

Data File : VL033375.D
Acq On : 19 Mar 2019 1:58
Operator : SY/AP
Sample : K1805-04 10X
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
L1HA-IA3

Quant Time: Mar 19 06:58:11 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL031519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar 15 14:52:14 2019
QLast Update : Fri Mar 15 14:52:14 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	751222	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1663495	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.24	117	1597691	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.58 95 1248376 10.54 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 105.40%

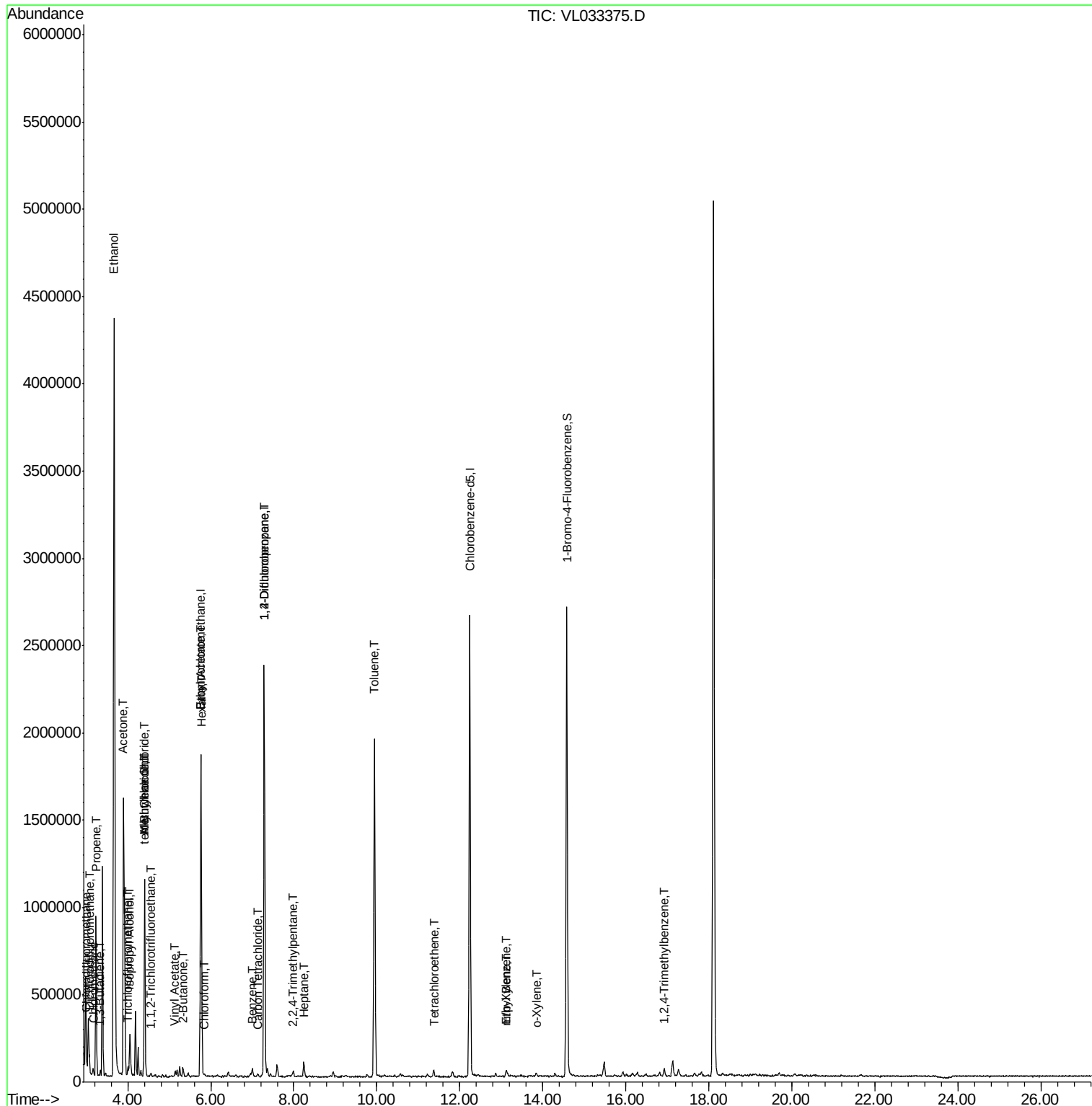
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	71638	0.542	ppbv	94
3) Chlorodifluoromethane	3.01	51	64672	0.750	ppbv #	81
4) Chloromethane	3.17	50	30558	0.654	ppbv #	84
9) Propene	3.24	41	196319	5.100	ppbv	90
10) Heptane	8.25	43	31554	0.331	ppbv	99
11) Trichlorofluoromethane	4.00	101	33585	0.255	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.55	101	3970	0.045	ppbv #	43
13) Ethanol	3.67	45	5701674	310.730	ppbv	99
15) Acetone	3.90	43	1842978	15.782	ppbv	96
16) 1,3-Butadiene	3.34	39	7166	0.189	ppbv #	2
17) tert-Butyl alcohol	4.39	59	1094	0.067	ppbv #	74
19) Isopropyl Alcohol	4.05	45	252763	4.550	ppbv #	1
20) Methylene Chloride	4.41	84	392576	10.308	ppbv	99
21) Allyl Chloride	4.40	41	16556	0.292	ppbv #	37
23) Vinyl Acetate	5.14	43	21715	0.161	ppbv #	50
25) Ethyl Acetate	5.77	43	171232	1.009	ppbv #	82
26) Hexane	5.78	57	215762	2.843	ppbv #	43
29) Chloroform	5.85	83	3780	0.030	ppbv	84
34) 2-Butanone	5.33	43	55722	0.510	ppbv	98
35) Carbon Tetrachloride	7.13	117	7739	0.066	ppbv	97
36) Benzene	6.99	78	15131	0.102	ppbv #	92
39) 1,2-Dichloropropane	7.29	63	439650	7.886	ppbv #	24
44) 2,2,4-Trimethylpentane	7.99	57	8204	0.033	ppbv #	1
52) Tetrachloroethene	11.38	164	3939	0.064	ppbv	89
53) Toluene	9.94	91	1529204	9.040	ppbv	100
58) Ethyl Benzene	13.12	91	21732	0.096	ppbv	91
59) m/p-Xylene	13.13	91	7230	0.037	ppbv #	100
60) o-Xylene	13.85	91	12776	0.067	ppbv	93
74) 1,2,4-Trimethylbenzene	16.92	105	27907	0.126	ppbv #	70

