ion Ratio Lower Upper

41 100

42 48.2 55.8 83.6#



#10

Heptane

Concen: 0.034 ppbv

RT: 8.16 min Scan# 1670

Delta R.T. -0.03 min

Lab File: VL034227.D

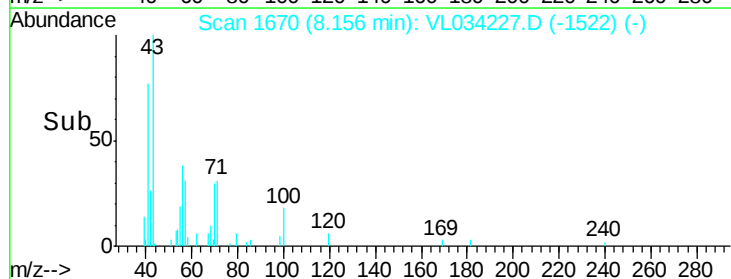
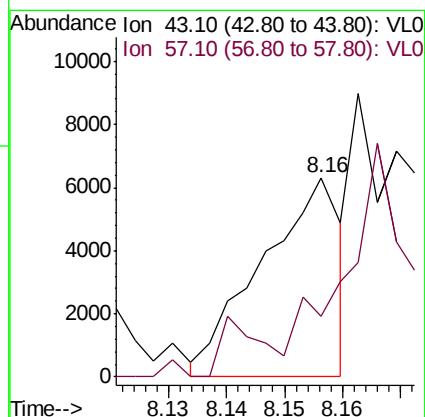
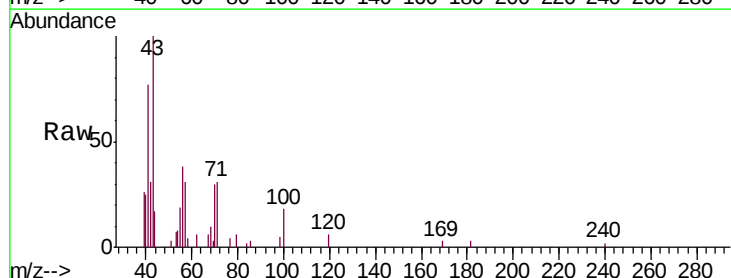
Acq: 7 Oct 2019 18:18

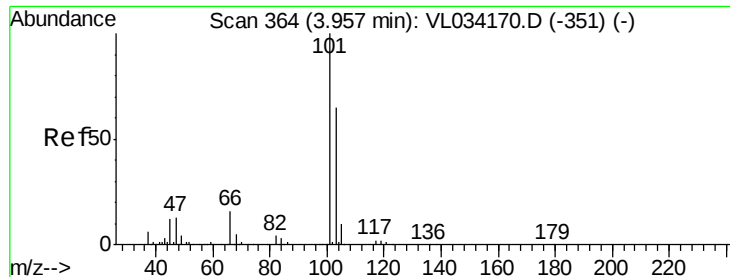
Tgt Ion: 43 Resp: 5978

Ion Ratio Lower Upper

43 100

57 0.0 37.5 56.3#





#11

Trichlorofluoromethane

Concen: 0.306 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.01 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Instrument :

MSVOA_L

ClientSampleId :

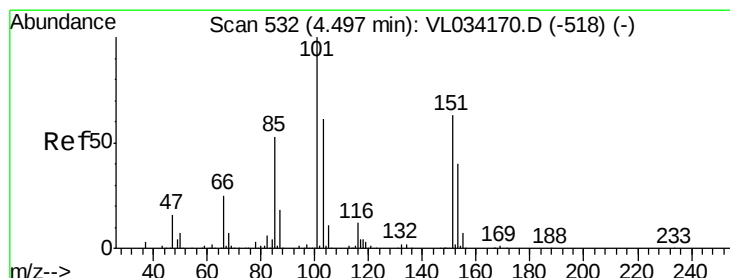
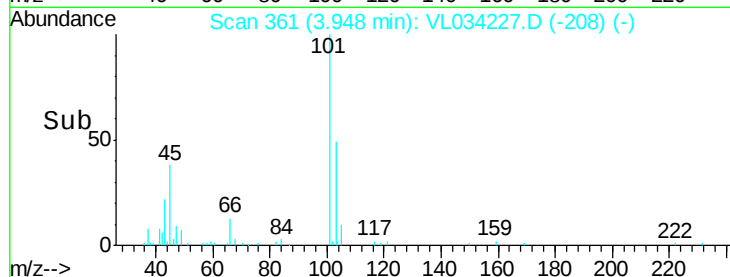
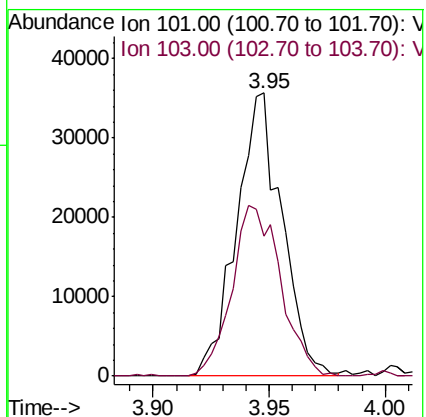
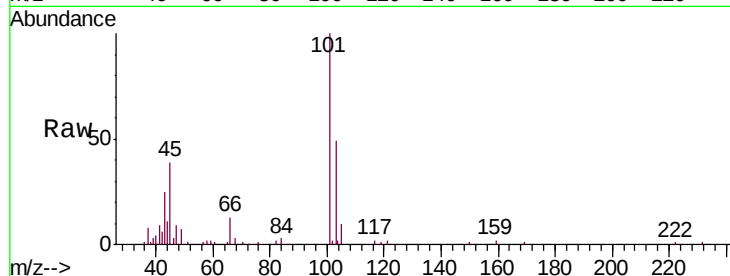
IA4DUP

Tgt Ion:101 Resp: 48564

Ion Ratio Lower Upper

101 100

103 49.4 52.1 78.1#



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.077 ppbv

RT: 4.49 min Scan# 531

Delta R.T. -0.00 min

Lab File: VL034227.D

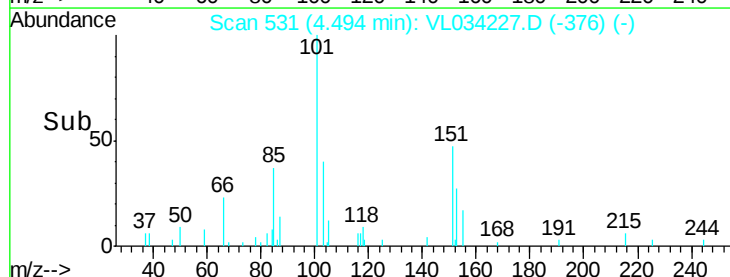
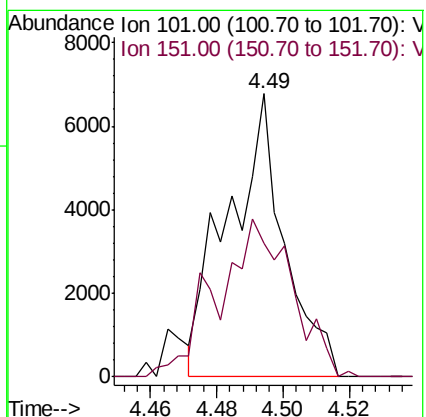
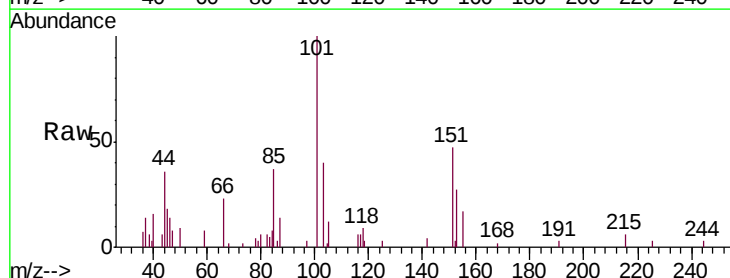
Acq: 7 Oct 2019 18:18

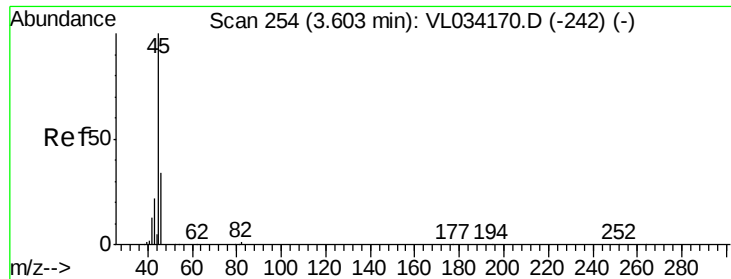
Tgt Ion:101 Resp: 7987

Ion Ratio Lower Upper

101 100

151 74.2 51.8 77.8





#13

Ethanol

Concen: 66.126 ppbv

RT: 3.59 min Scan# 251

Delta R.T. -0.01 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Instrument :

MSVOA_L

ClientSampleId :

