

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100719\
 Data File : VL034226.D
 Acq On : 7 Oct 2019 17:37
 Operator : SY/AP
 Sample : K5225-01
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

Quant Time: Oct 09 02:21:00 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	1194937	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.21	114	1946862	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.15	117	1974752	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.49	95	1744608	10.17	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.70%

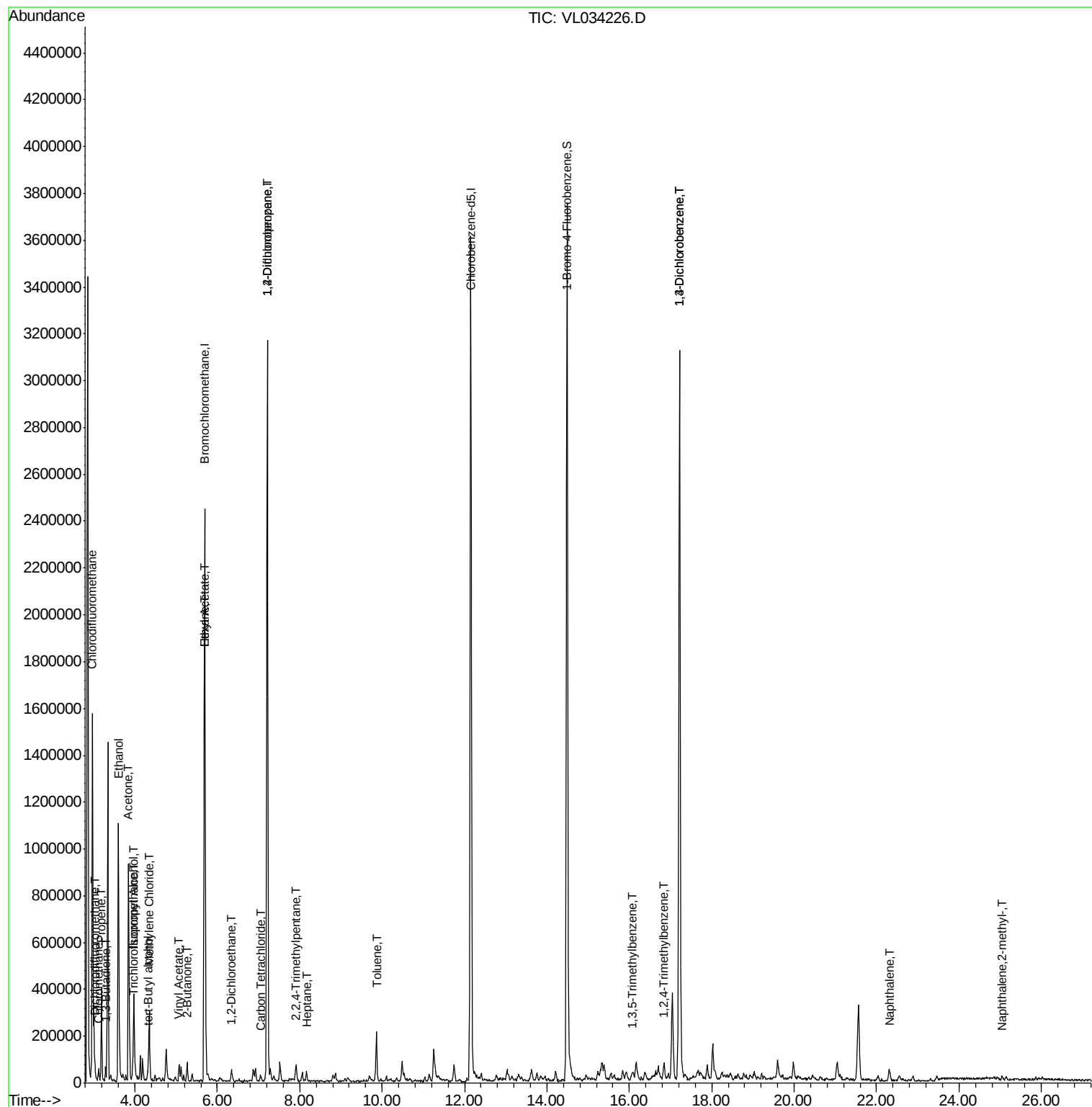
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.03	85	46414	0.263	ppbv	99
3) Chlorodifluoromethane	2.97	51	1405899	10.034	ppbv	100
4) Chloromethane	3.12	50	37747	0.458	ppbv	98
9) Propene	3.19	41	76287	1.104	ppbv	87
10) Heptane	8.17	43	13517	0.075	ppbv #	85
11) Trichlorofluoromethane	3.95	101	47285	0.294	ppbv #	81
13) Ethanol	3.60	45	1120782	66.958	ppbv	97
15) Acetone	3.84	43	918247	5.734	ppbv	98
16) 1,3-Butadiene	3.29	39	13963	0.200	ppbv #	10
17) tert-Butyl alcohol	4.31	59	5706	0.056	ppbv #	71
19) Isopropyl Alcohol	3.97	45	388935	3.949	ppbv #	98
20) Methylene Chloride	4.34	84	89517	1.939	ppbv	93
23) Vinyl Acetate	5.08	43	28295	0.120	ppbv #	75
25) Ethyl Acetate	5.71	43	157329	0.519	ppbv #	92
26) Hexane	5.71	57	122171	0.970	ppbv #	60
34) 2-Butanone	5.26	43	30675	0.154	ppbv #	58
35) Carbon Tetrachloride	7.05	117	11848	0.073	ppbv	89
37) 1,2-Dichloroethane	6.34	62	8426	0.055	ppbv #	85
39) 1,2-Dichloropropane	7.21	63	651328	6.742	ppbv #	21
44) 2,2,4-Trimethylpentane	7.92	57	52681	0.127	ppbv #	77
53) Toluene	9.86	91	122633	0.522	ppbv	94
73) 1,3,5-Trimethylbenzene	16.06	105	9017	0.031	ppbv	98
74) 1,2,4-Trimethylbenzene	16.83	105	9963	0.033	ppbv #	70
75) 1,3-Dichlorobenzene	17.22	146	1398846	8.525	ppbv	98
76) 1,4-Dichlorobenzene	17.22	146	1398846	8.324	ppbv	99
79) Naphthalene	22.33	128	11746	0.044	ppbv	97
80) Naphthalene,2-methyl-	25.04	142	7848	0.063	ppbv #	93

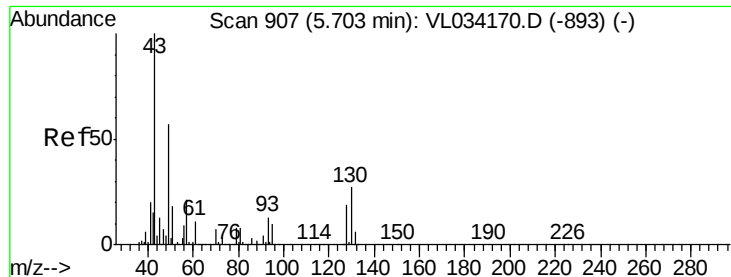
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Sep 18 12:53:31 2019
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. -0.02 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampleId :

IA4

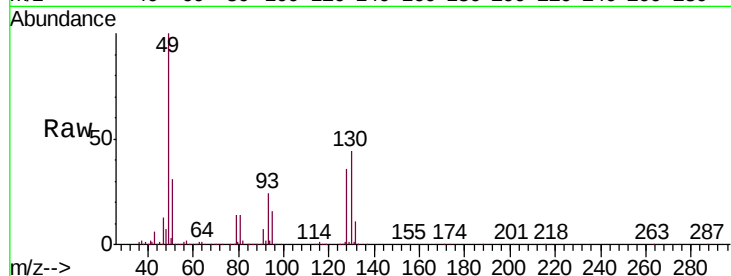
Tgt Ion: 49 Resp: 1194937

Ion Ratio Lower Upper

49 100

128 34.5 17.6 52.9

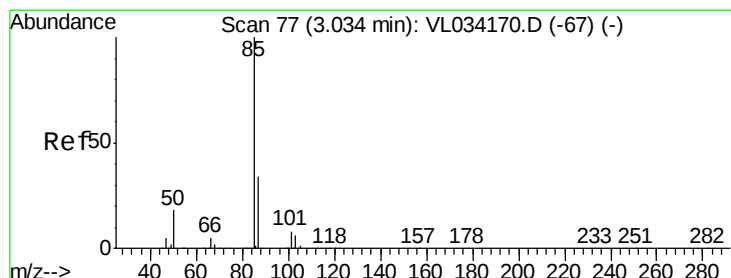
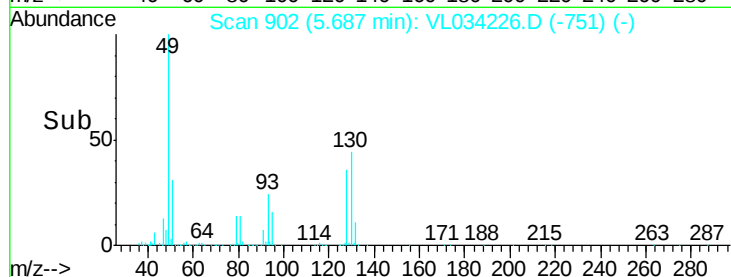
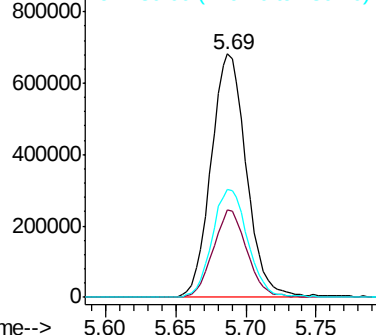
130 45.2 22.3 66.9



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.263 ppbv

RT: 3.03 min Scan# 75

Delta R.T. -0.01 min

Lab File: VL034226.D

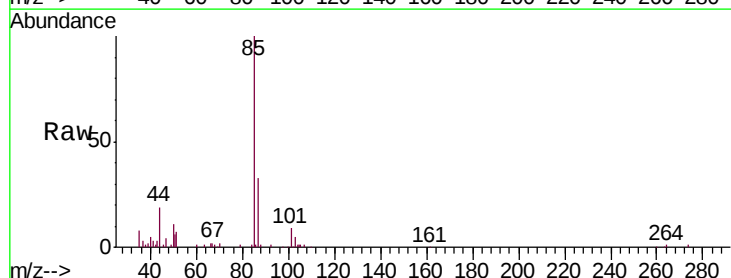
Acq: 7 Oct 2019 17:37

Tgt Ion: 85 Resp: 46414

Ion Ratio Lower Upper

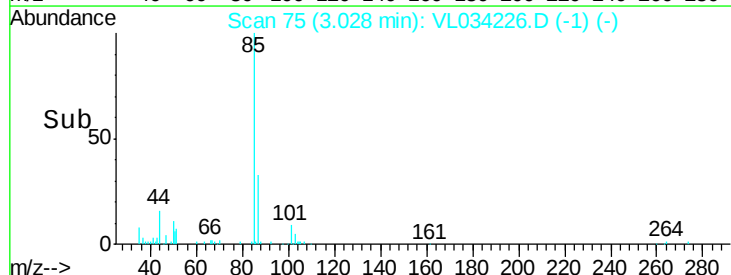
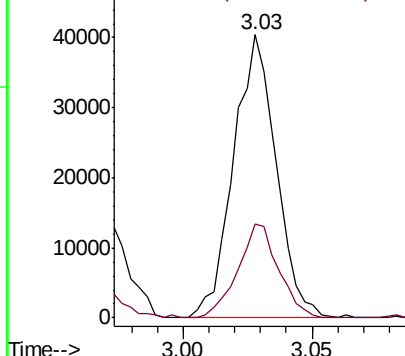
85 100