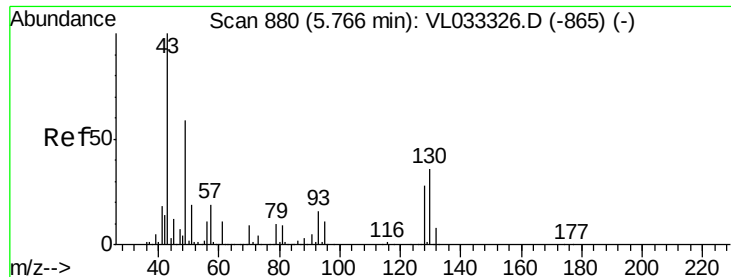
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

L1HA-IA3

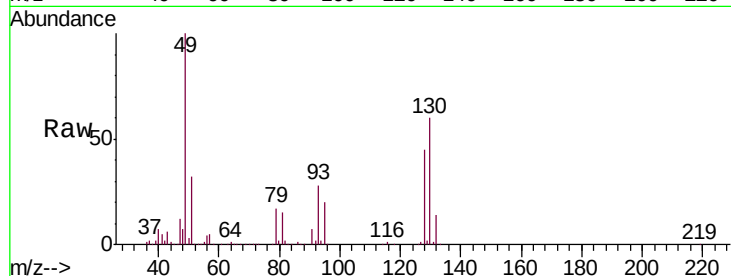
Tgt Ion: 49 Resp: 751222

Ion Ratio Lower Upper

49 100

128 47.3 23.5 70.6

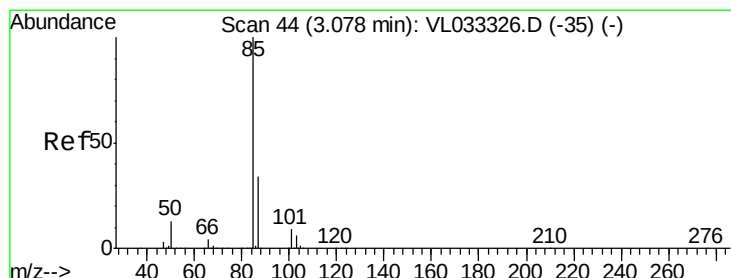
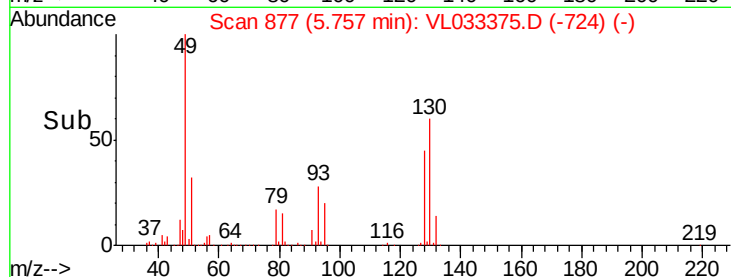
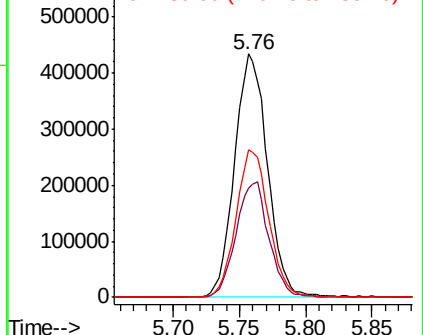
130 60.4 30.1 90.3



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: 0.542 ppbv

RT: 3.08 min Scan# 43

Delta R.T. -0.00 min

Lab File: VL033375.D

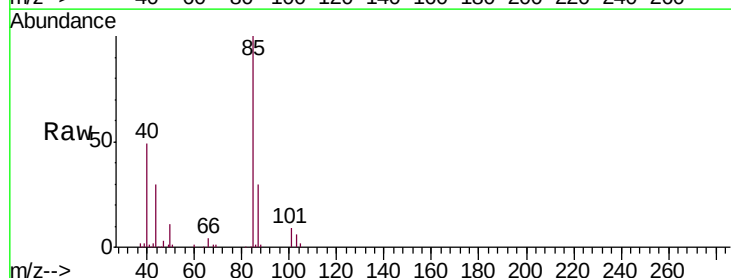
Acq: 19 Mar 2019 1:58

Tgt Ion: 85 Resp: 71638

Ion Ratio Lower Upper

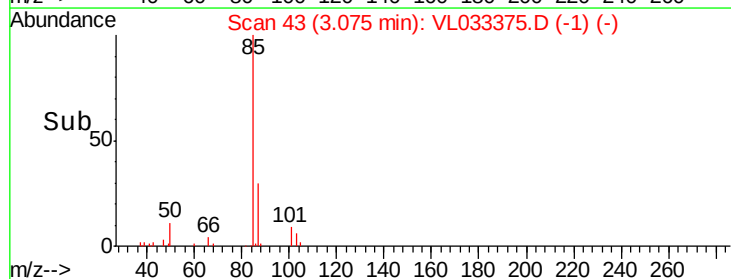
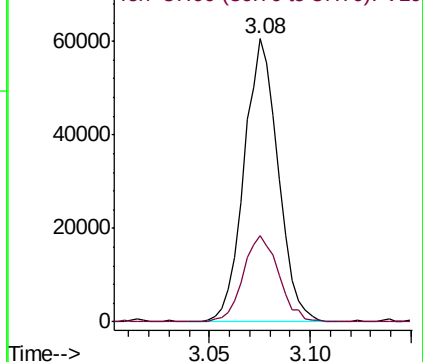
85 100