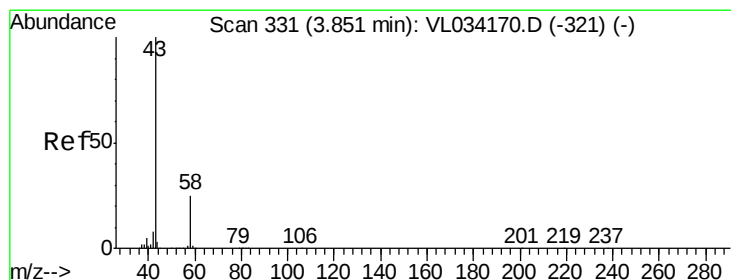
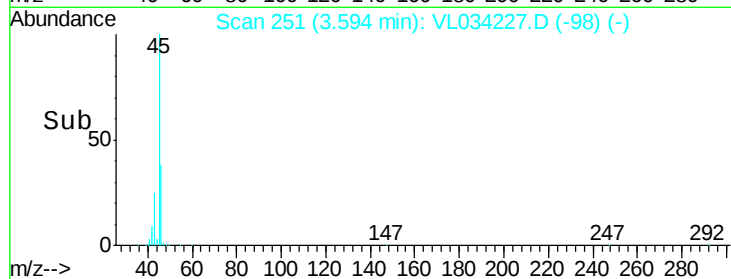
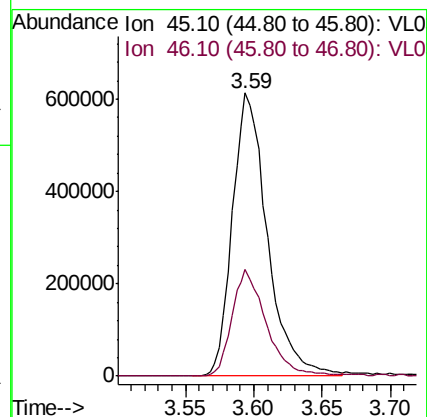
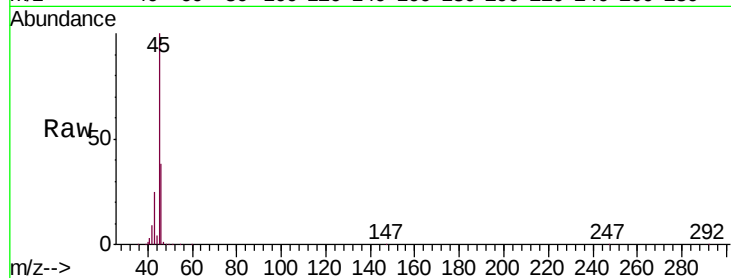
IA4DUP

Tgt Ion: 45 Resp: 1092784

Ion Ratio Lower Upper

45 100

46 37.9 15.5 61.9



#15

Acetone

Concen: 5.879 ppbv

RT: 3.84 min Scan# 328

Delta R.T. -0.01 min

Lab File: VL034227.D

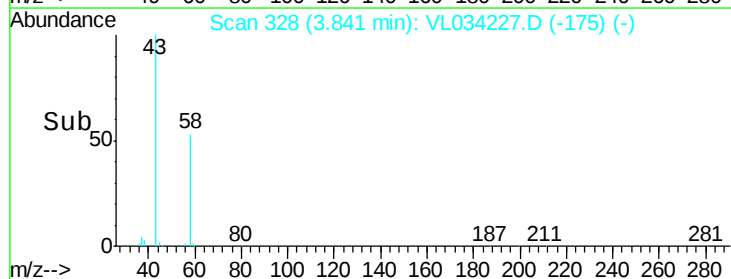
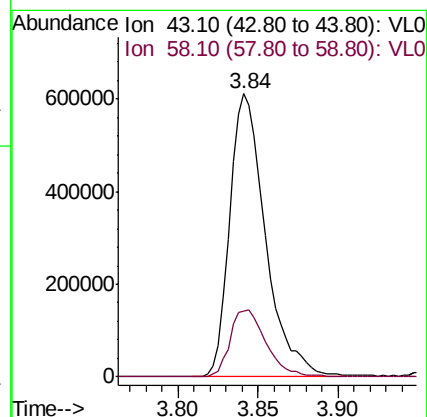
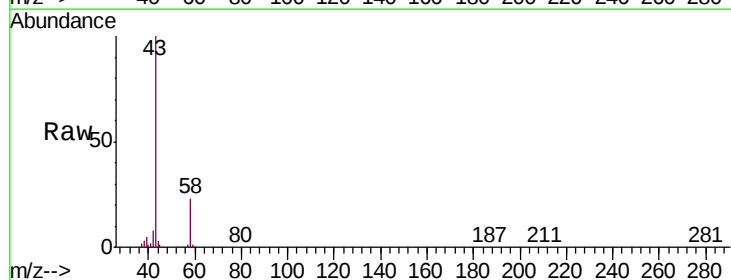
Acq: 7 Oct 2019 18:18

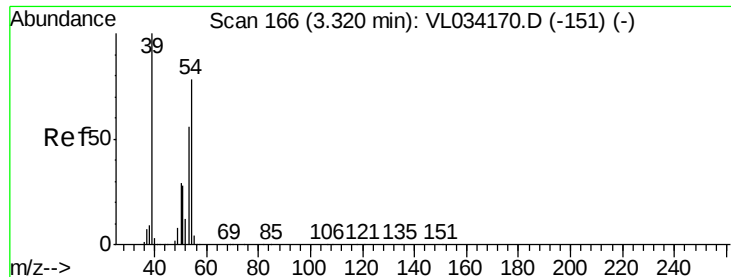
Tgt Ion: 43 Resp: 929570

Ion Ratio Lower Upper

43 100

58 24.0 20.5 30.7

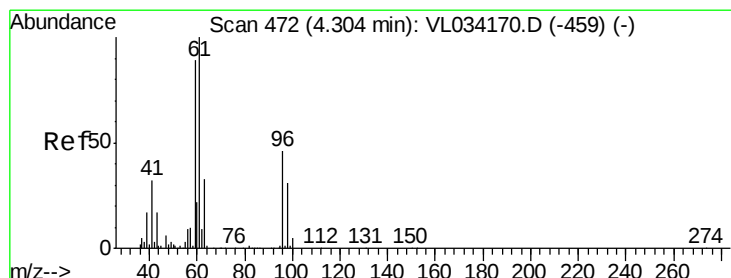
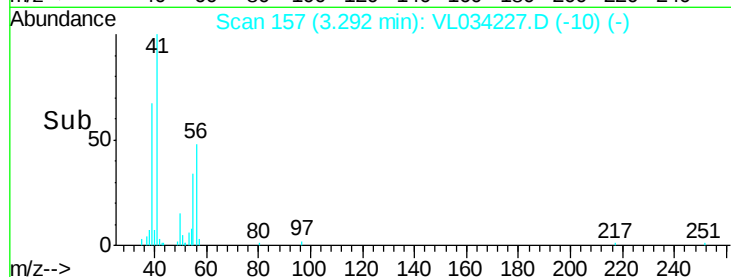
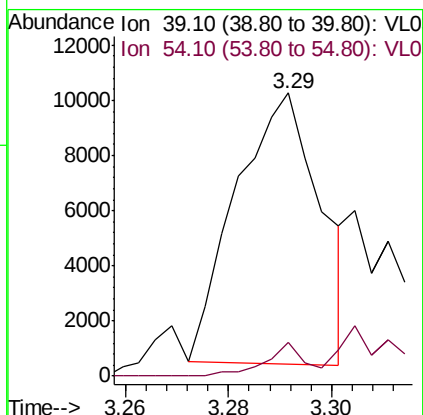
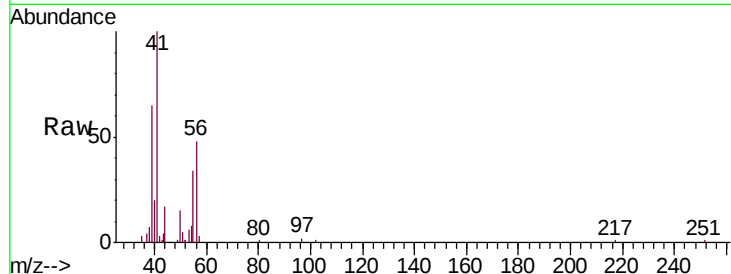




#16
1,3-Butadiene
Concen: 0.161 ppbv
RT: 3.29 min Scan# 157
Delta R.T. -0.03 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

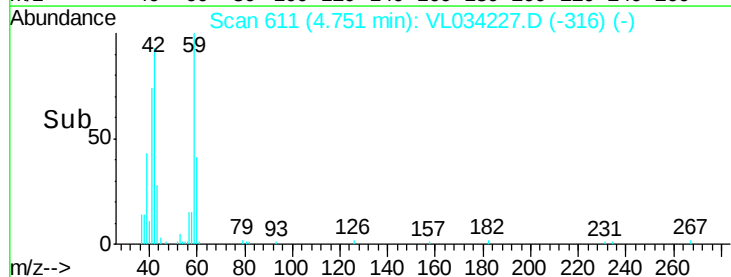
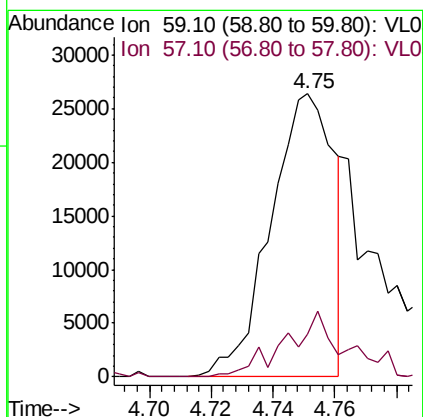
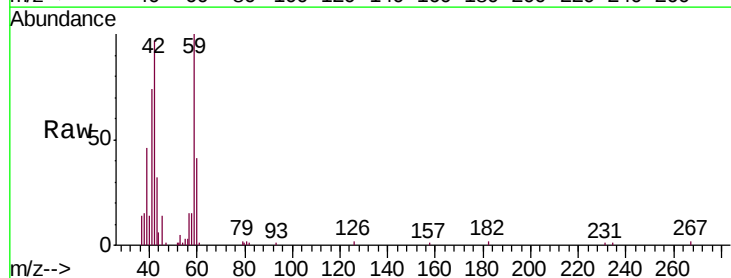
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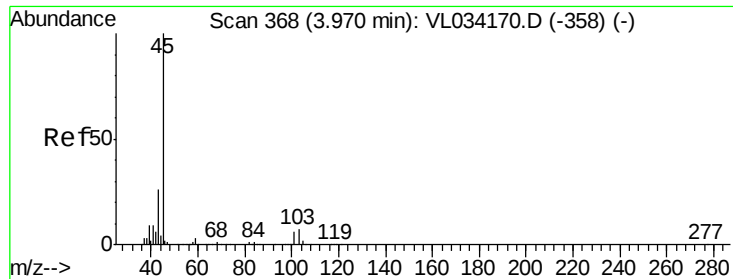
Tgt Ion: 39 Resp: 11114
Ion Ratio Lower Upper
39 100
54 15.5 63.4 95.0#