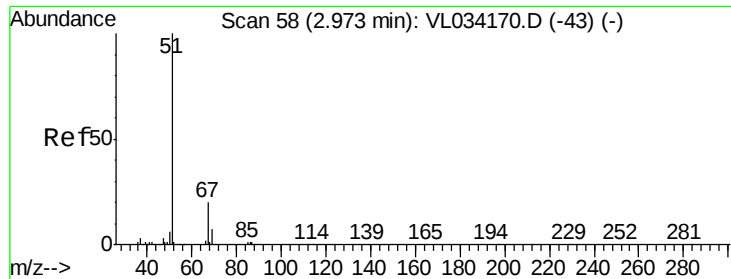
87 33.4 27.2 40.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 10.034 ppbv

RT: 2.97 min Scan# 56

Delta R.T. -0.01 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampleId :

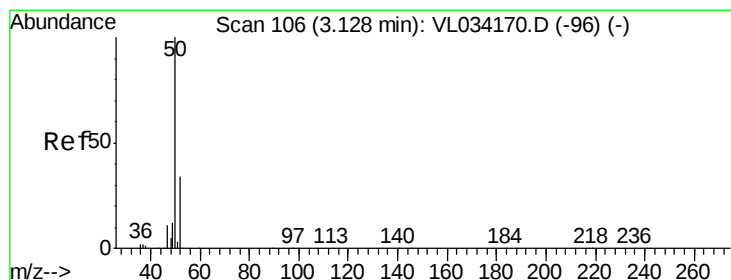
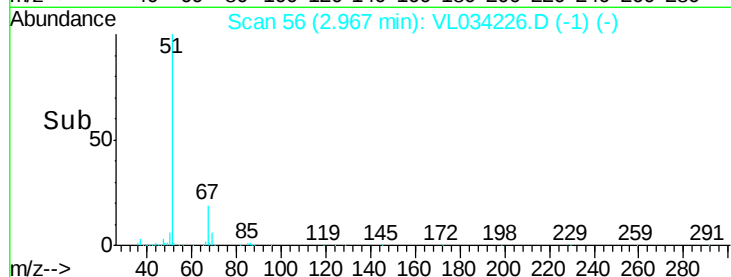
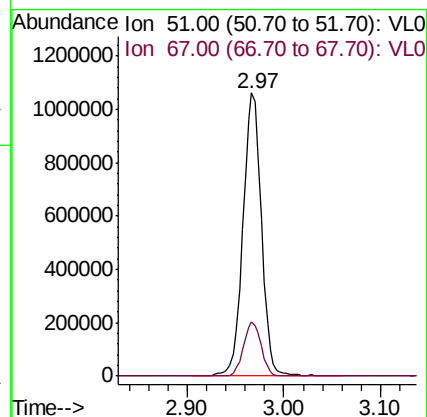
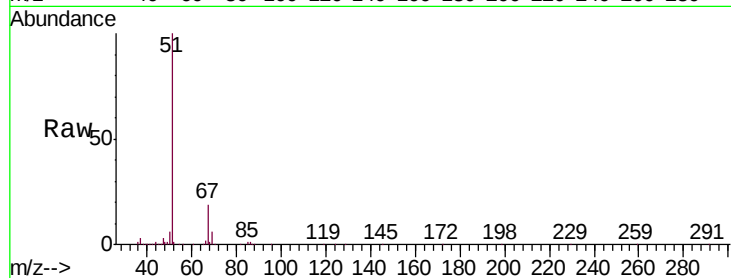
IA4

Tgt Ion: 51 Resp: 1405899

Ion Ratio Lower Upper

51 100

67 18.4 14.8 22.2



#4

Chloromethane

Concen: 0.458 ppbv

RT: 3.12 min Scan# 105

Delta R.T. -0.00 min

Lab File: VL034226.D

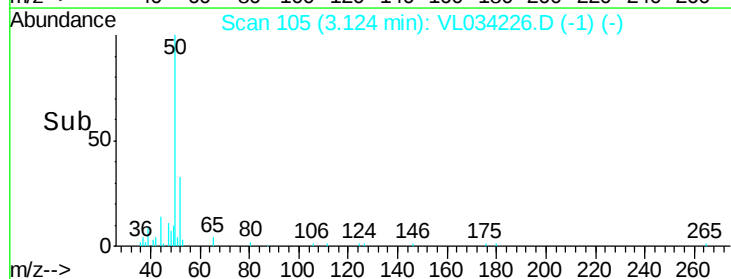
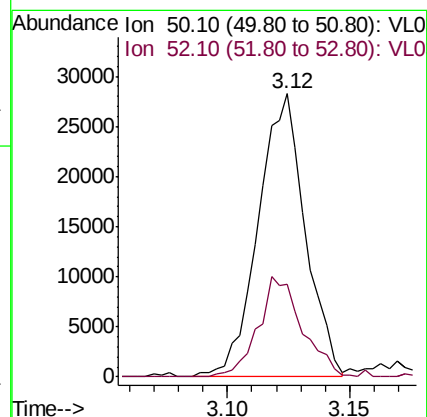
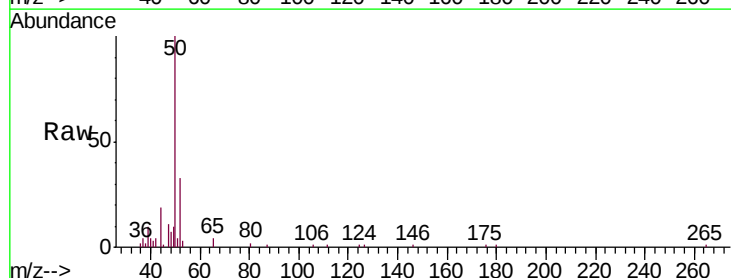
Acq: 7 Oct 2019 17:37

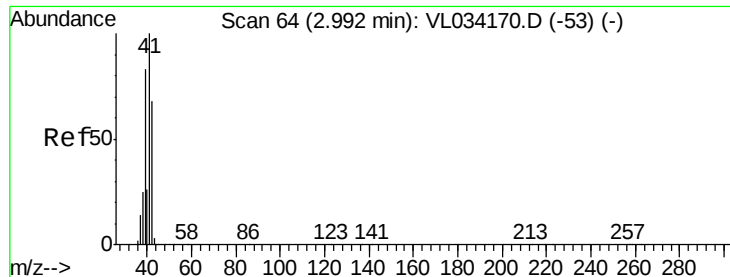
Tgt Ion: 50 Resp: 37747

Ion Ratio Lower Upper

50 100

52 32.8 27.1 40.7





#9

Propene

Concen: 1.104 ppbv

RT: 3.19 min Scan# 125

Delta R.T. 0.20 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampleId :

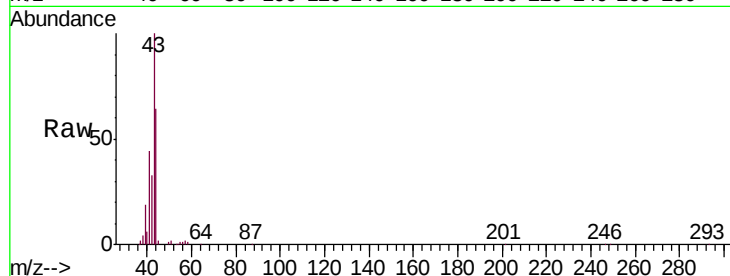
IA4

Tgt Ion: 41 Resp: 76287

Ion Ratio Lower Upper

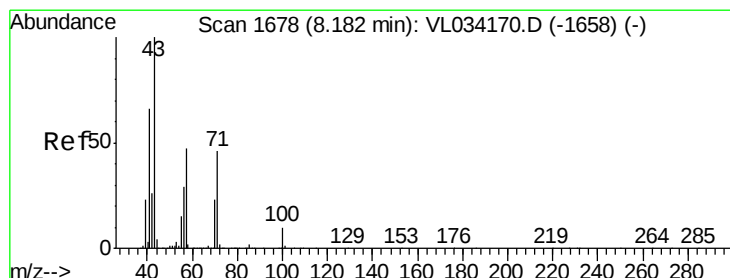
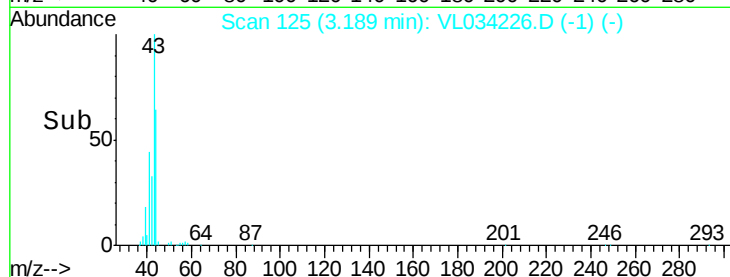
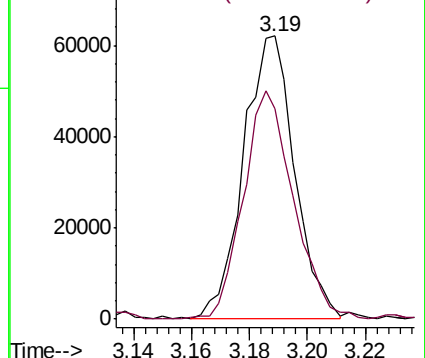
41 100

42 80.1 55.8 83.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.075 ppbv

RT: 8.17 min Scan# 1673

Delta R.T. -0.02 min

Lab File: VL034226.D

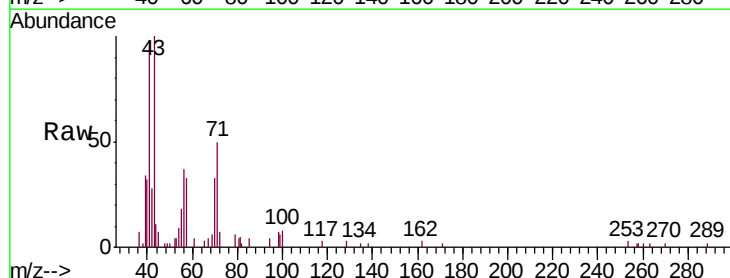
Acq: 7 Oct 2019 17:37

Tgt Ion: 43 Resp: 13517

Ion Ratio Lower Upper

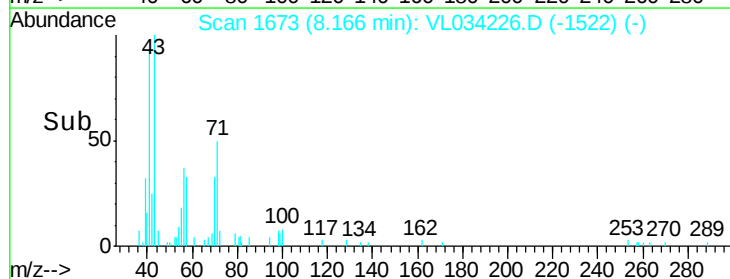
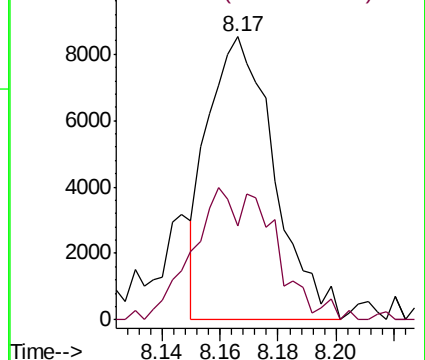
43 100