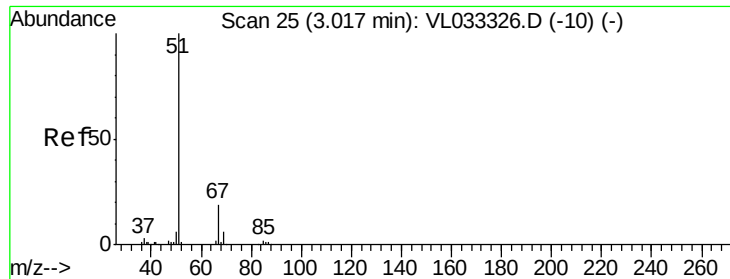
87 30.4 26.9 40.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.750 ppbv

RT: 3.01 min Scan# 24

Delta R.T. -0.00 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

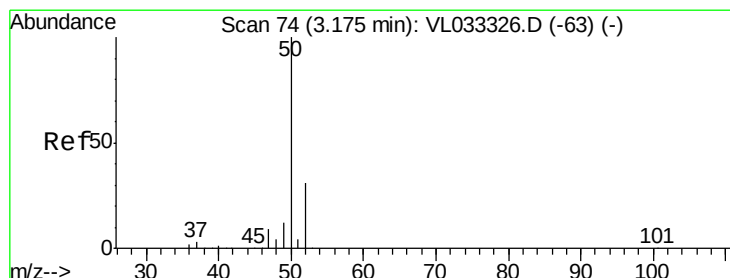
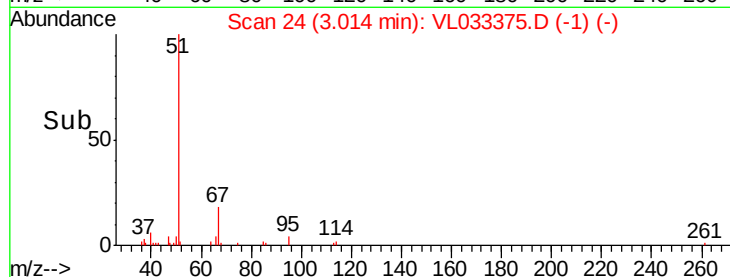
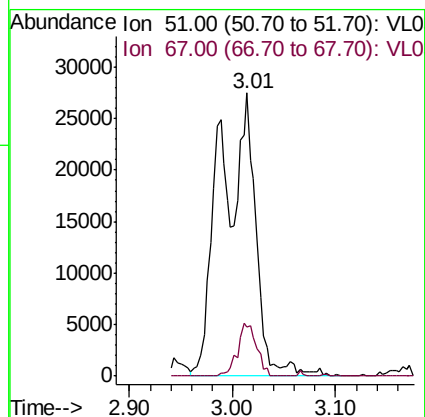
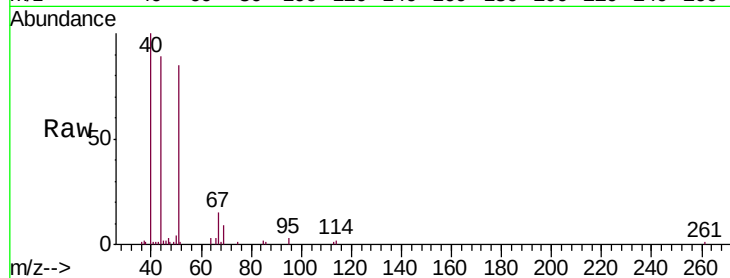
L1HA-IA3

Tgt Ion: 51 Resp: 64672

Ion Ratio Lower Upper

51 100

67 10.2 14.9 22.3#



#4

Chloromethane

Concen: 0.654 ppbv

RT: 3.17 min Scan# 73

Delta R.T. -0.00 min

Lab File: VL033375.D

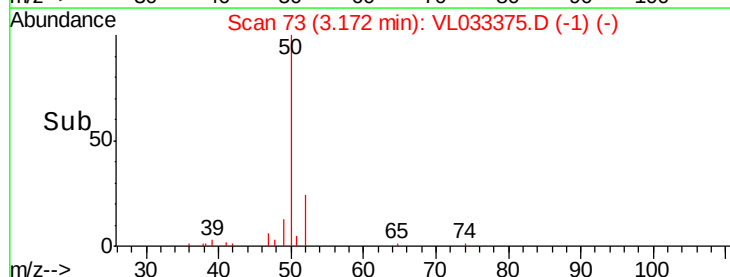
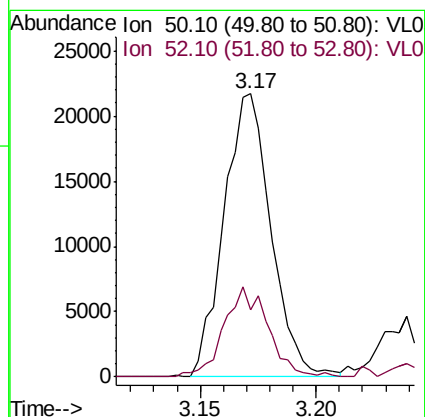
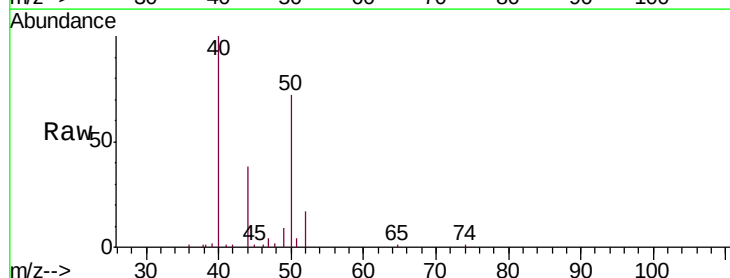
Acq: 19 Mar 2019 1:58