#17
tert-Butyl alcohol
Concen: 0.374 ppbv
RT: 4.75 min Scan# 611
Delta R.T. 0.45 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

Tgt Ion: 59 Resp: 37484
Ion Ratio Lower Upper
59 100
57 12.8 8.7 13.1





#19

Isopropyl Alcohol

Concen: 3.742 ppbv

RT: 3.97 min Scan# 367

Delta R.T. -0.00 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Instrument :

MSVOA_L

ClientSampleId :

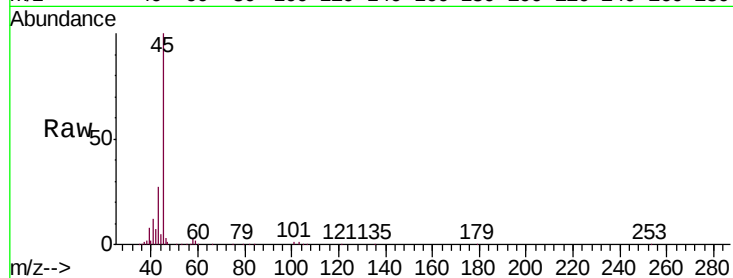
IA4DUP

Tgt Ion: 45 Resp: 363875

Ion Ratio Lower Upper

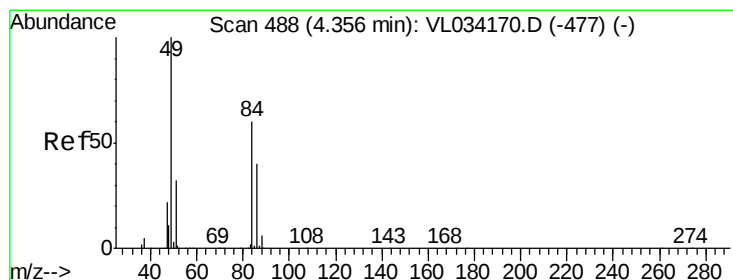
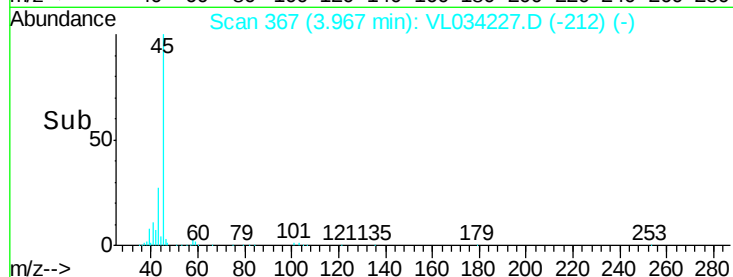
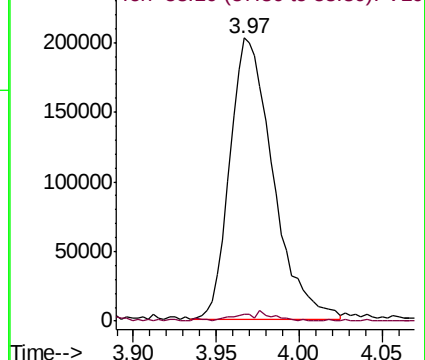
45 100

58 2.4 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: 2.194 ppbv

RT: 4.35 min Scan# 485

Delta R.T. -0.01 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Tgt Ion: 84 Resp: 100018

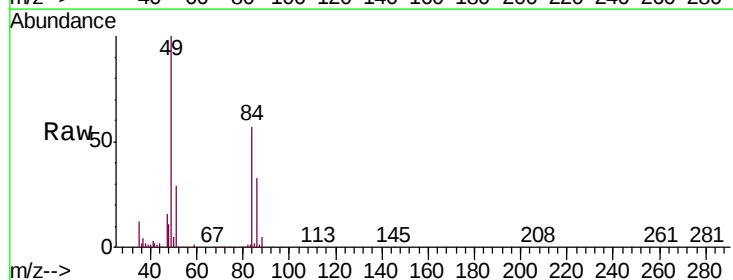
Ion Ratio Lower Upper

84 100

49 175.9 133.8 200.8

51 51.4 43.6 65.4

86 59.0 53.1 79.7

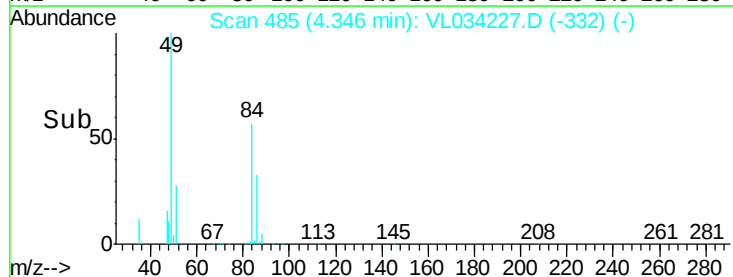
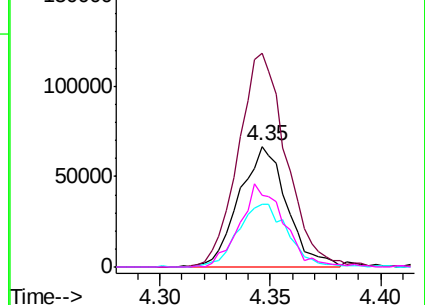


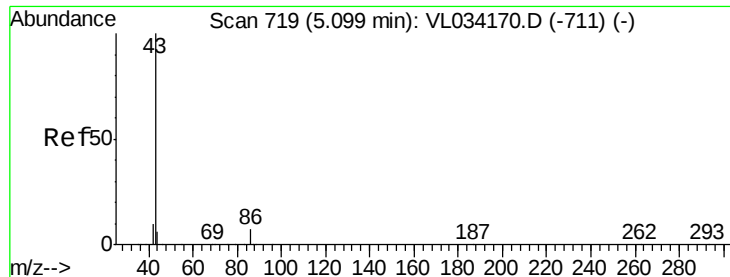
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0





#23

Vinyl Acetate

Concen: 0.241 ppbv

RT: 5.08 min Scan# 713

Delta R.T. -0.02 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

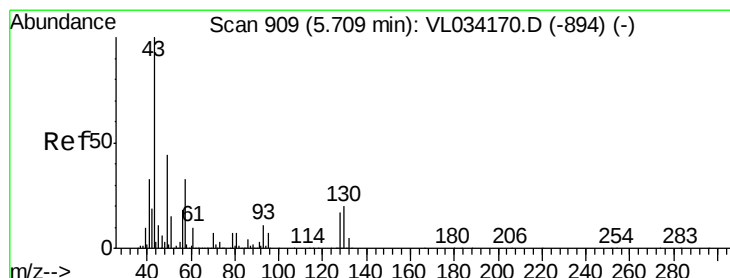
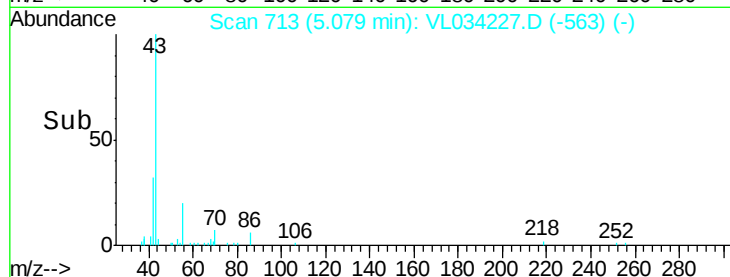
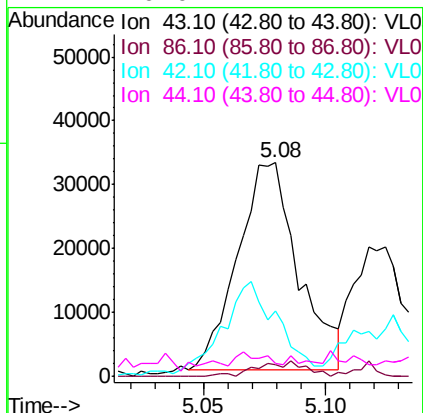
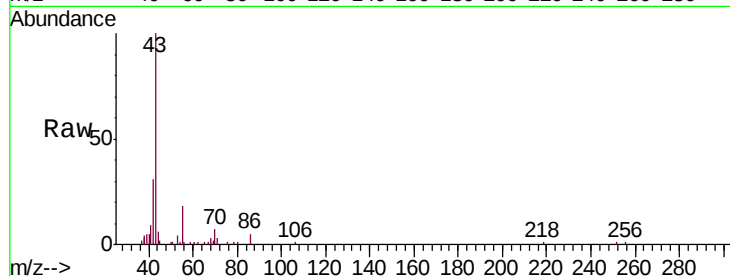
Instrument :

MSVOA_L

ClientSampleId :

IA4DUP

Tgt Ion:	43	Resp:	56098
Ion	Ratio	Lower	Upper
43	100		
86	5.5	5.1	7.7
42	25.7	8.6	12.8#
44	0.0	4.7	7.1#