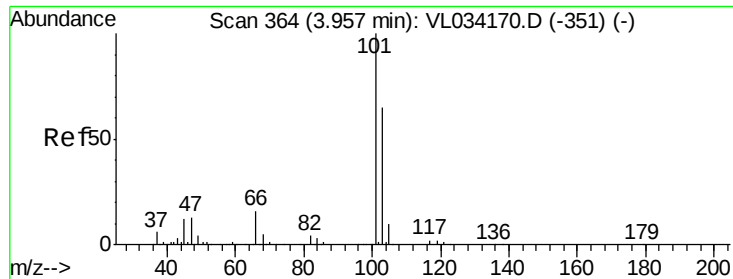
57 57.1 37.5 56.3#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

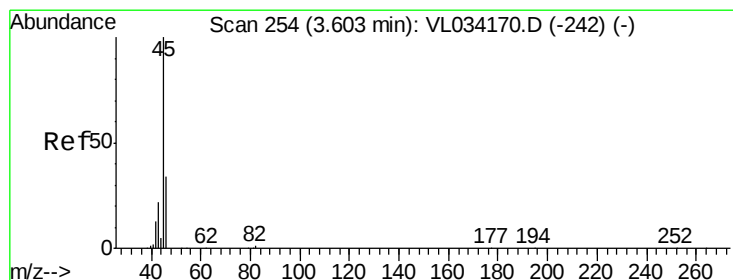
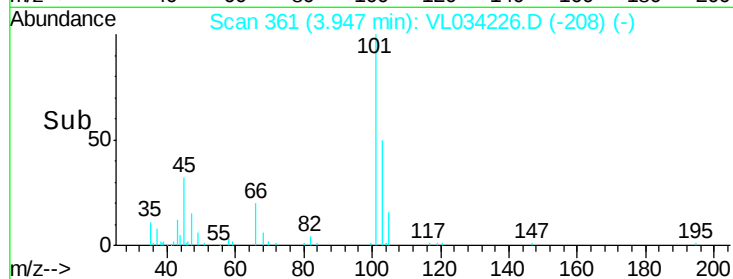
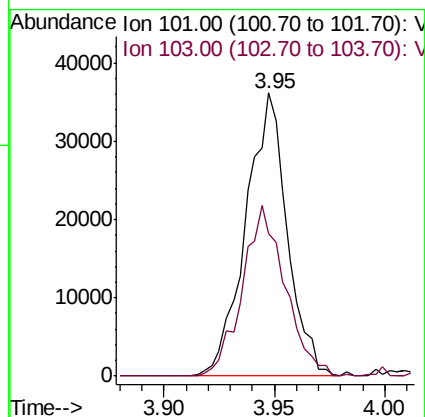
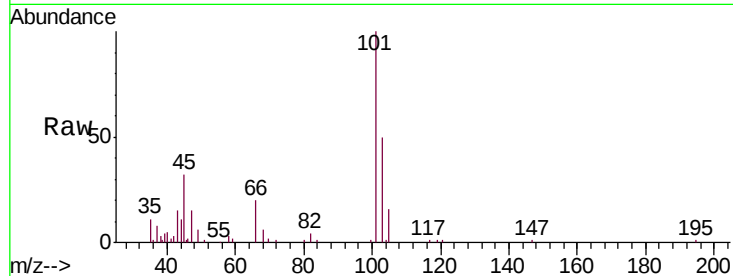




#11
 Trichlorofluoromethane
 Concen: 0.294 ppbv
 RT: 3.95 min Scan# 361
 Delta R.T. -0.01 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

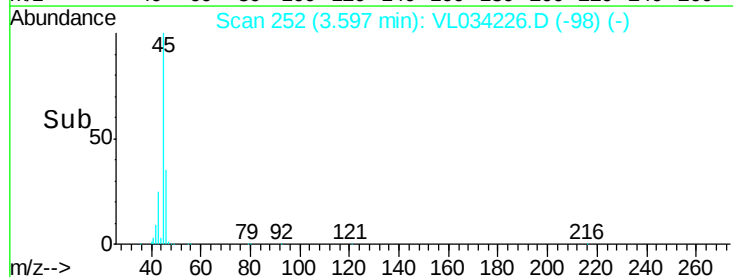
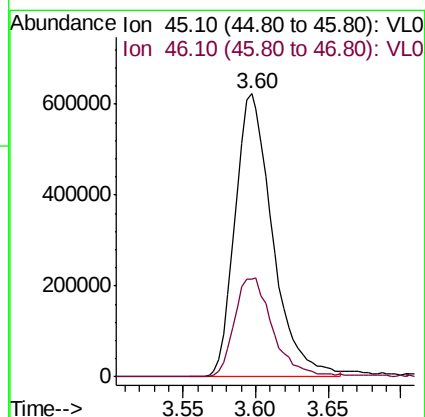
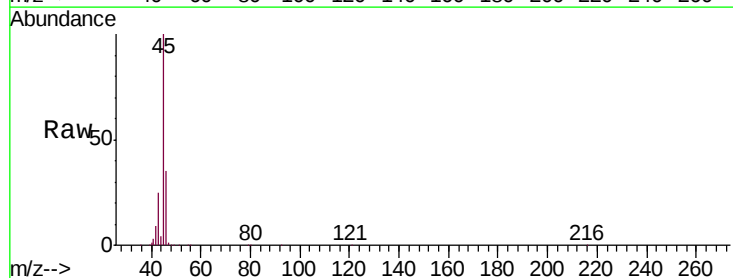
Instrument :
 MSVOA_L
 ClientSampled :
 IA4

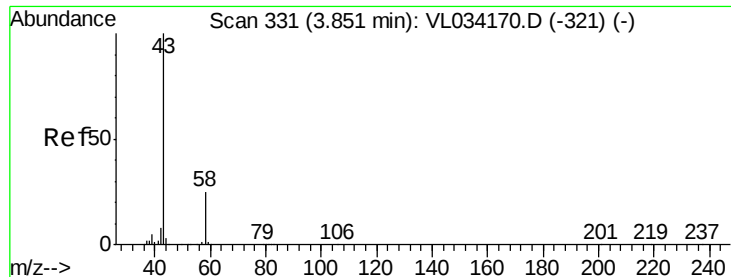
Tgt Ion: 101 Resp: 47285
 Ion Ratio Lower Upper
 101 100
 103 50.3 52.1 78.1#



#13
 Ethanol
 Concen: 66.958 ppbv
 RT: 3.60 min Scan# 252
 Delta R.T. -0.01 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

Tgt Ion: 45 Resp: 1120782
 Ion Ratio Lower Upper
 45 100
 46 36.9 15.5 61.9





#15

Acetone

Concen: 5.734 ppbv

RT: 3.84 min Scan# 328

Delta R.T. -0.01 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampleId :

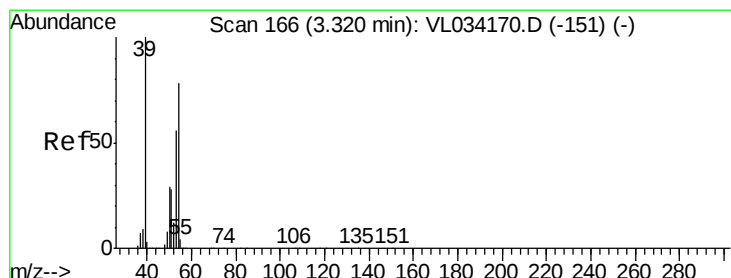
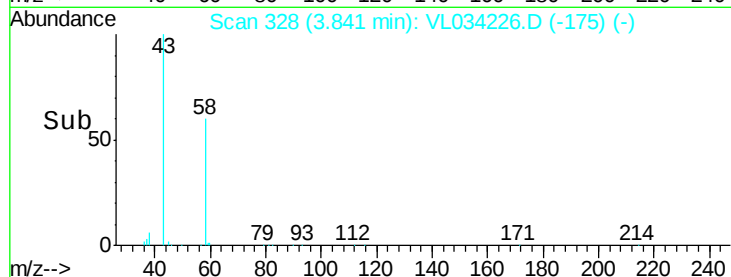
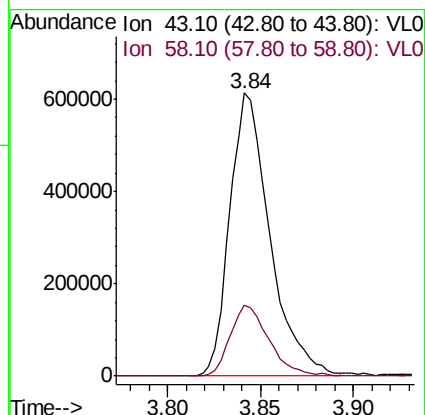
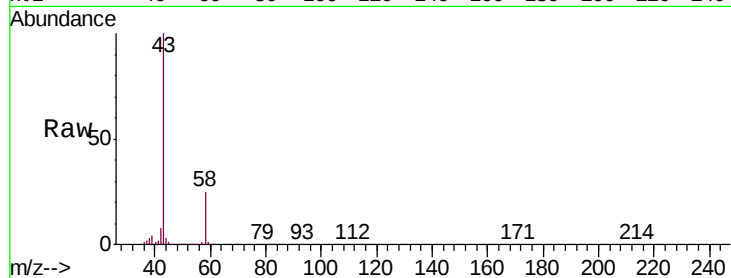
IA4

Tgt Ion: 43 Resp: 918247

Ion Ratio Lower Upper

43 100

58 24.6 20.5 30.7



#16

1,3-Butadiene

Concen: 0.200 ppbv

RT: 3.29 min Scan# 157

Delta R.T. -0.03 min

Lab File: VL034226.D

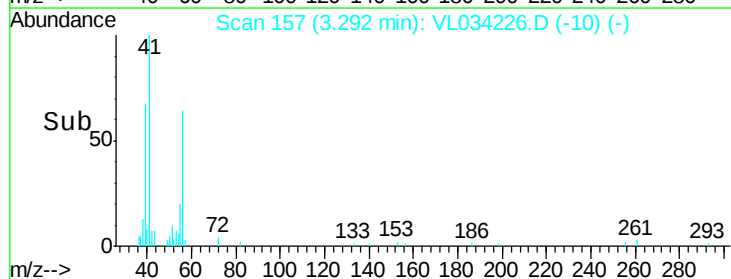
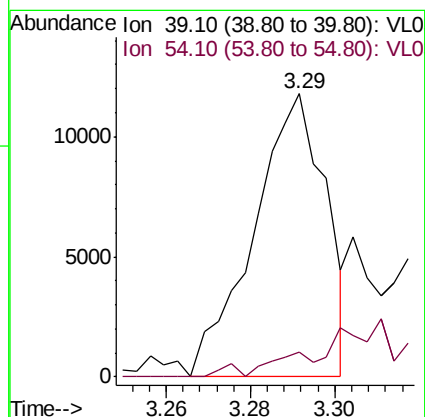
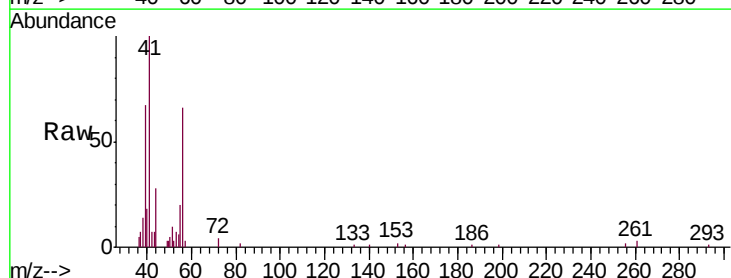
Acq: 7 Oct 2019 17:37