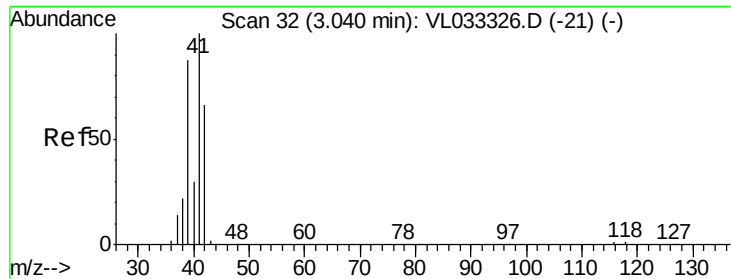
Tgt Ion: 50 Resp: 30558

Ion Ratio Lower Upper

50 100

52 22.6 25.0 37.6#





#9

Propene

Concen: 5.100 ppbv

RT: 3.24 min Scan# 93

Delta R.T. 0.20 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

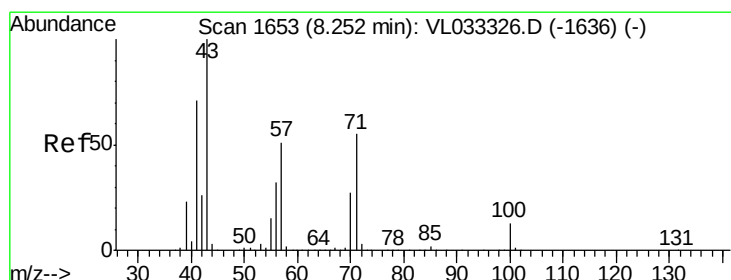
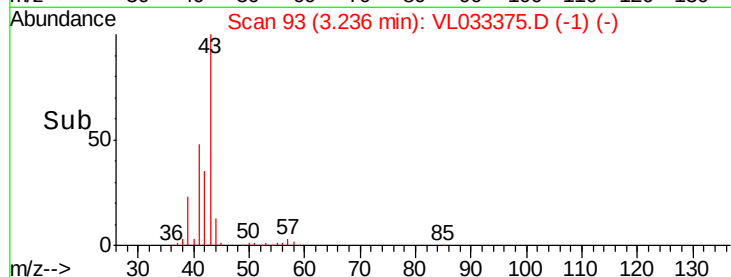
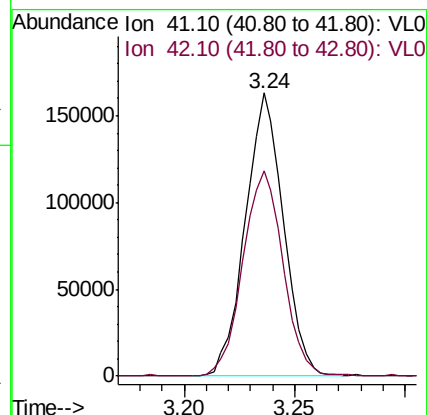
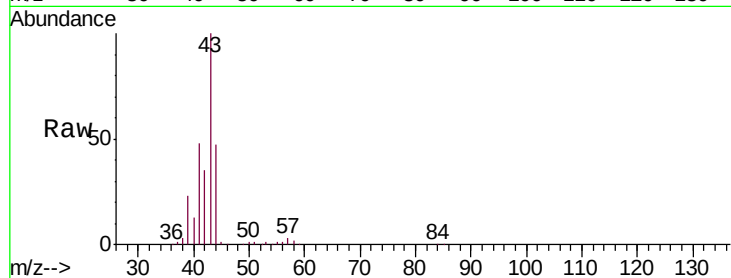
L1HA-IA3

Tgt Ion: 41 Resp: 196319

Ion Ratio Lower Upper

41 100

42 76.9 55.2 82.8



#10

Heptane

Concen: 0.331 ppbv

RT: 8.25 min Scan# 1651

Delta R.T. -0.01 min

Lab File: VL033375.D

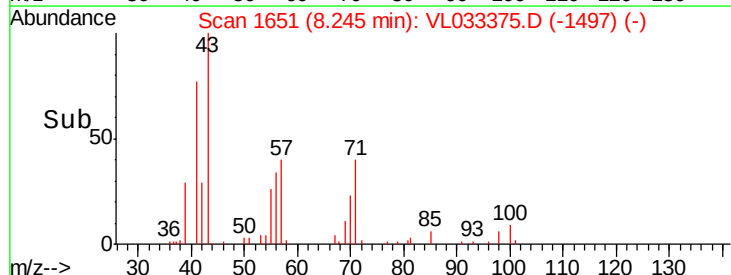
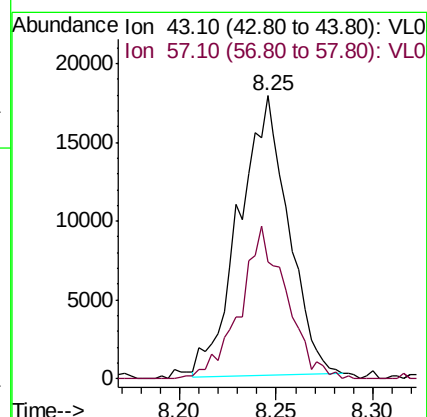
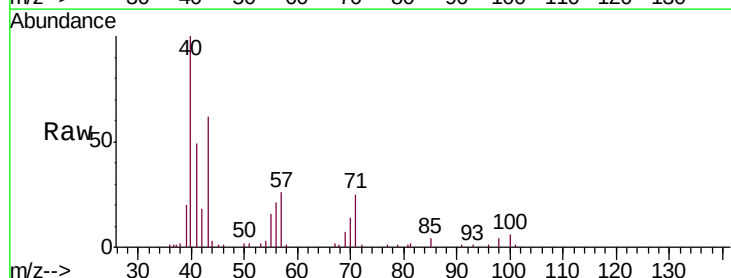
Acq: 19 Mar 2019 1:58