#25

Ethyl Acetate

Concen: 0.337 ppbv

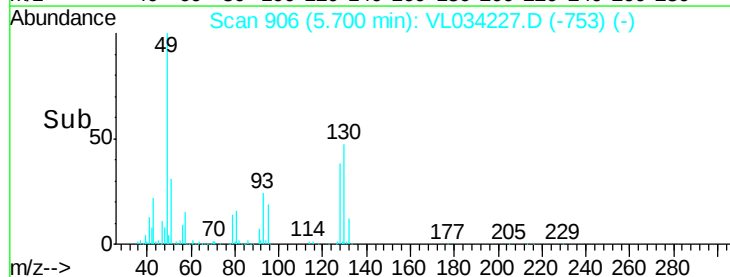
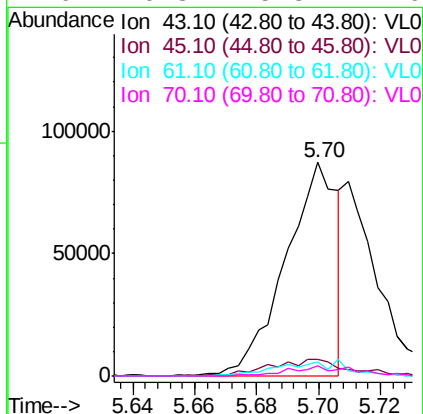
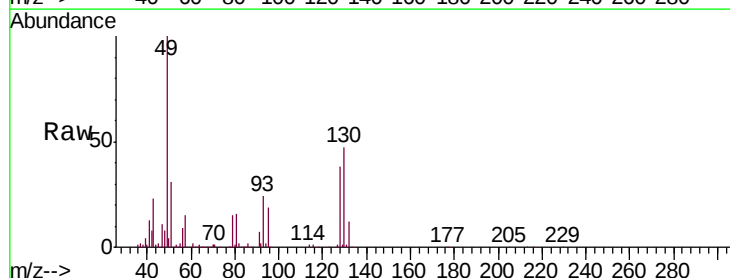
RT: 5.70 min Scan# 906

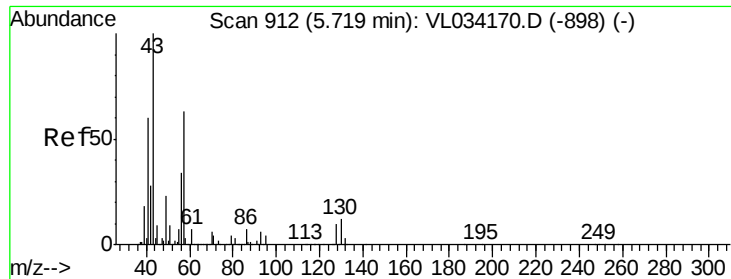
Delta R.T. -0.01 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Tgt Ion:	43	Resp:	100660
Ion	Ratio	Lower	Upper
43	100		
45	12.2	8.4	12.6
61	0.0	7.2	10.8#
70	6.3	5.3	7.9

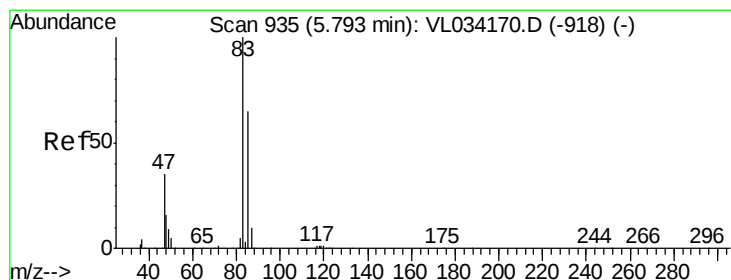
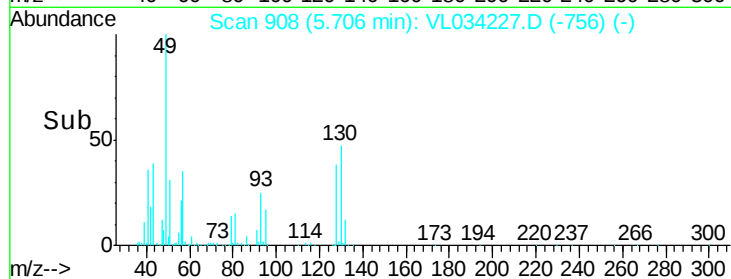
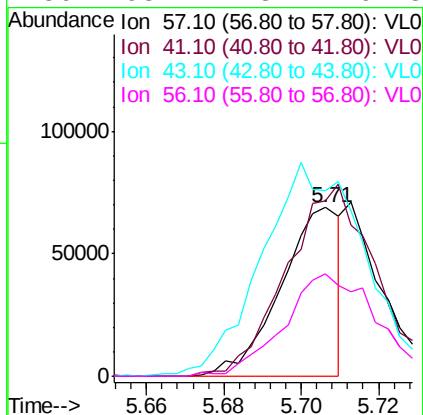
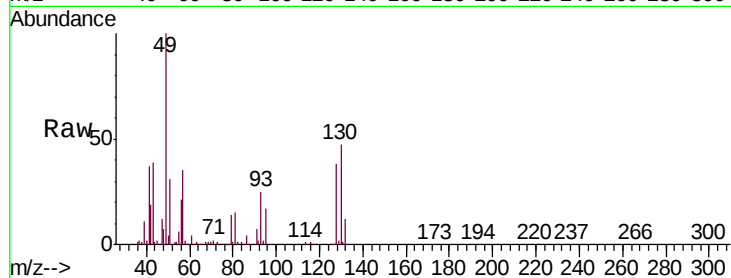




#26
Hexane
Concen: 0.591 ppbv
RT: 5.71 min Scan# 908
Delta R.T. -0.01 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

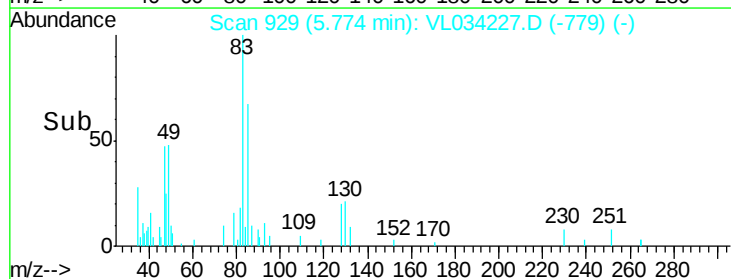
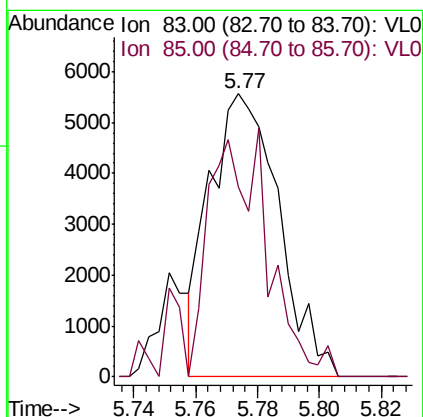
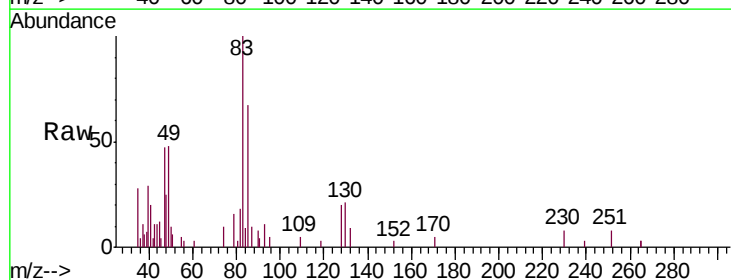
Instrument :
MSVOA_L
ClientSampleId :
IA4DUP

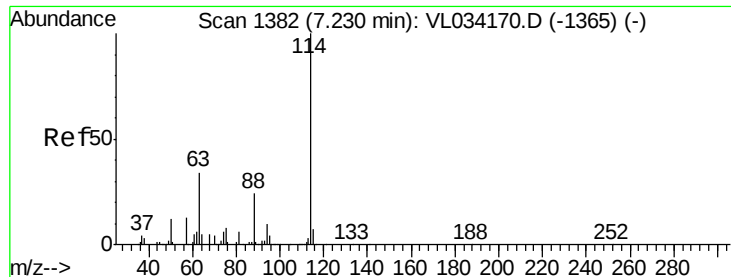
Tgt Ion: 57 Resp: 73446
Ion Ratio Lower Upper
57 100
41 0.0 78.5 117.7#
43 223.3 189.5 284.3
56 95.2 43.2 64.8#



#29
Chloroform
Concen: 0.049 ppbv
RT: 5.77 min Scan# 929
Delta R.T. -0.02 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

Tgt Ion: 83 Resp: 8636
Ion Ratio Lower Upper
83 100
85 66.9 52.3 78.5

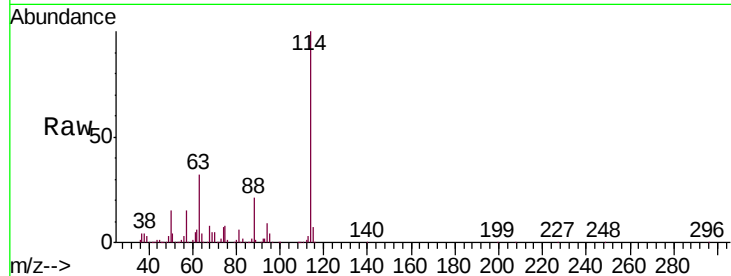




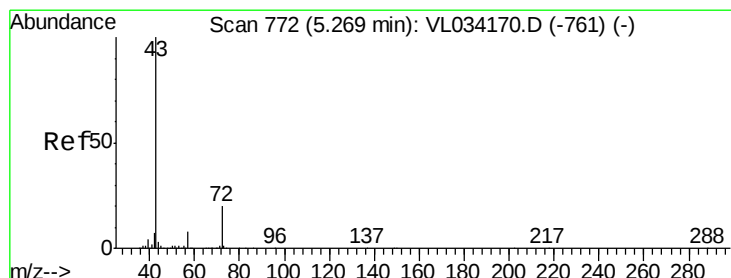
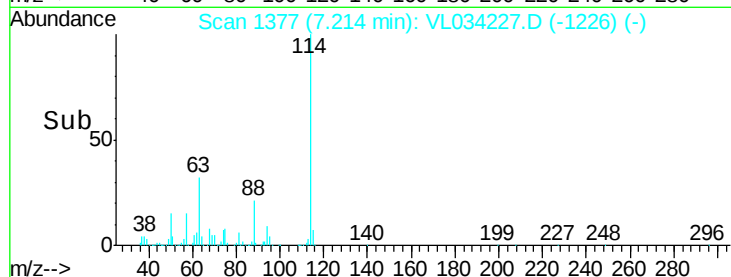
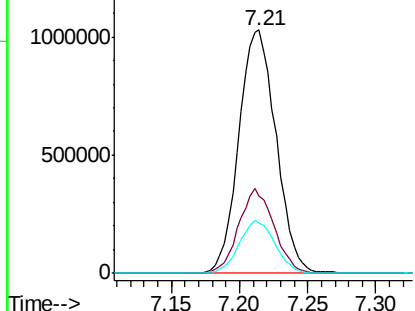
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.21 min Scan# 1377
 Delta R.T. -0.02 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4DUP