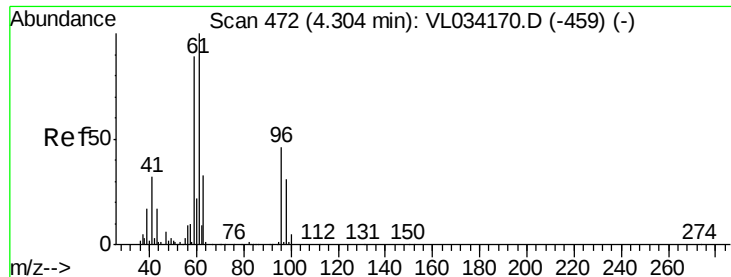
Tgt Ion: 39 Resp: 13963

Ion Ratio Lower Upper

39 100

54 0.0 63.4 95.0#



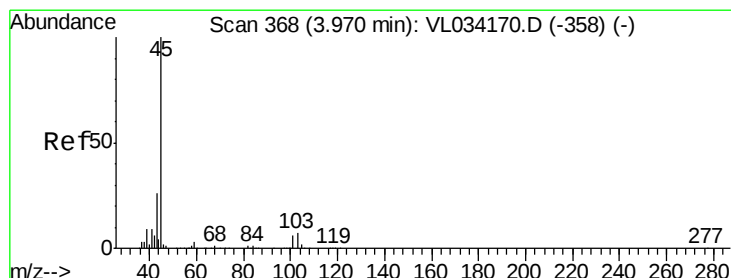
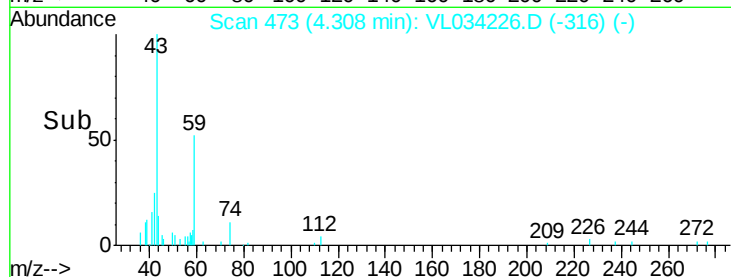
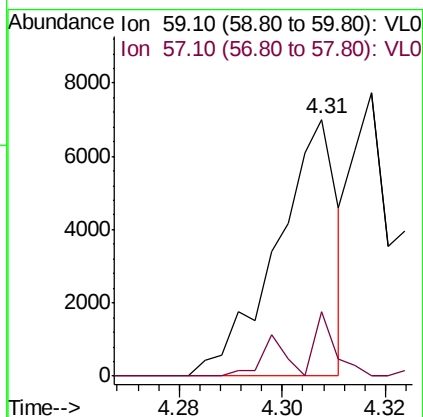
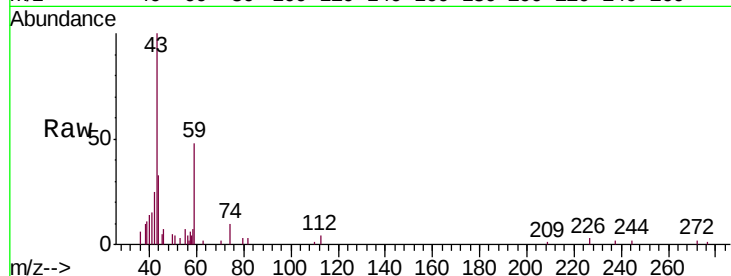


#17

tert-Butyl alcohol
 Concen: 0.056 ppbv
 RT: 4.31 min Scan# 473
 Delta R.T. 0.00 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

Instrument :
 MSVOA_L
 ClientSampled :
 IA4

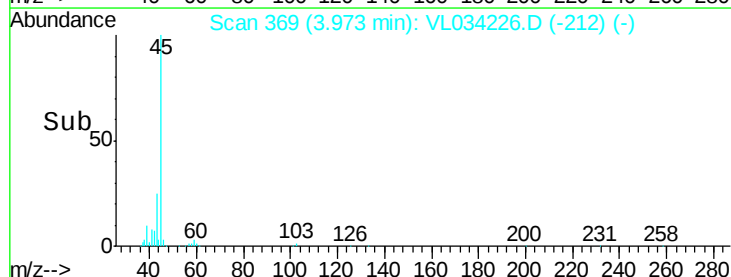
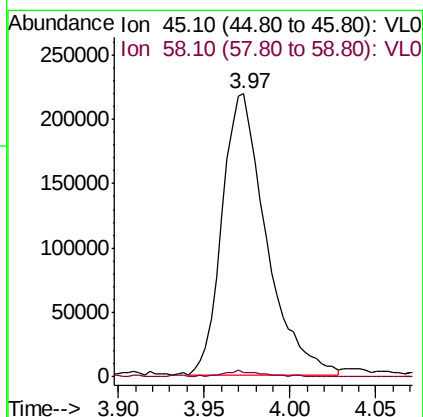
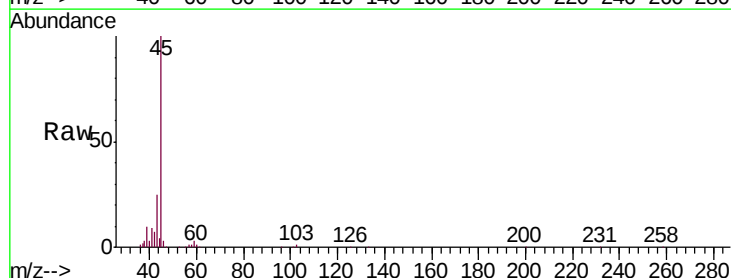
Tgt Ion: 59 Resp: 5706
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.7 13.1#

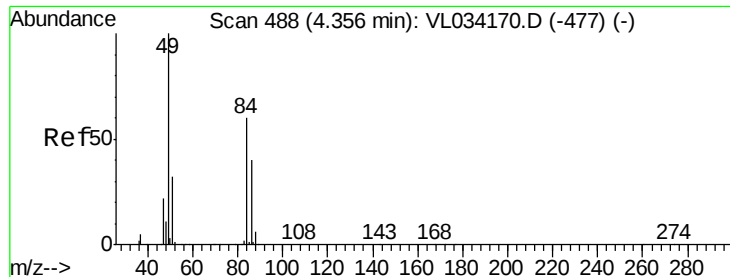


#19

Isopropyl Alcohol
 Concen: 3.949 ppbv
 RT: 3.97 min Scan# 369
 Delta R.T. 0.00 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

Tgt Ion: 45 Resp: 388935
 Ion Ratio Lower Upper
 45 100
 58 2.4 1.4 2.0#

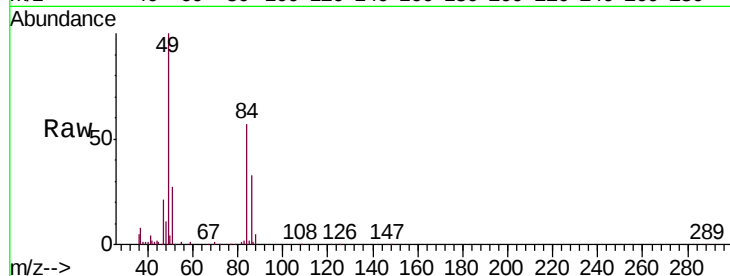




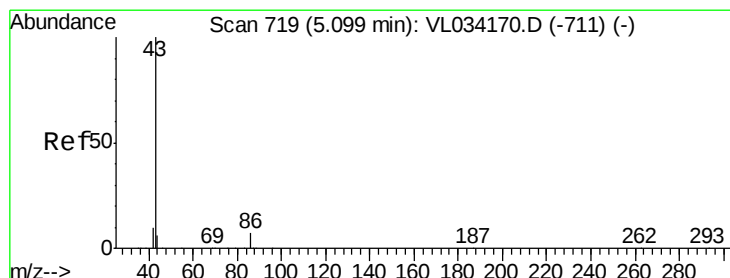
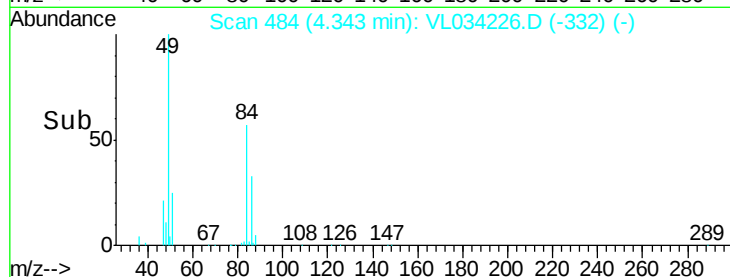
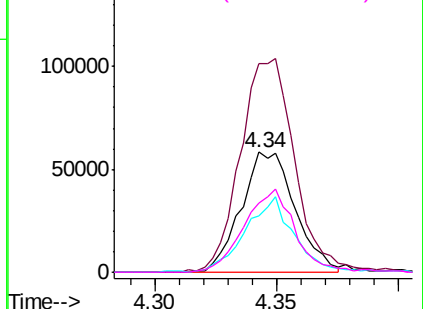
#20
Methylene Chloride
Concen: 1.939 ppbv
RT: 4.34 min Scan# 484
Delta R.T. -0.01 min
Lab File: VL034226.D
Acq: 7 Oct 2019 17:37

Instrument :
MSVOA_L
ClientSampleId :
IA4

Tgt Ion:	84	Resp:	89517
Ion	Ratio	Lower	Upper
84	100		
49	173.0	133.8	200.8
51	46.6	43.6	65.4
86	57.7	53.1	79.7

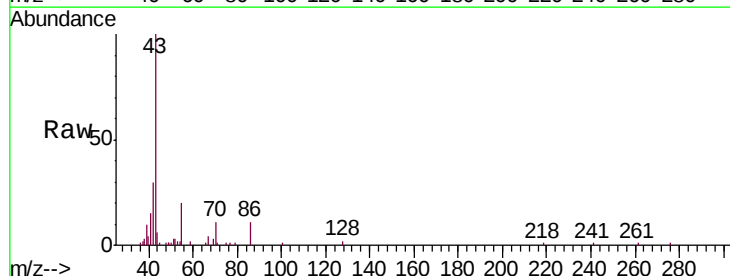


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

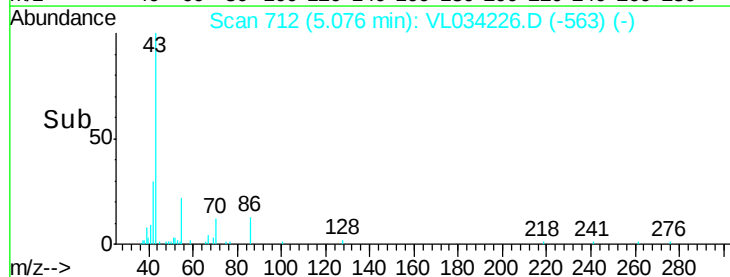
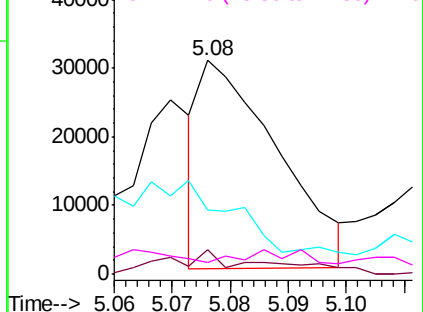