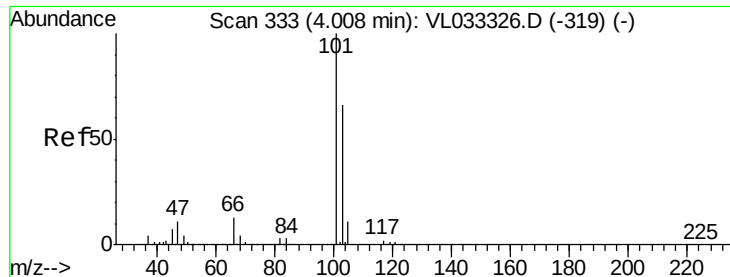
Tgt Ion: 43 Resp: 31554

Ion Ratio Lower Upper

43 100

57 50.9 40.4 60.6





#11

Trichlorofluoromethane

Concen: 0.255 ppbv

RT: 4.00 min Scan# 332

Delta R.T. -0.00 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

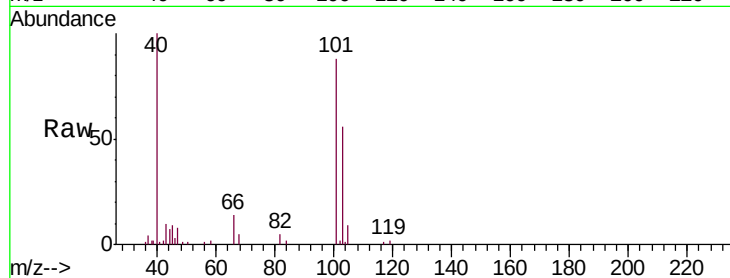
L1HA-IA3

Tgt Ion:101 Resp: 33585

Ion Ratio Lower Upper

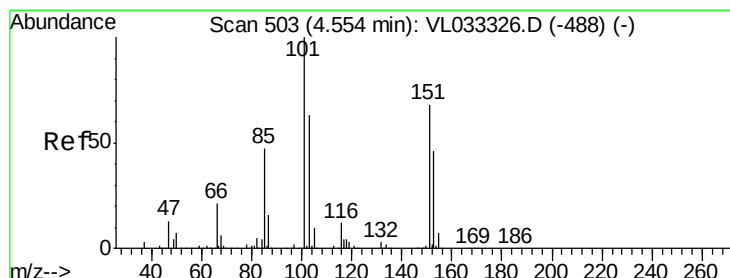
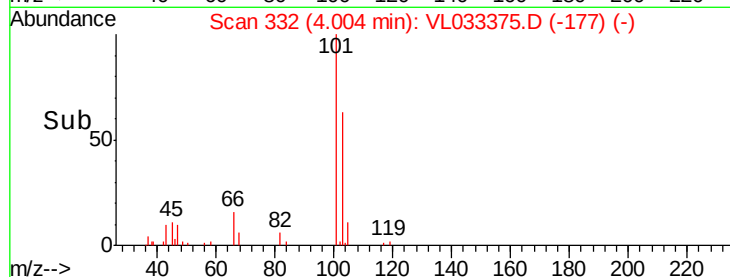
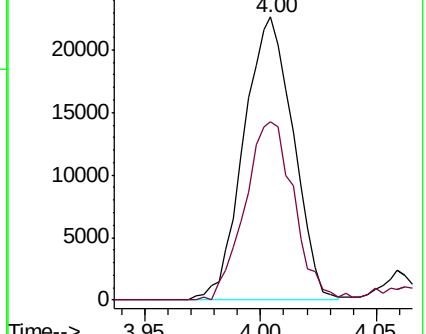
101 100

103 63.3 52.9 79.3



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: 0.045 ppbv

RT: 4.55 min Scan# 501

Delta R.T. -0.01 min

Lab File: VL033375.D

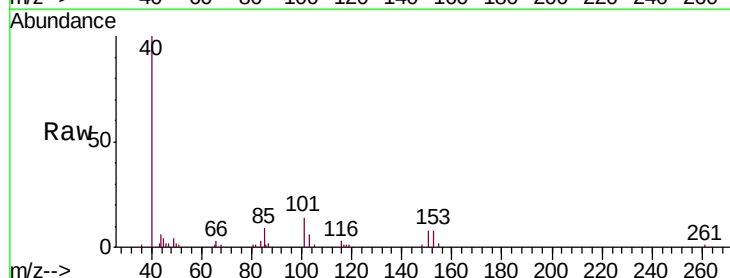
Acq: 19 Mar 2019 1:58

Tgt Ion:101 Resp: 3970

Ion Ratio Lower Upper

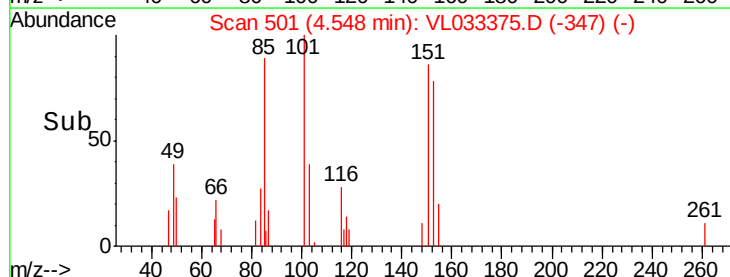
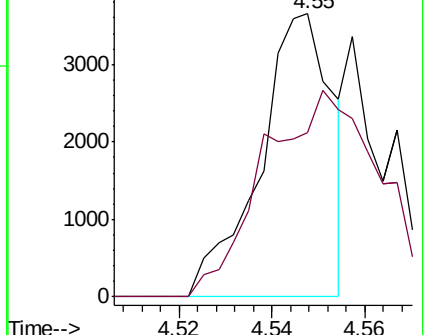
101 100