Tgt Ion:114 Resp: 1949343
 Ion Ratio Lower Upper
 114 100
 63 33.1 27.8 41.6
 88 20.9 17.1 25.7

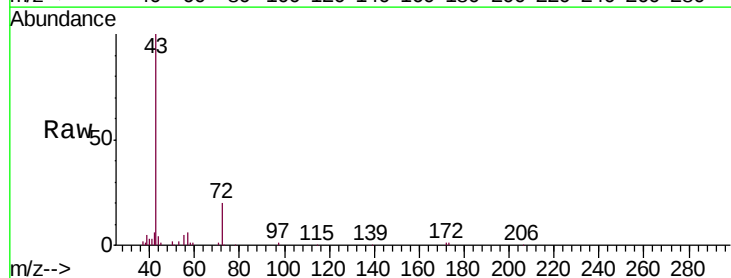


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

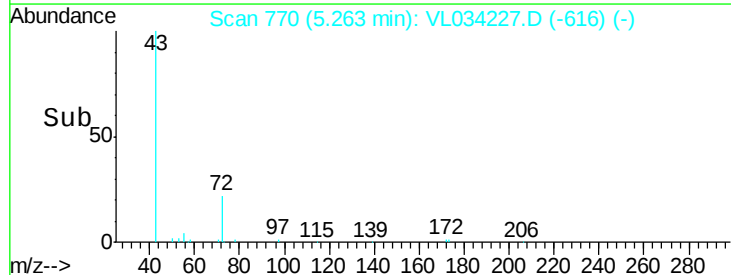
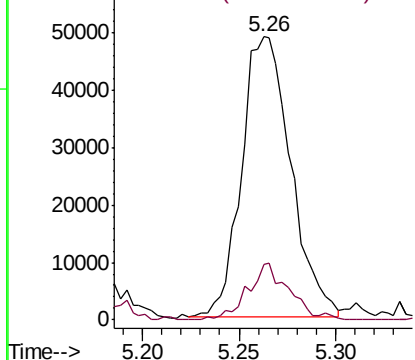


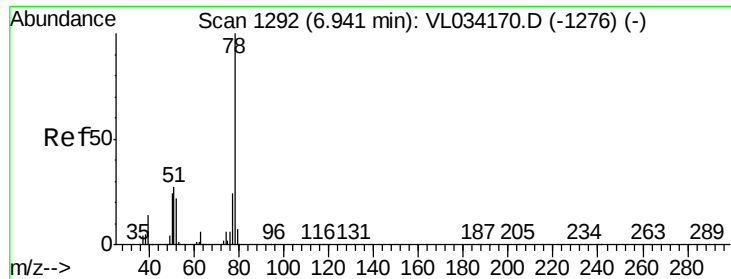
#34
 2-Butanone
 Concen: 0.430 ppbv
 RT: 5.26 min Scan# 770
 Delta R.T. -0.01 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

Tgt Ion: 43 Resp: 85566
 Ion Ratio Lower Upper
 43 100
 72 17.3 15.0 22.6



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.143 ppbv

RT: 6.92 min Scan# 1287

Delta R.T. -0.02 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Instrument :

MSVOA_L

ClientSampleId :

IA4DUP

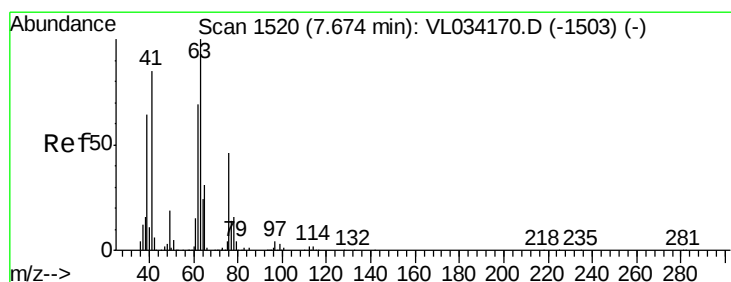
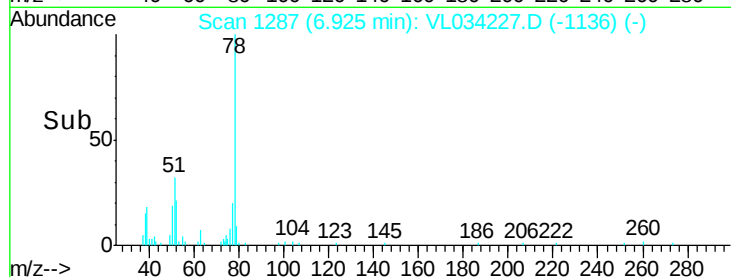
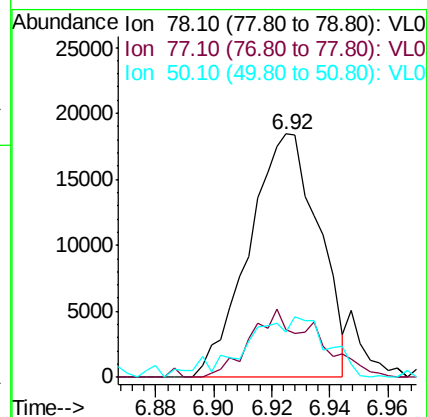
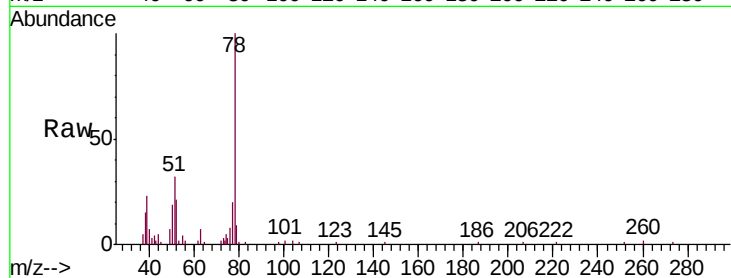
Tgt Ion: 78 Resp: 30756

Ion Ratio Lower Upper

78 100

77 19.7 19.0 28.4

50 15.9 18.9 28.3#



#39

1,2-Dichloropropane

Concen: 6.641 ppbv

RT: 7.21 min Scan# 1376

Delta R.T. -0.46 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

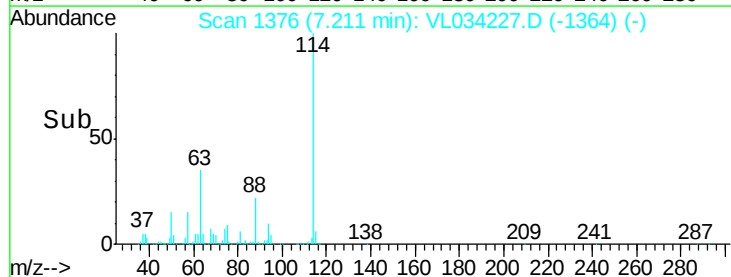
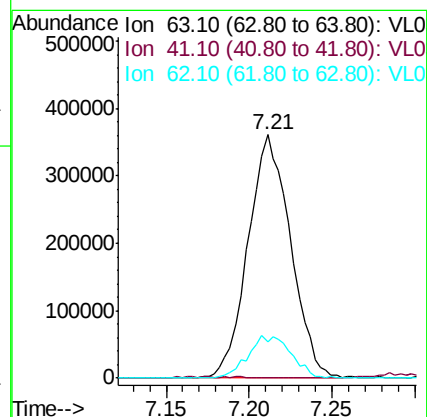
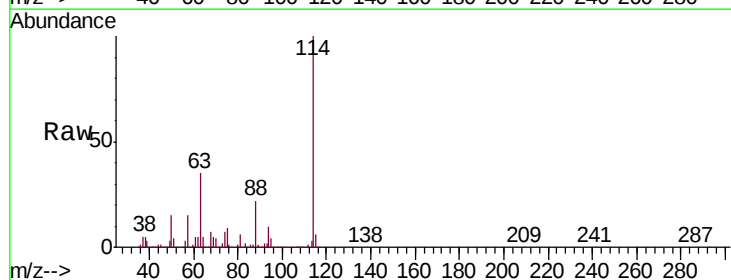
Tgt Ion: 63 Resp: 642397