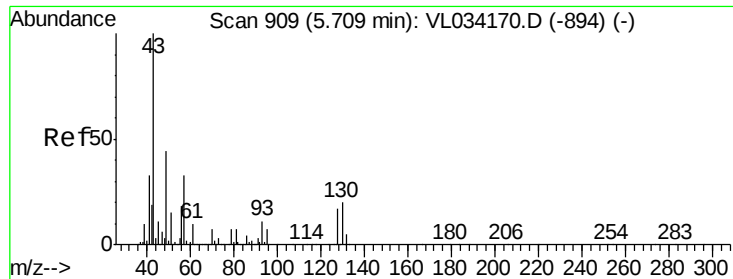
#23
Vinyl Acetate
Concen: 0.120 ppbv
RT: 5.08 min Scan# 712
Delta R.T. -0.02 min
Lab File: VL034226.D
Acq: 7 Oct 2019 17:37

Tgt Ion:	43	Resp:	28295
Ion	Ratio	Lower	Upper
43	100		
86	10.4	5.1	7.7#
42	25.8	8.6	12.8#
44	2.2	4.7	7.1#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0

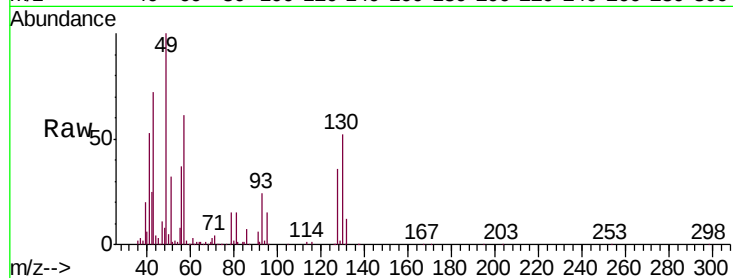




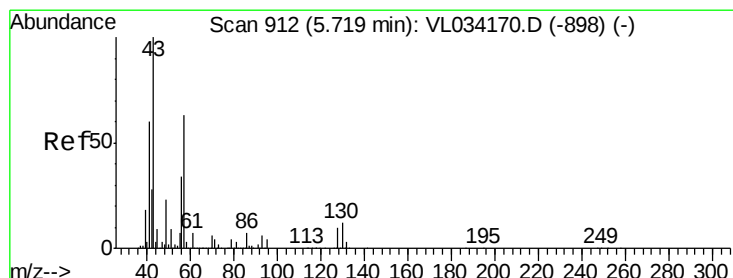
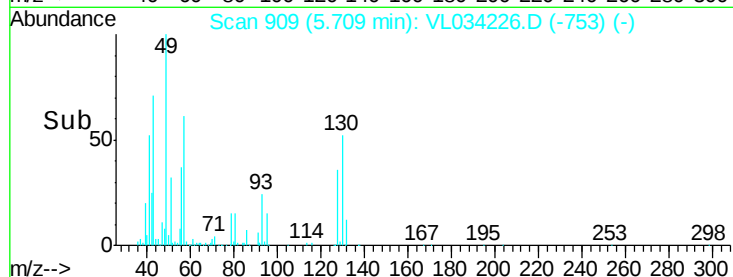
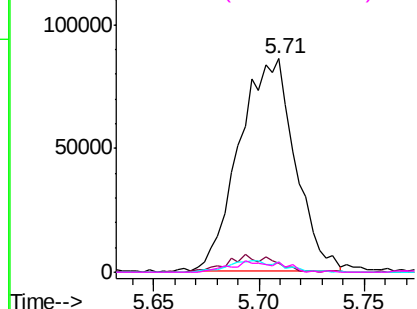
#25
Ethyl Acetate
Concen: 0.519 ppbv
RT: 5.71 min Scan# 909
Delta R.T. 0.00 min
Lab File: VL034226.D
Acq: 7 Oct 2019 17:37

Instrument :
MSVOA_L
ClientSampleId :
IA4

Tgt Ion:	43	Resp:	157329
Ion	Ratio	Lower	Upper
43	100		
45	7.4	8.4	12.6#
61	5.3	7.2	10.8#
70	4.9	5.3	7.9#

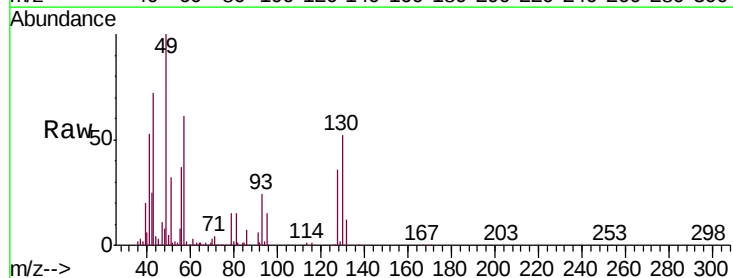


Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

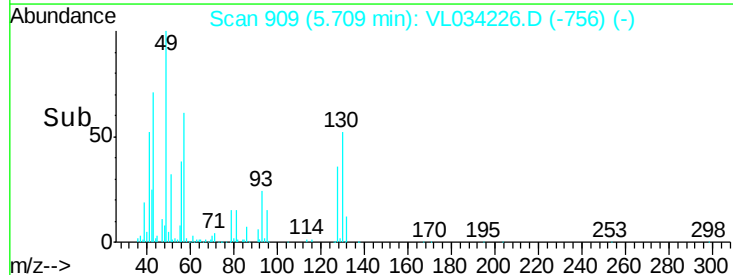
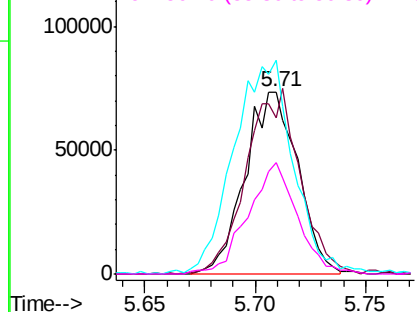


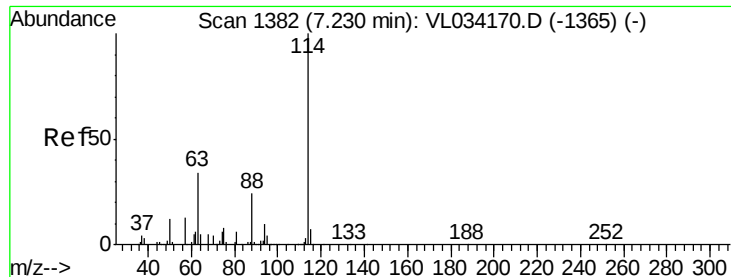
#26
Hexane
Concen: 0.970 ppbv
RT: 5.71 min Scan# 909
Delta R.T. -0.01 min
Lab File: VL034226.D
Acq: 7 Oct 2019 17:37

Tgt Ion:	57	Resp:	122171
Ion	Ratio	Lower	Upper
57	100		
41	104.2	78.5	117.7
43	132.3	189.5	284.3#
56	57.4	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



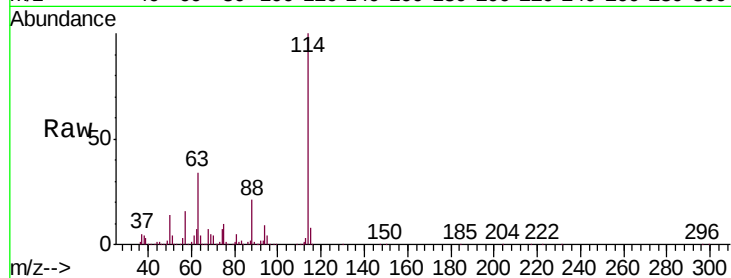


#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.21 min Scan# 1376
 Delta R.T. -0.02 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

Tgt Ion:114 Resp: 1946862

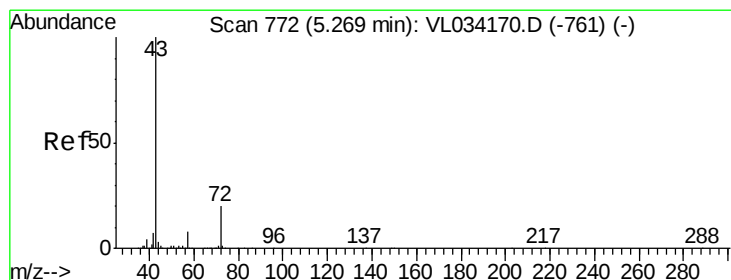
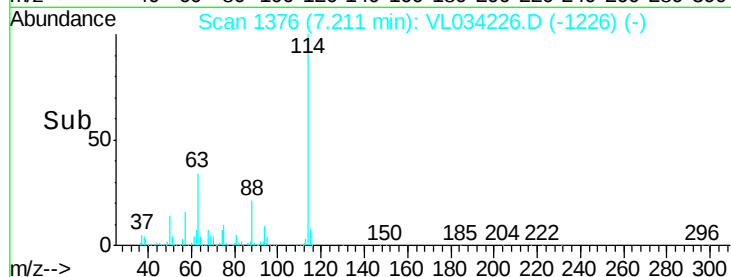
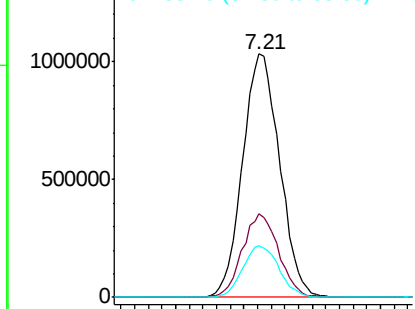
Ion	Ratio	Lower	Upper
114	100		
63	33.6	27.8	41.6
88	20.9	17.1	25.7



Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

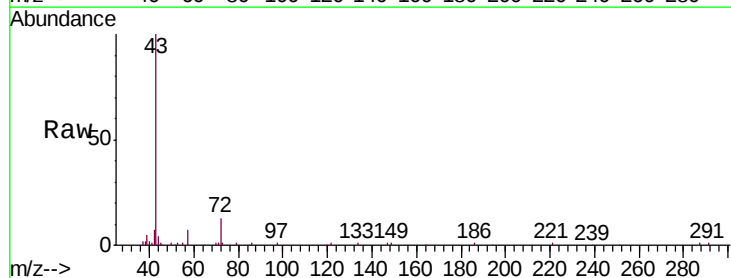
Ion 88.10 (87.80 to 88.80): VL0



#34
 2-Butanone
 Concen: 0.154 ppbv
 RT: 5.26 min Scan# 768
 Delta R.T. -0.01 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

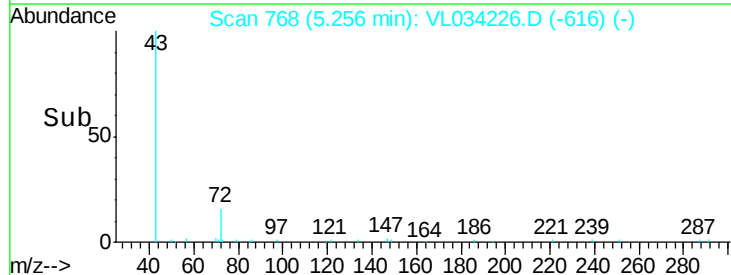
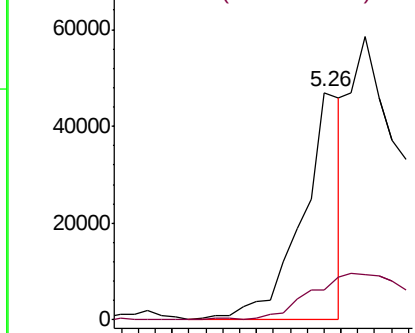
Tgt Ion: 43 Resp: 30675