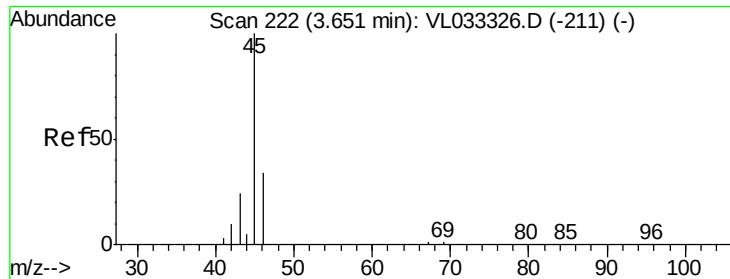
151 117.3 56.3 84.5#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 310.730 ppbv

RT: 3.67 min Scan# 228

Delta R.T. 0.02 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

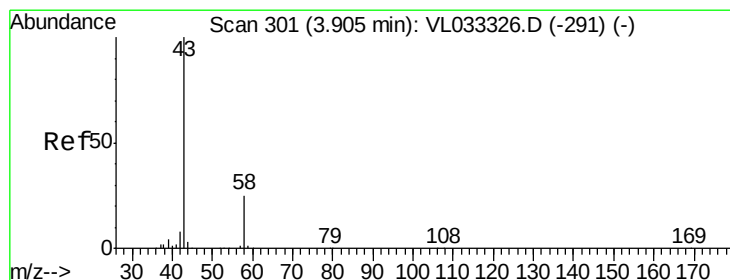
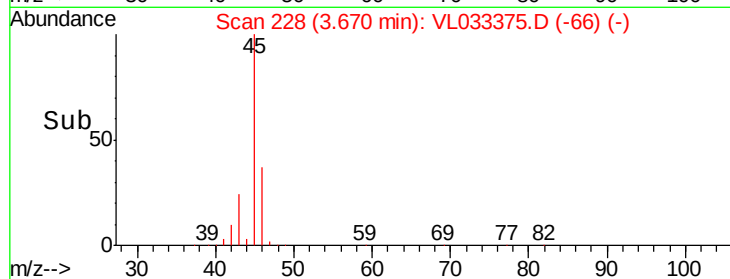
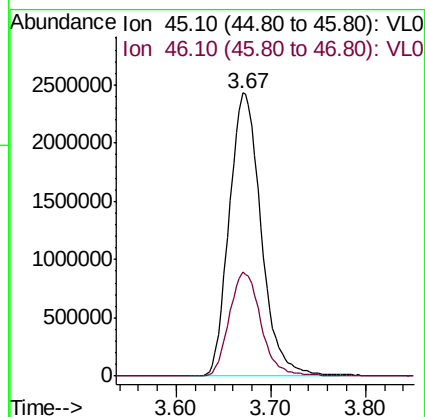
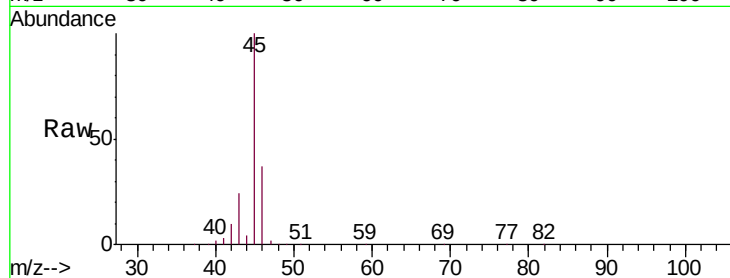
L1HA-IA3

Tgt Ion: 45 Resp: 5701674

Ion Ratio Lower Upper

45 100

46 36.6 14.9 59.7



#15

Acetone

Concen: 15.782 ppbv

RT: 3.90 min Scan# 298

Delta R.T. -0.01 min

Lab File: VL033375.D

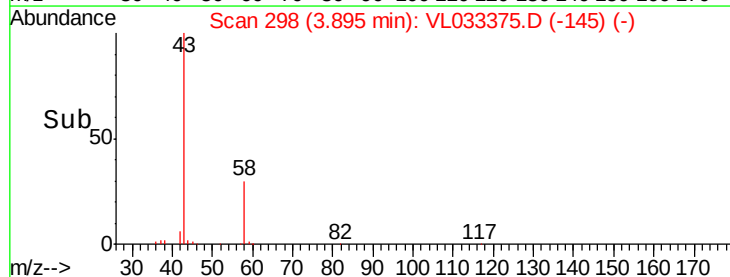
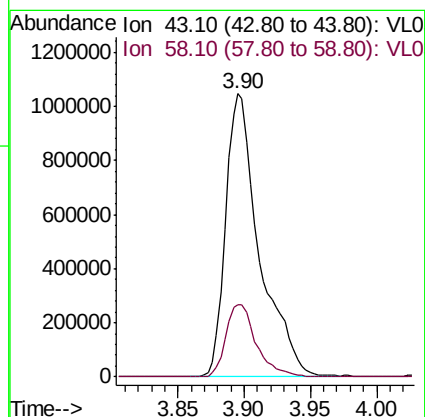
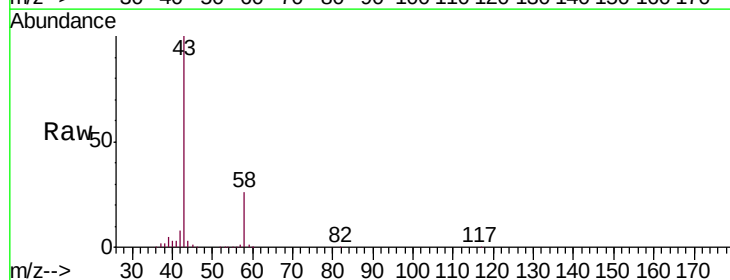
Acq: 19 Mar 2019 1:58