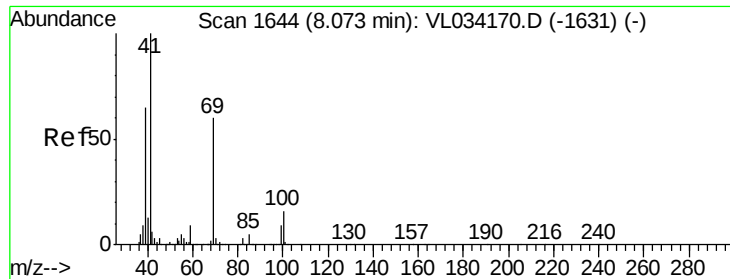
Ion Ratio Lower Upper

63 100

41 0.0 68.4 102.6#

62 15.0 55.4 83.2#

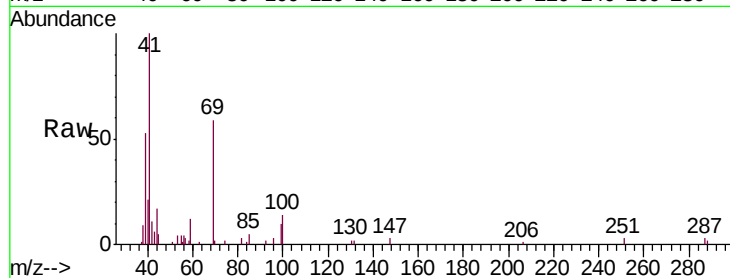




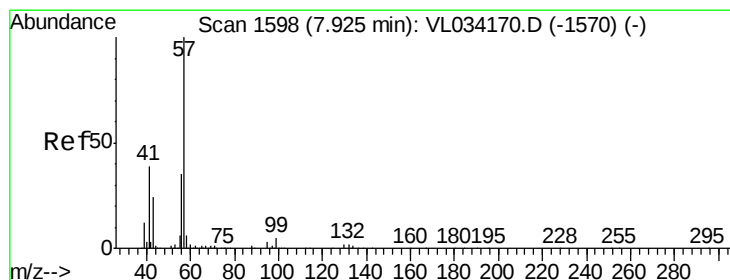
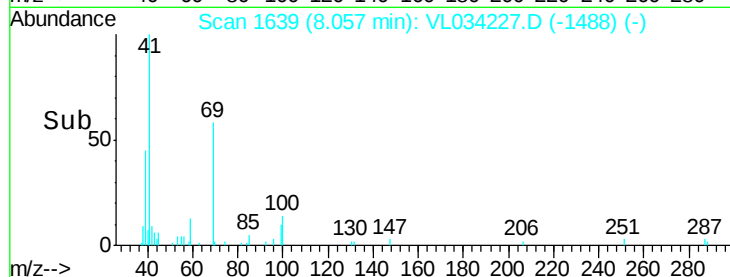
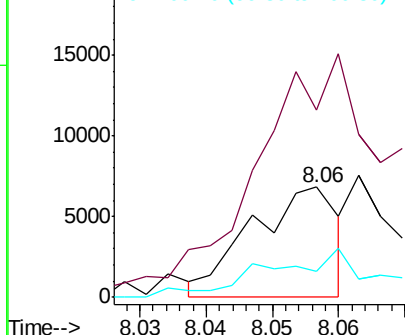
#43
Methyl Methacrylate
Concen: 0.069 ppbv
RT: 8.06 min Scan# 1639
Delta R.T. -0.02 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

Instrument :
MSVOA_L
ClientSampleId :
IA4DUP

Tgt Ion: 69 Resp: 6179
Ion Ratio Lower Upper
69 100
41 0.0 140.4 210.6#
100 0.0 21.9 32.9#

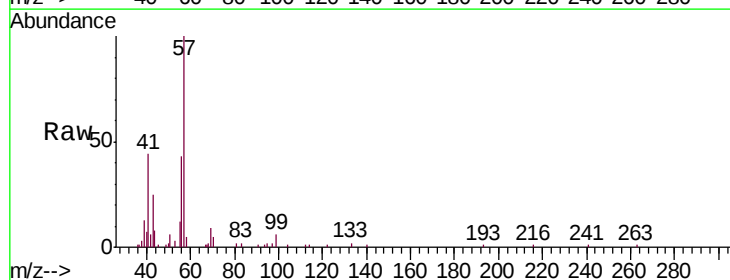


Abundance Ion 69.10 (68.80 to 69.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 100.10 (99.80 to 100.80): VL0

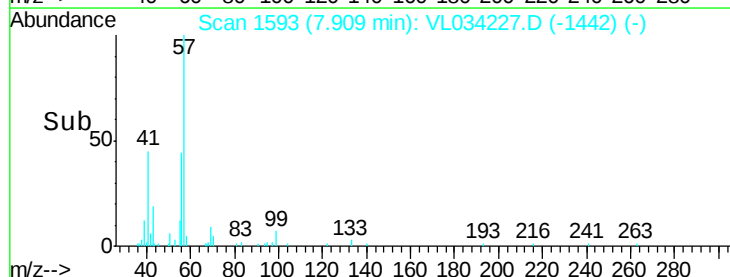
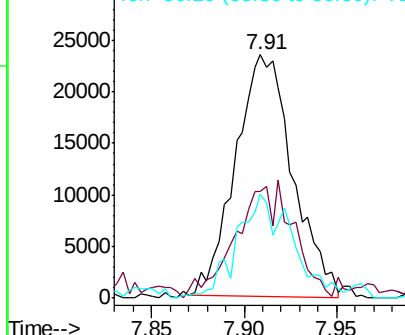


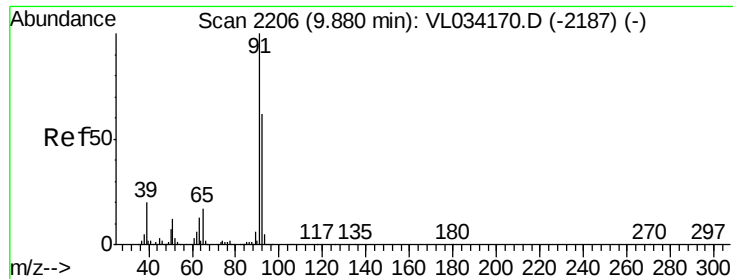
#44
2,2,4-Trimethylpentane
Concen: 0.122 ppbv
RT: 7.91 min Scan# 1593
Delta R.T. -0.02 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

Tgt Ion: 57 Resp: 50603
Ion Ratio Lower Upper
57 100
41 47.2 29.8 44.6#
56 43.8 25.9 38.9#



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





#53

Toluene

Concen: 0.505 ppbv

RT: 9.86 min Scan# 2201

Delta R.T. -0.02 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

Instrument :

MSVOA_L

ClientSampleId :

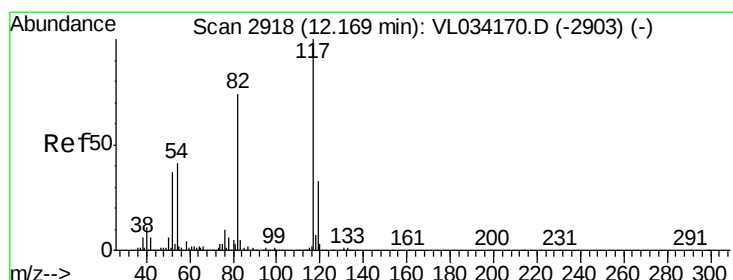
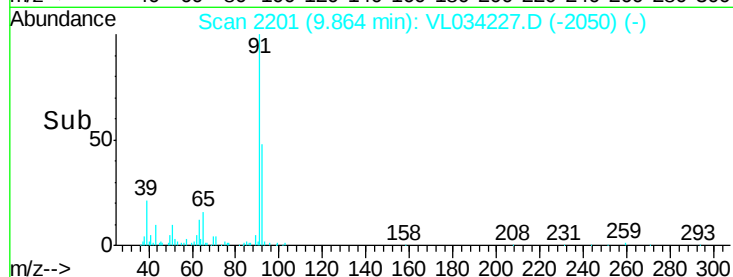
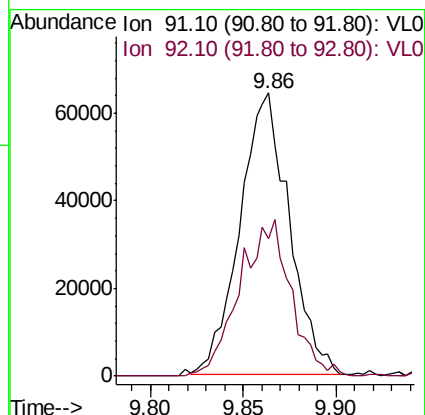
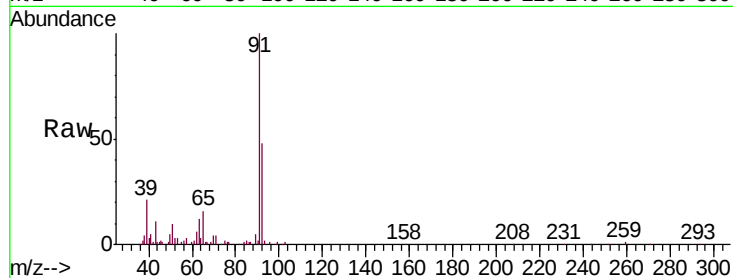
IA4DUP

Tgt Ion: 91 Resp: 118723

Ion Ratio Lower Upper

91 100

92 57.8 49.0 73.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.15 min Scan# 2912

Delta R.T. -0.02 min

Lab File: VL034227.D

Acq: 7 Oct 2019 18:18

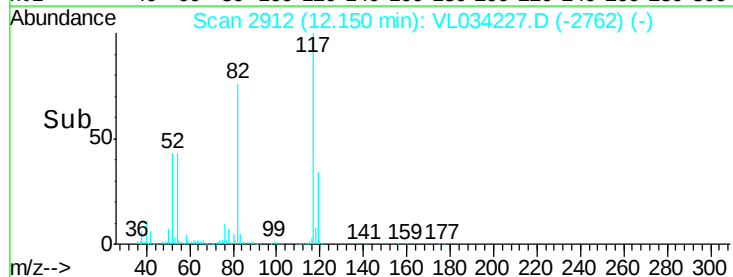
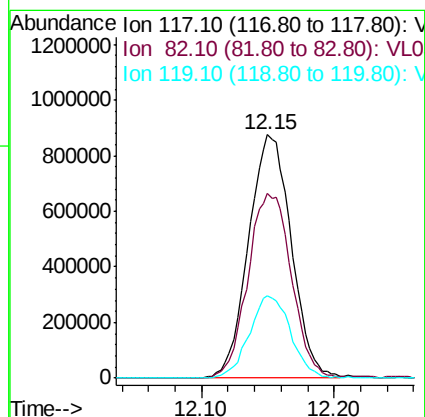
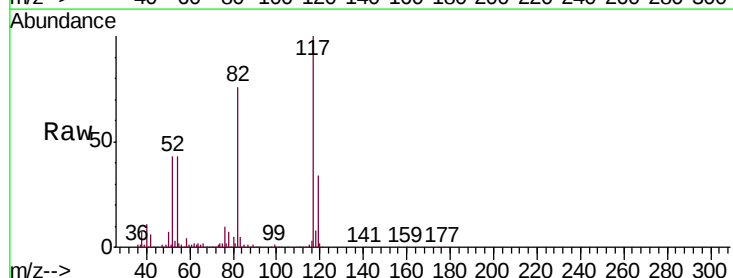
Tgt Ion: 117 Resp: 1959737