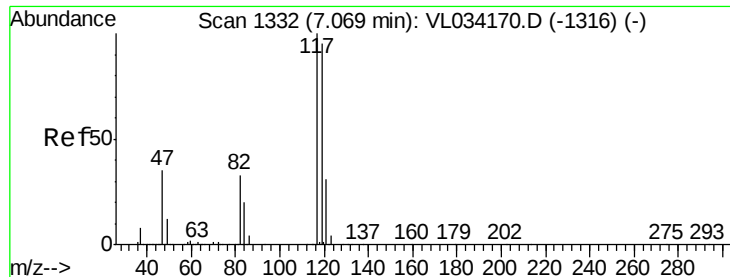
Ion	Ratio	Lower	Upper
43	100		
72	0.0	15.0	22.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.073 ppbv

RT: 7.05 min Scan# 1326

Delta R.T. -0.02 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampleId :

IA4

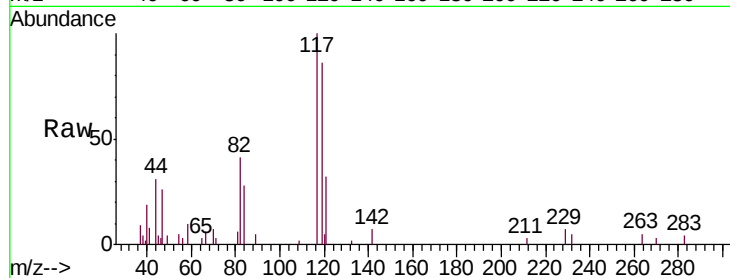
Tgt Ion:117 Resp: 11848

Ion Ratio Lower Upper

117 100

119 80.9 75.8 113.6

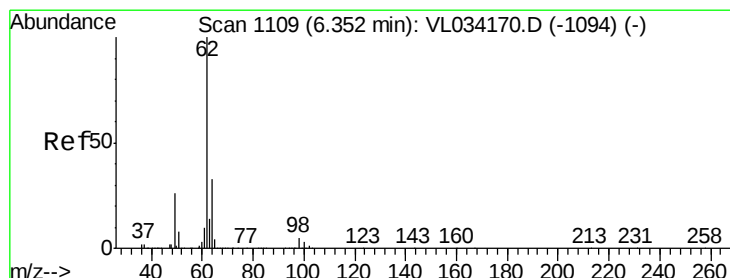
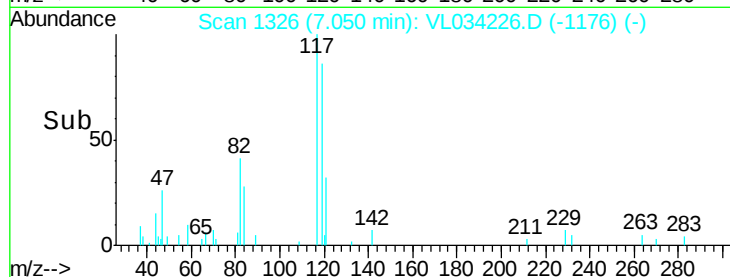
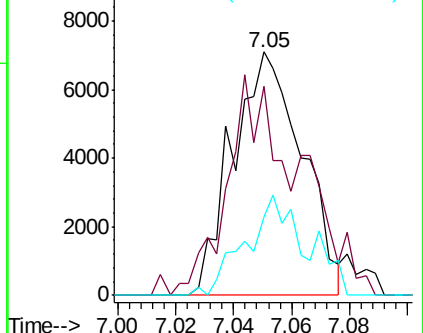
121 32.1 25.0 37.6



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



#37

1,2-Dichloroethane

Concen: 0.055 ppbv

RT: 6.34 min Scan# 1104

Delta R.T. -0.02 min

Lab File: VL034226.D

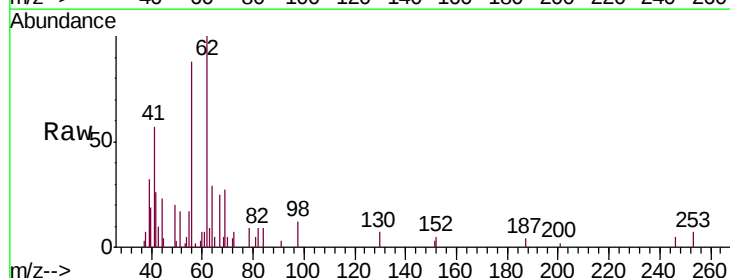
Acq: 7 Oct 2019 17:37

Tgt Ion: 62 Resp: 8426

Ion Ratio Lower Upper

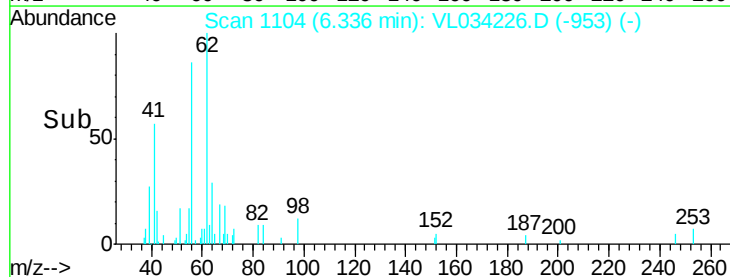
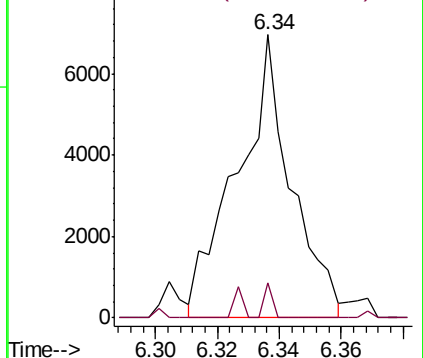
62 100

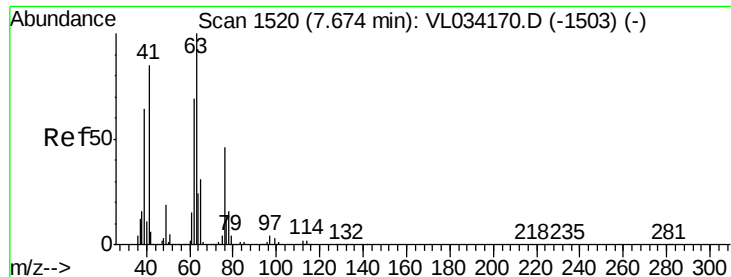
98 0.0 3.8 5.8#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

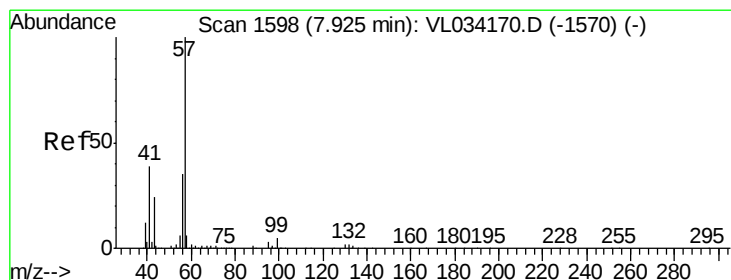
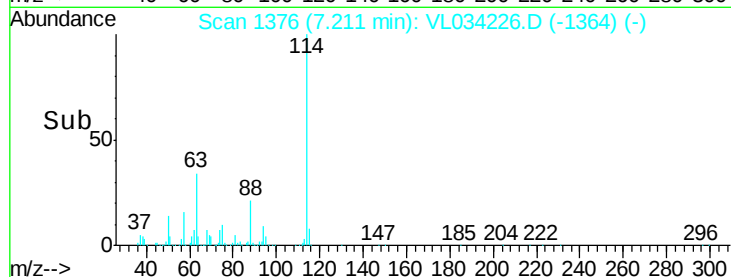
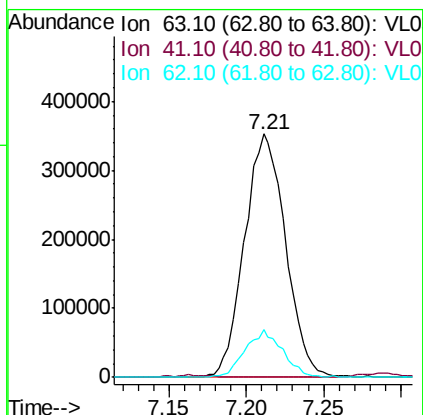
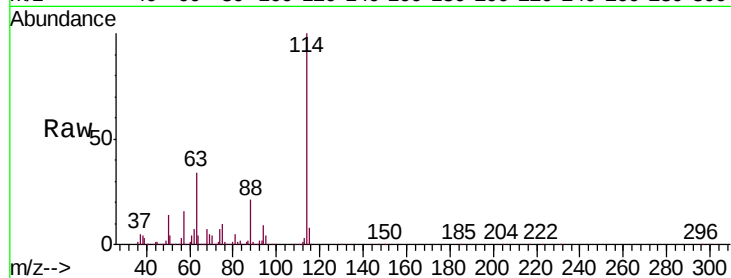




#39
 1,2-Dichloropropane
 Concen: 6.742 ppbv
 RT: 7.21 min Scan# 1376
 Delta R.T. -0.46 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

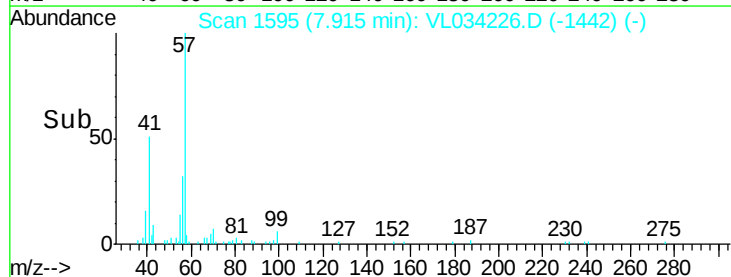
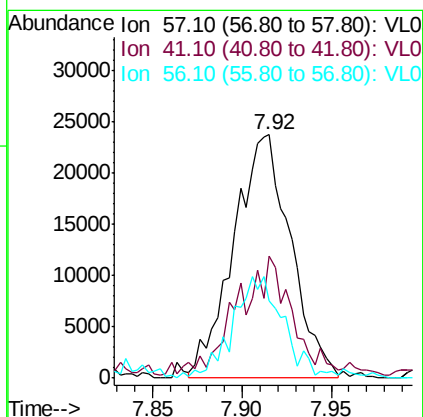
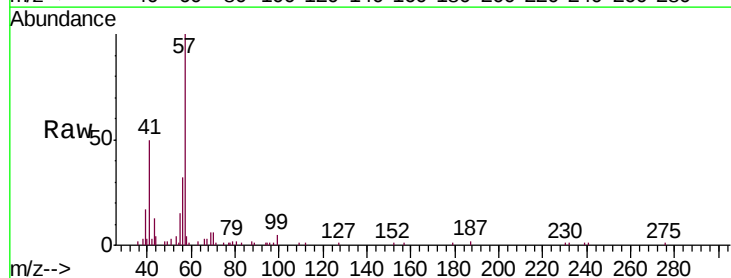
Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

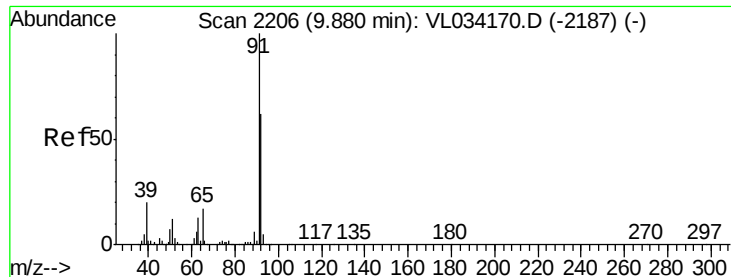
Tgt Ion: 63 Resp: 651328
 Ion Ratio Lower Upper
 63 100
 41 0.0 68.4 102.6#
 62 19.6 55.4 83.2#