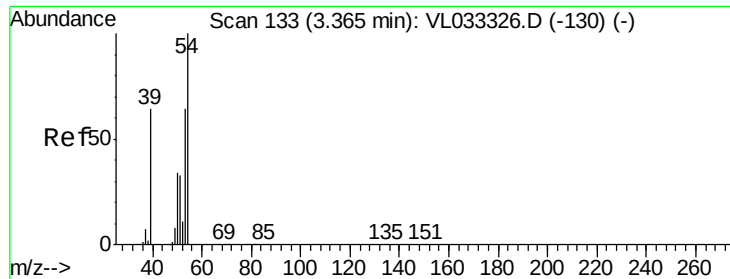
Tgt Ion: 43 Resp: 1842978

Ion Ratio Lower Upper

43 100

58 23.3 20.4 30.6

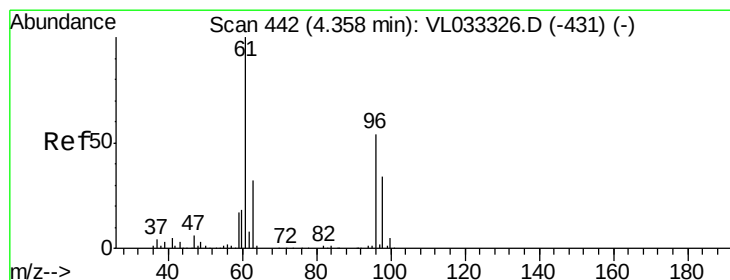
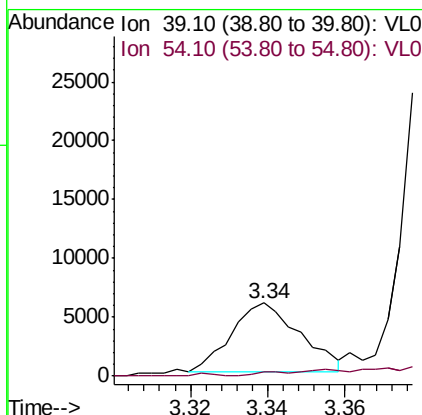
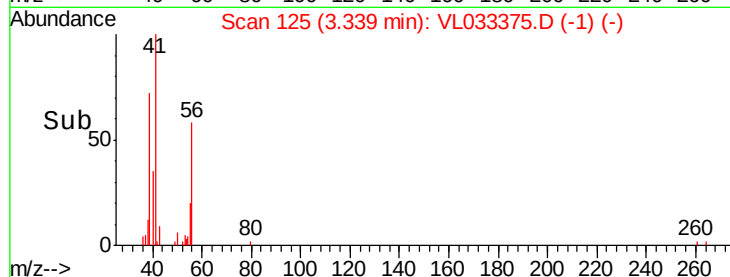
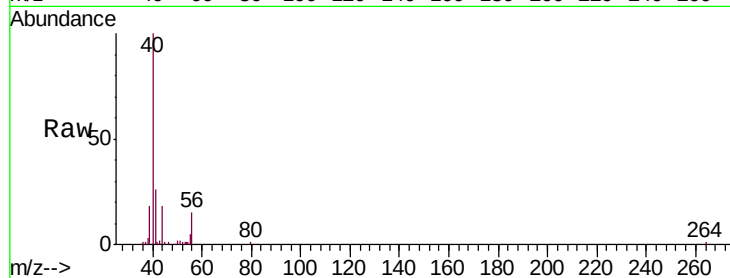




#16
1,3-Butadiene
Concen: 0.189 ppbv
RT: 3.34 min Scan# 125
Delta R.T. -0.03 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

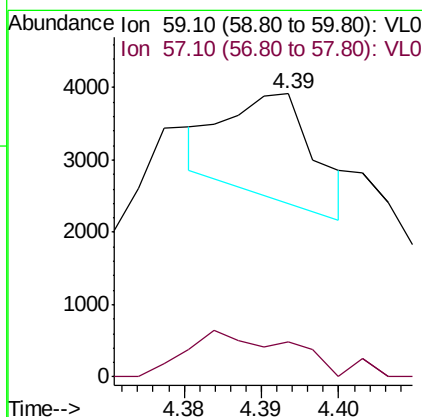
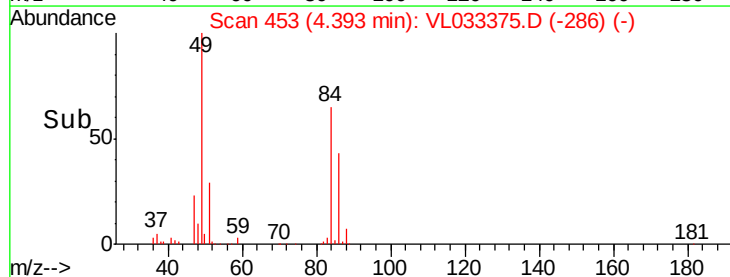
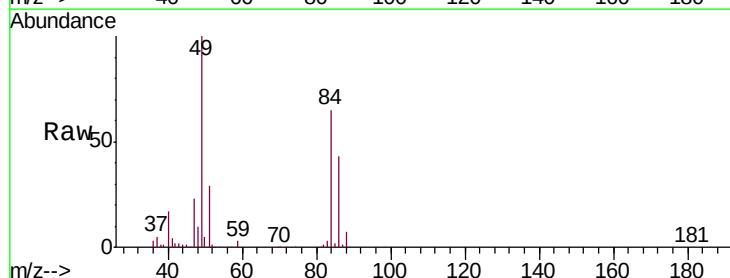
Instrument :
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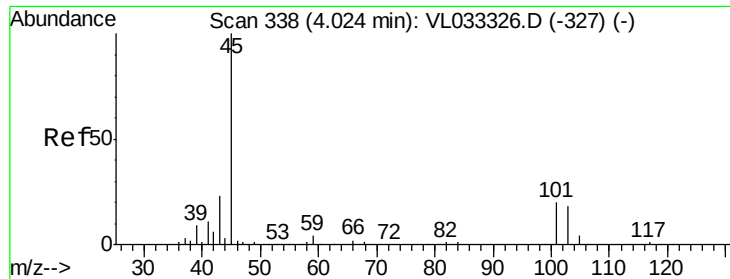
Tgt Ion: 39 Resp: 7166
Ion Ratio Lower Upper
39 100
54 0.0 76.8 115.2#