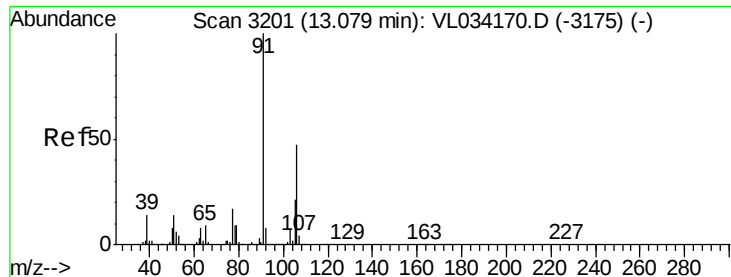
Ion Ratio Lower Upper

117 100

82 77.2 58.2 87.4

119 32.9 23.7 35.5

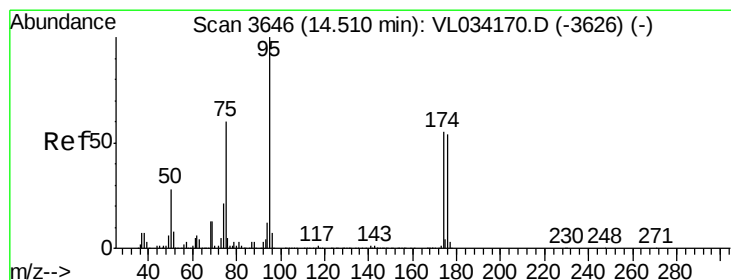
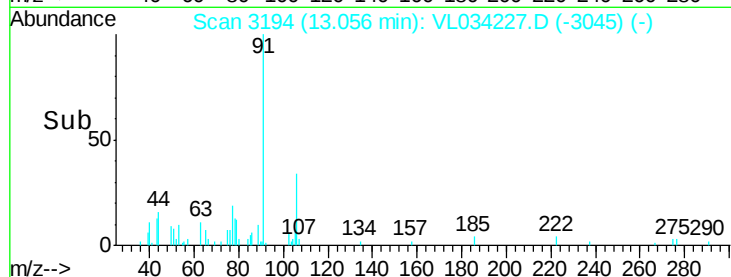
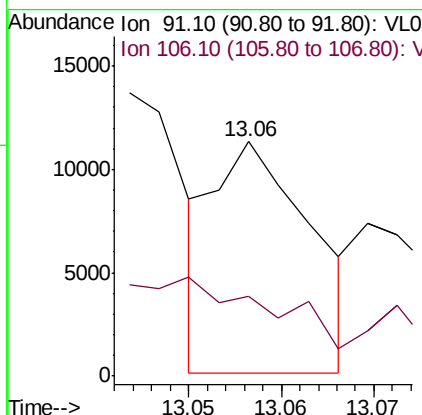
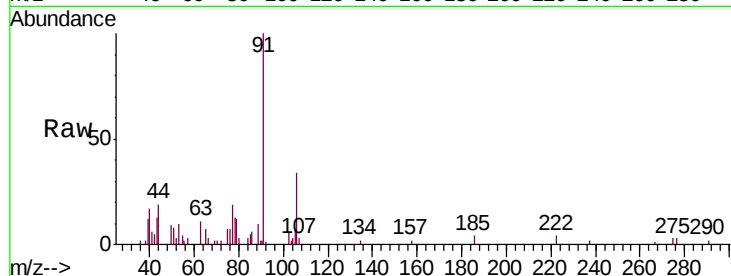




#59
m/p-Xylene
Concen: 0.031 ppbv
RT: 13.06 min Scan# 3194
Delta R.T. -0.02 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

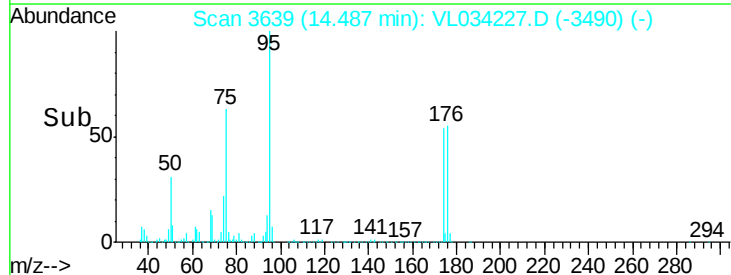
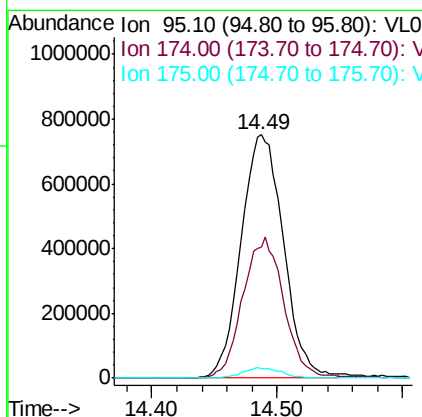
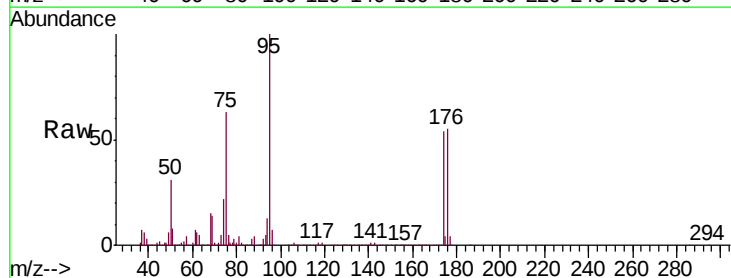
Instrument :
MSVOA_L
ClientSampleId :
IA4DUP

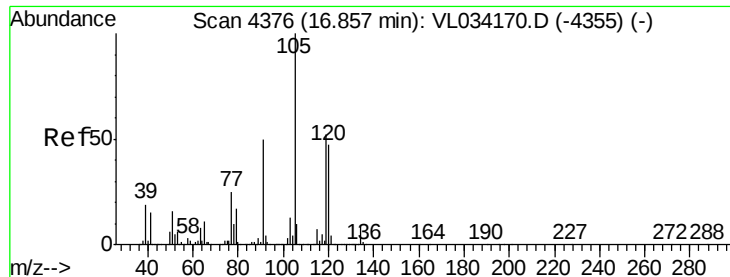
Tgt Ion: 91 Resp: 8109
Ion Ratio Lower Upper
91 100
106 0.0 35.5 53.3#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.343 ppbv
RT: 14.49 min Scan# 3639
Delta R.T. -0.02 min
Lab File: VL034227.D
Acq: 7 Oct 2019 18:18

Tgt Ion: 95 Resp: 1761321
Ion Ratio Lower Upper
95 100
174 56.4 45.1 67.7
175 3.9 3.3 4.9

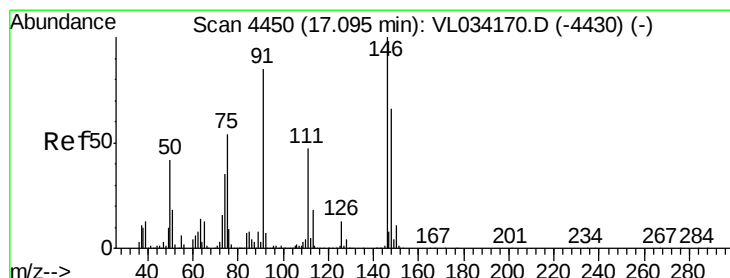
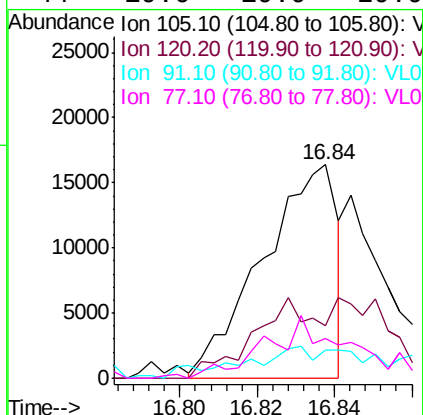
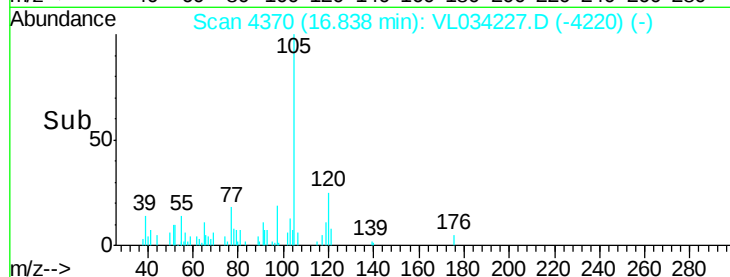
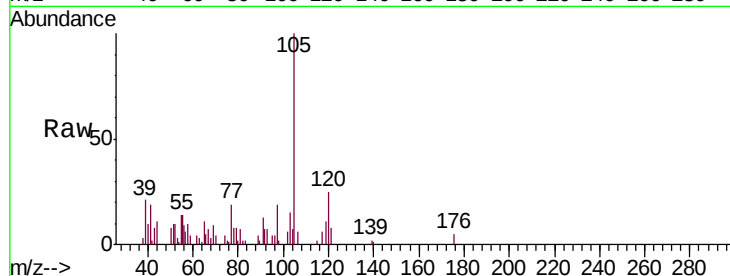