#44
 2,2,4-Trimethylpentane
 Concen: 0.127 ppbv
 RT: 7.92 min Scan# 1595
 Delta R.T. -0.01 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

Tgt Ion: 57 Resp: 52681
 Ion Ratio Lower Upper
 57 100
 41 57.1 29.8 44.6#
 56 38.4 25.9 38.9





#53

Toluene

Concen: 0.522 ppbv

RT: 9.86 min Scan# 2201

Delta R.T. -0.02 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampled :

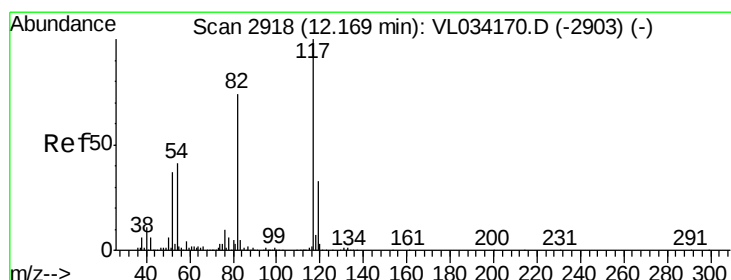
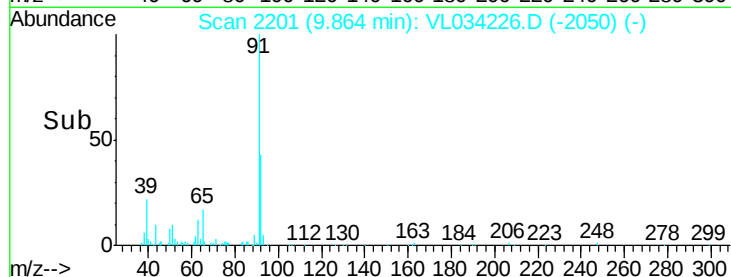
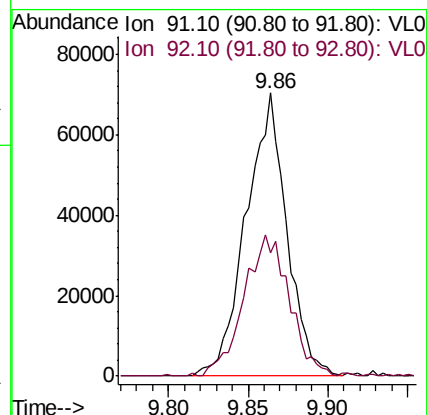
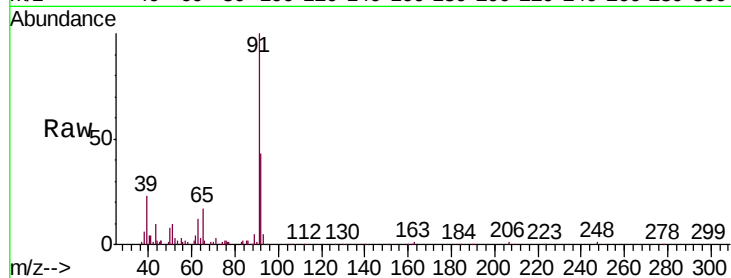
IA4

Tgt Ion: 91 Resp: 122633

Ion Ratio Lower Upper

91 100

92 56.5 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: VL034226.D

Acq: 7 Oct 2019 17:37

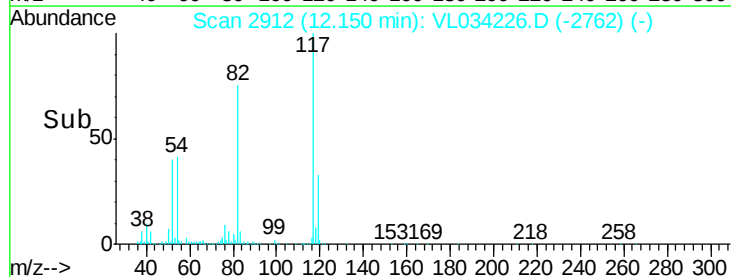
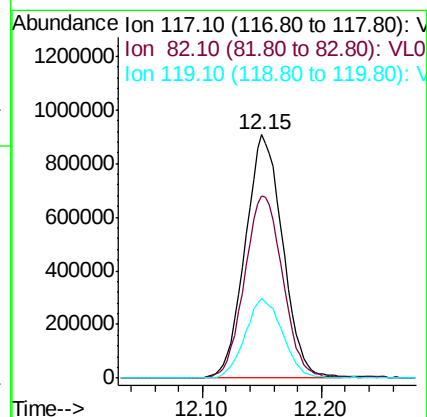
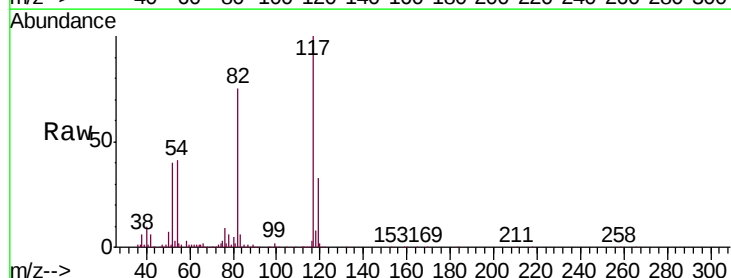
Tgt Ion: 117 Resp: 1974752

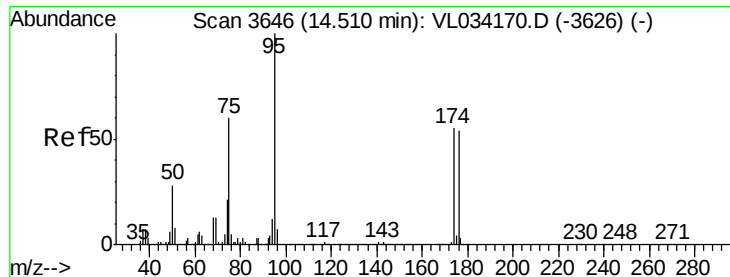
Ion Ratio Lower Upper

117 100

82 77.4 58.2 87.4

119 33.1 23.7 35.5





#68

1-Bromo-4-Fluorobenzene

Concen: 10.167 ppbv

RT: 14.49 min Scan# 3639

Delta R.T. -0.02 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampleId :

IA4

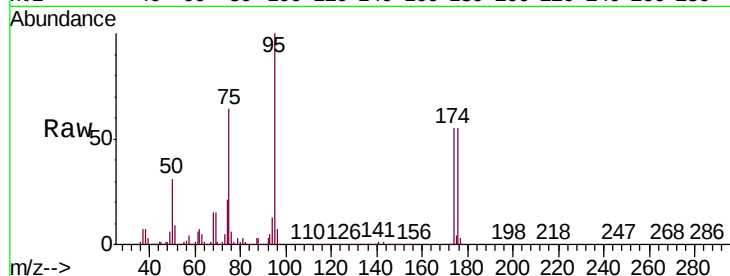
Tgt Ion: 95 Resp: 1744608

Ion Ratio Lower Upper

95 100

174 56.0 45.1 67.7

175 4.2 3.3 4.9



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

14.49

800000

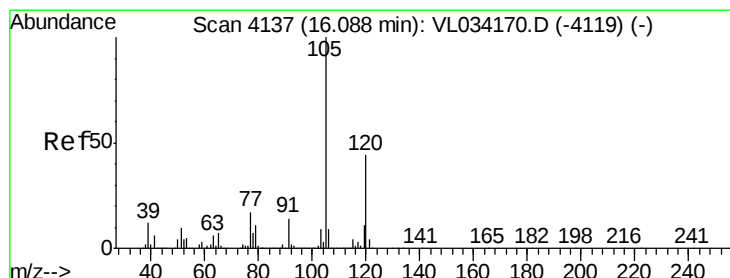
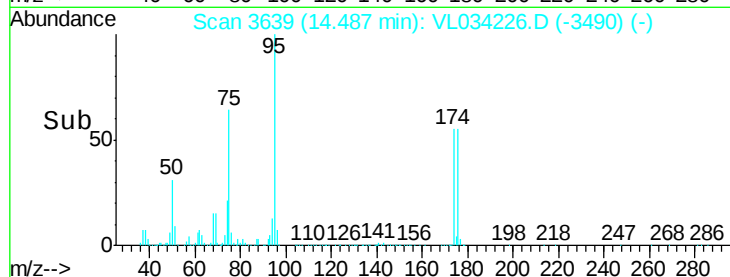
600000

400000

200000

0

Time-->



#73

1,3,5-Trimethylbenzene

Concen: 0.031 ppbv

RT: 16.06 min Scan# 4129

Delta R.T. -0.03 min

Lab File: VL034226.D

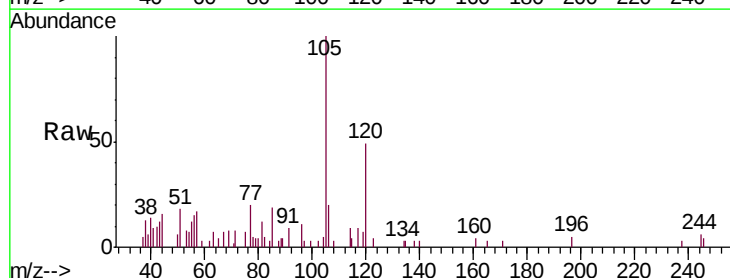
Acq: 7 Oct 2019 17:37

Tgt Ion: 105 Resp: 9017

Ion Ratio Lower Upper

105 100

120 43.3 35.6 53.4



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

16.06

8000

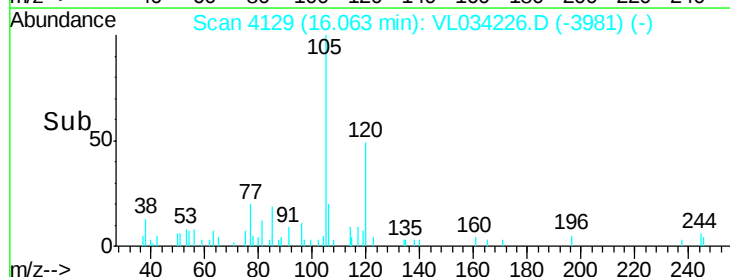
6000

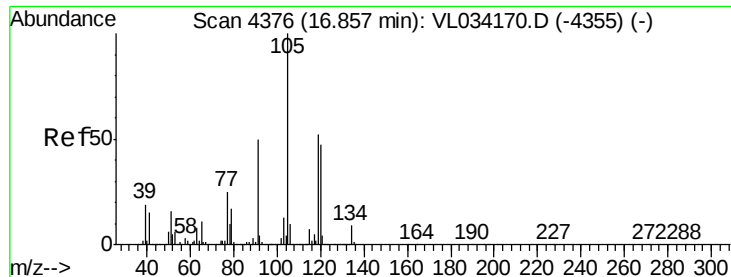
4000

2000

0

Time-->





#74

1,2,4-Trimethylbenzene

Concen: 0.033 ppbv

RT: 16.83 min Scan# 4368

Delta R.T. -0.03 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

Instrument :

MSVOA_L

ClientSampleId :