#74
 1,2,4-Trimethylbenzene
 Concen: 0.072 ppbv
 RT: 16.84 min Scan# 4370
 Delta R.T. -0.02 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

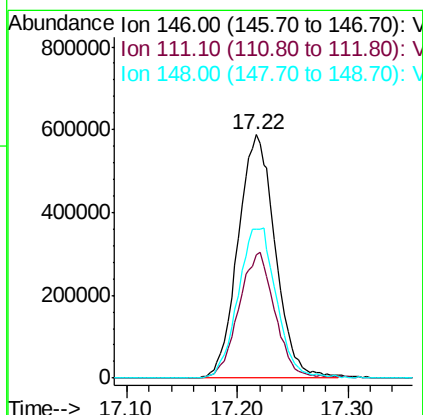
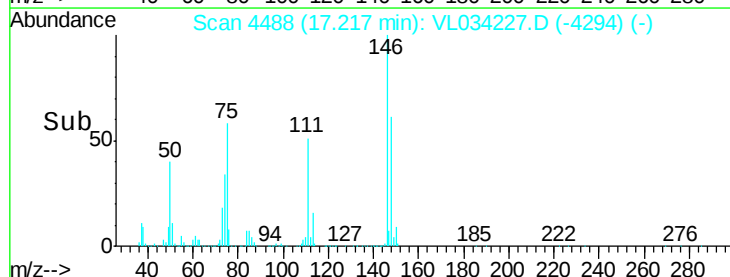
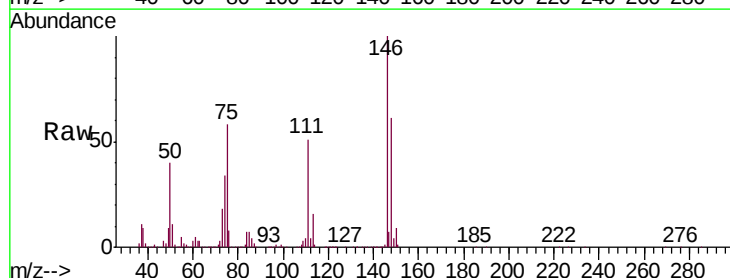
Instrument :
 MSVOA_L
 ClientSampleId :
 IA4DUP

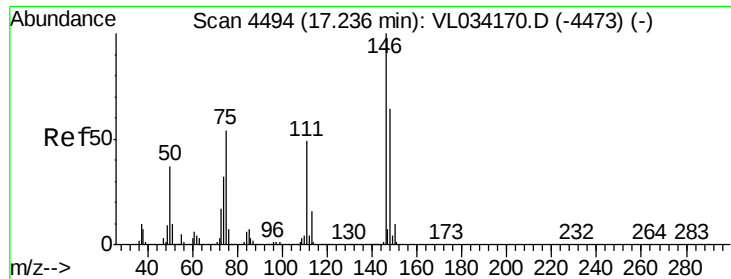
Tgt Ion:	105	Resp:	21953
Ion	Ratio	Lower	Upper
105	100		
120	25.4	37.5	56.3#
91	7.5	41.1	61.7#
77	19.0	19.9	29.9#



#75
 1,3-Dichlorobenzene
 Concen: 8.452 ppbv
 RT: 17.22 min Scan# 4488
 Delta R.T. 0.12 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

Tgt Ion:	146	Resp:	1376418
Ion	Ratio	Lower	Upper
146	100		
111	50.4	25.9	77.8
148	63.7	32.6	97.7

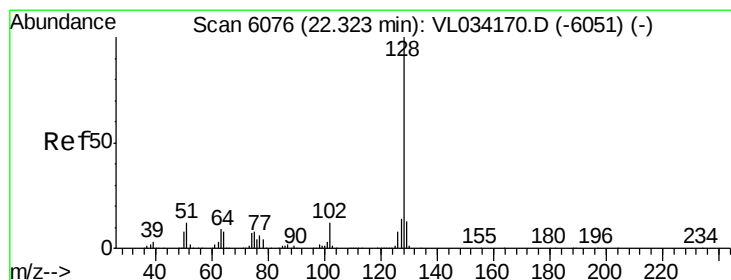
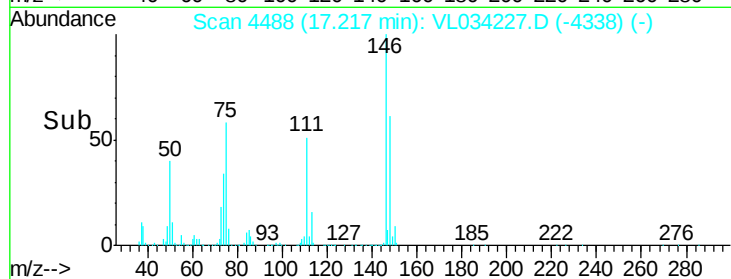
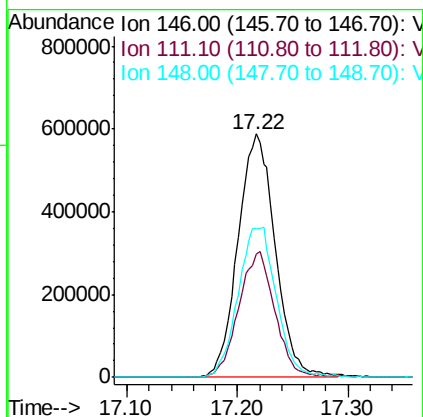
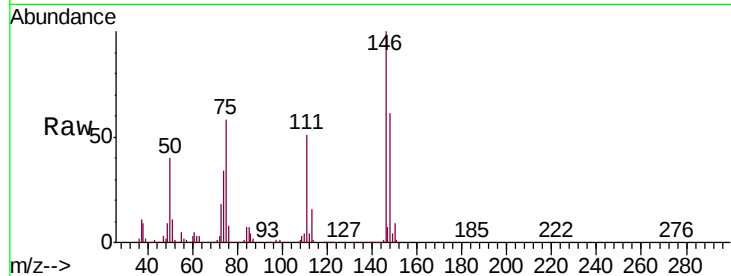




#76
 1,4-Dichlorobenzene
 Concen: 8.253 ppbv
 RT: 17.22 min Scan# 4488
 Delta R.T. -0.02 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

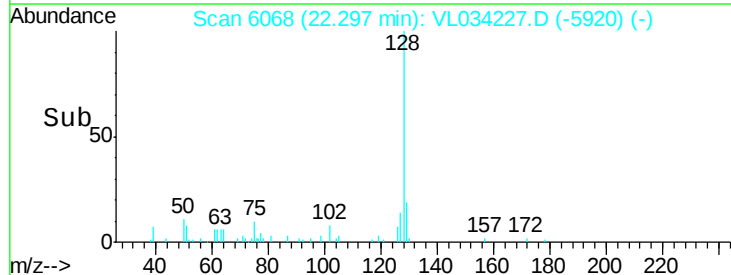
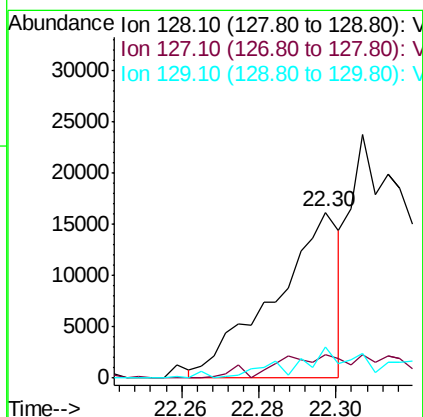
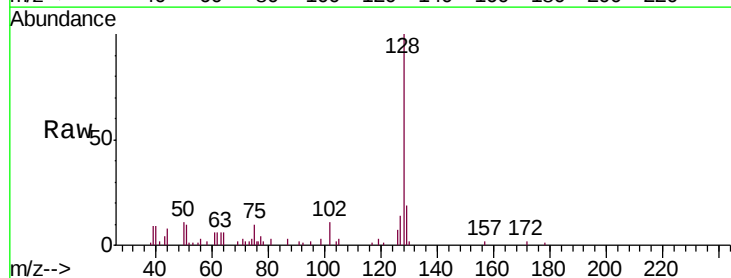
Instrument :
 MSVOA_L
 ClientSampleId :
 IA4DUP

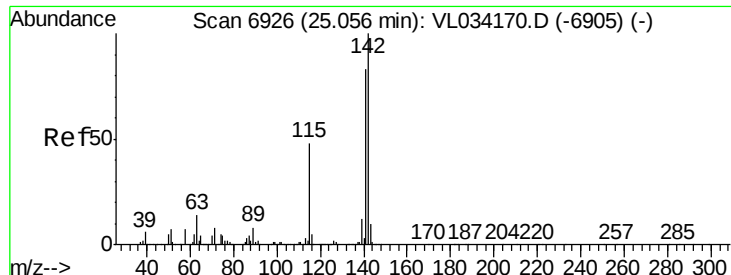
Tgt Ion:146 Resp: 1376418
 Ion Ratio Lower Upper
 146 100
 111 50.5 24.6 74.0
 148 63.8 32.4 97.0



#79
 Naphthalene
 Concen: 0.071 ppbv
 RT: 22.30 min Scan# 6068
 Delta R.T. -0.03 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

Tgt Ion:128 Resp: 19009
 Ion Ratio Lower Upper
 128 100
 127 15.1 11.1 16.7
 129 20.0 10.2 15.4#





#80
 Naphthalene, 2-methyl-
 Concen: 0.037 ppbv
 RT: 25.05 min Scan# 6924
 Delta R.T. -0.01 min
 Lab File: VL034227.D
 Acq: 7 Oct 2019 18:18

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4DUP

Tgt Ion:	142	Resp:	4566
Ion	Ratio	Lower	Upper
142	100		
141	86.4	67.6	101.4
115	48.7	36.9	55.3