IA4

Tgt Ion:105 Resp: 9963

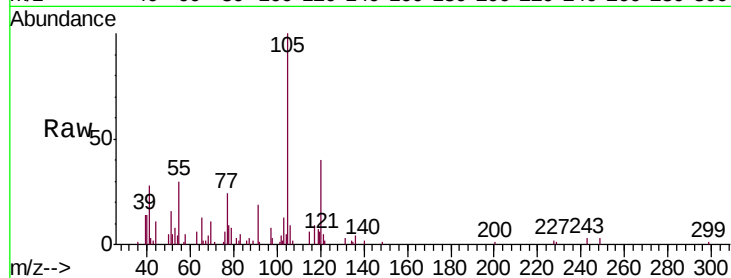
Ion Ratio Lower Upper

105 100

120 31.4 37.5 56.3#

91 19.4 41.1 61.7#

77 20.0 19.9 29.9

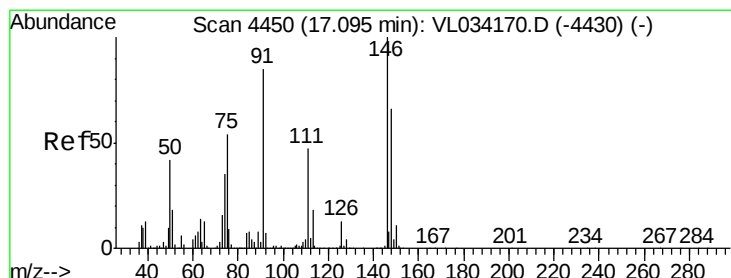
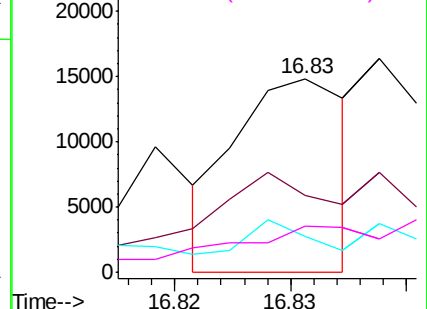
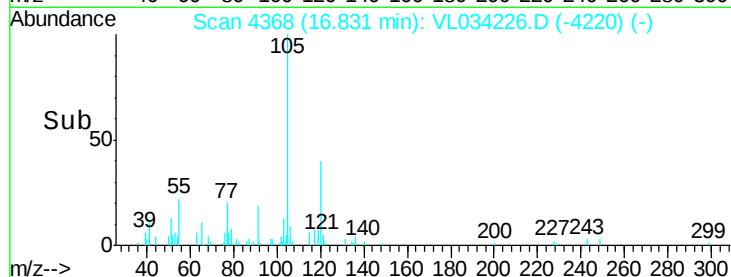


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#75

1,3-Dichlorobenzene

Concen: 8.525 ppbv

RT: 17.22 min Scan# 4488

Delta R.T. 0.12 min

Lab File: VL034226.D

Acq: 7 Oct 2019 17:37

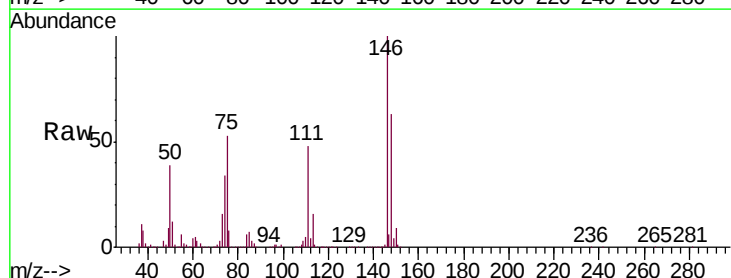
Tgt Ion:146 Resp: 1398846

Ion Ratio Lower Upper

146 100

111 50.2 25.9 77.8

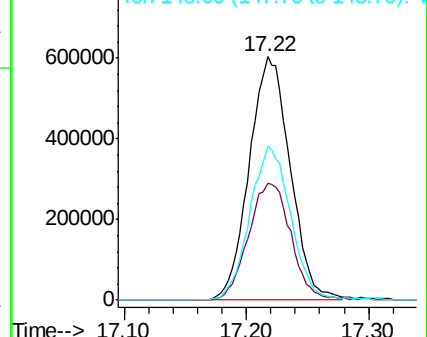
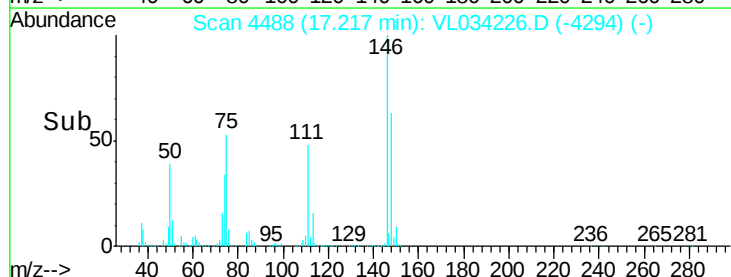
148 63.5 32.6 97.7

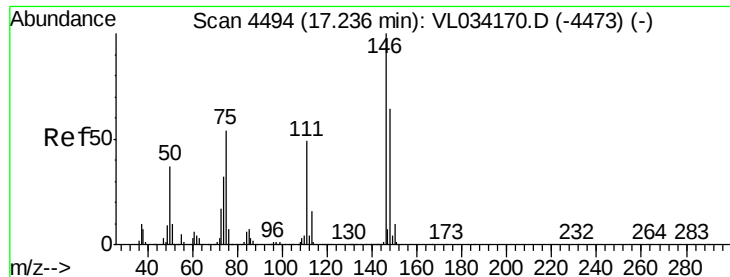


Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

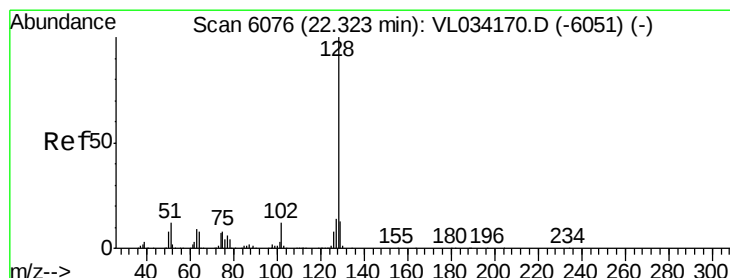
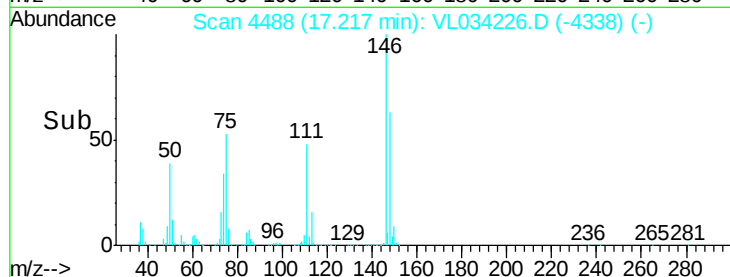
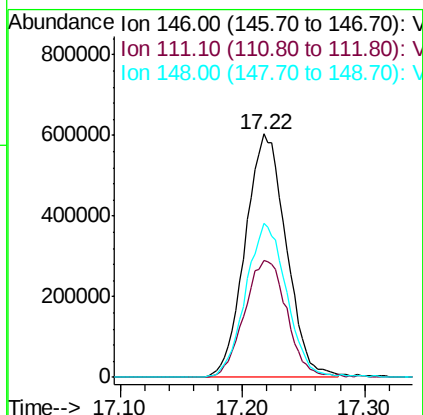
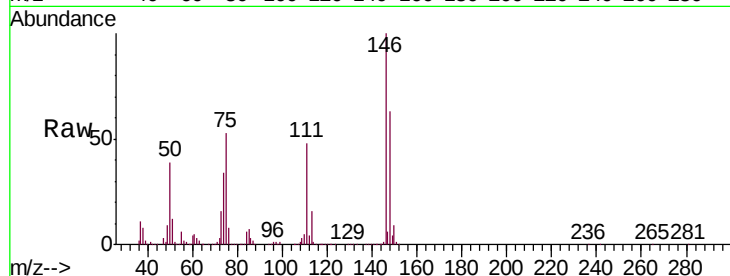




#76
 1,4-Dichlorobenzene
 Concen: 8.324 ppbv
 RT: 17.22 min Scan# 4488
 Delta R.T. -0.02 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

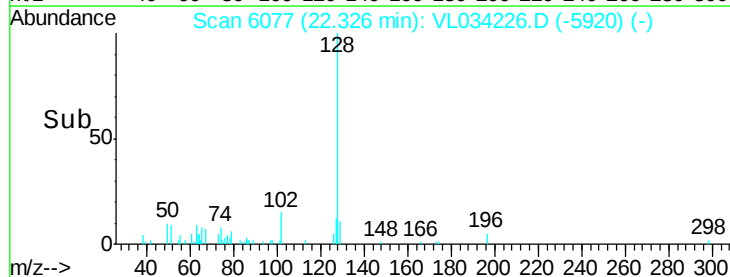
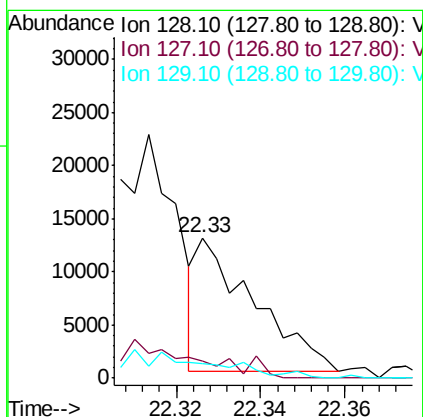
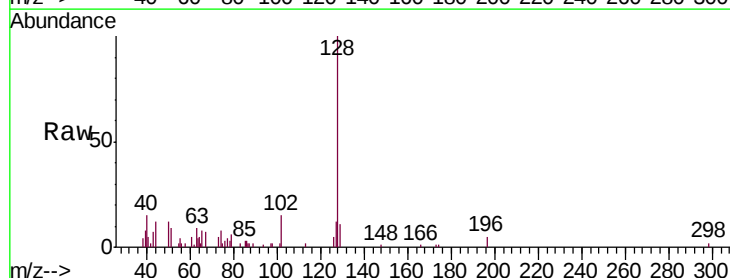
Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

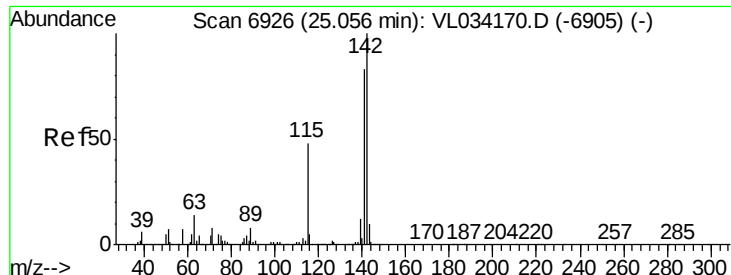
Tgt Ion:146 Resp: 1398846
 Ion Ratio Lower Upper
 146 100
 111 50.2 24.6 74.0
 148 63.4 32.4 97.0



#79
 Naphthalene
 Concen: 0.044 ppbv
 RT: 22.33 min Scan# 6077
 Delta R.T. 0.00 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

Tgt Ion:128 Resp: 11746
 Ion Ratio Lower Upper
 128 100
 127 13.0 11.1 16.7
 129 11.1 10.2 15.4





#80
 Naphthalene, 2-methyl-
 Concen: 0.063 ppbv
 RT: 25.04 min Scan# 6922
 Delta R.T. -0.01 min
 Lab File: VL034226.D
 Acq: 7 Oct 2019 17:37

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

Tgt Ion: 142 Resp: 7848
 Ion Ratio Lower Upper
 142 100
 141 86.3 67.6 101.4
 115 57.1 36.9 55.3#