#17
tert-Butyl alcohol
Concen: 0.067 ppbv
RT: 4.39 min Scan# 453
Delta R.T. 0.04 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

Tgt Ion: 59 Resp: 1094
Ion Ratio Lower Upper
59 100
57 0.0 7.7 11.5#





#19

Isopropyl Alcohol

Concen: 4.550 ppbv

RT: 4.05 min Scan# 346

Delta R.T. 0.03 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampled :

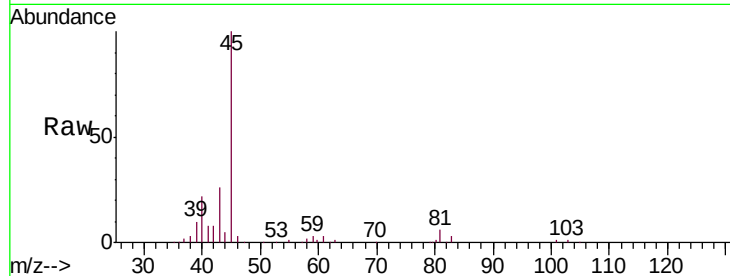
L1HA-IA3

Tgt Ion: 45 Resp: 252763

Ion Ratio Lower Upper

45 100

58 168.9 1.5 2.3#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

150000

100000

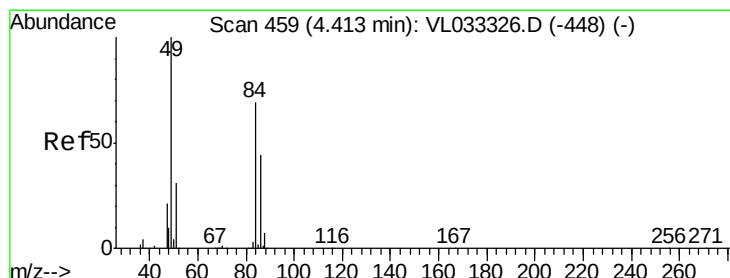
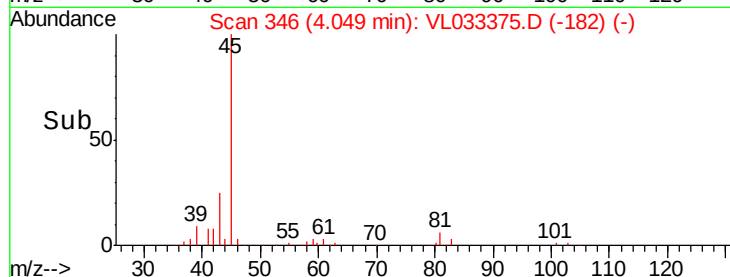
50000

0

4.05

4.00 4.05 4.10

Time-->



#20

Methylene Chloride

Concen: 10.308 ppbv

RT: 4.41 min Scan# 458

Delta R.T. -0.00 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Tgt Ion: 84 Resp: 392576

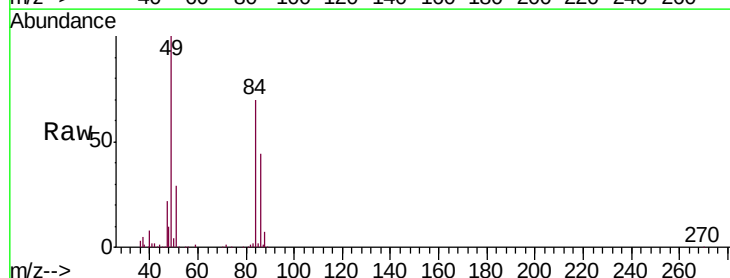
Ion Ratio Lower Upper

84 100

49 143.3 115.4 173.0

51 42.0 35.8 53.6

86 62.9 50.6 75.8



Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

500000

400000

300000

200000

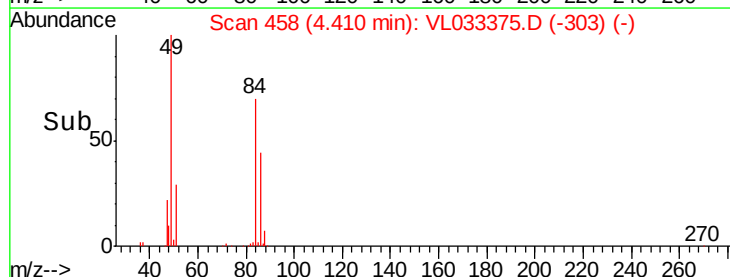
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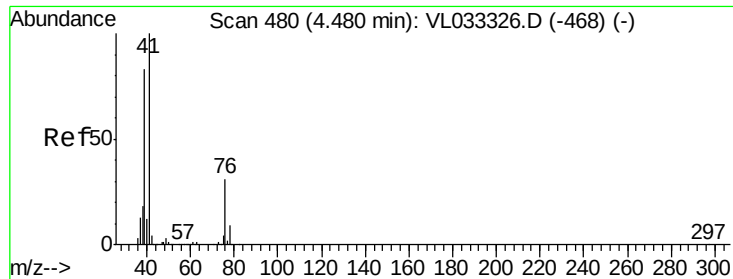
0

4.41

4.35 4.40 4.45

Time-->





#21

Allyl Chloride

Concen: 0.292 ppbv

RT: 4.40 min Scan# 456

Delta R.T. -0.08 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

L1HA-IA3

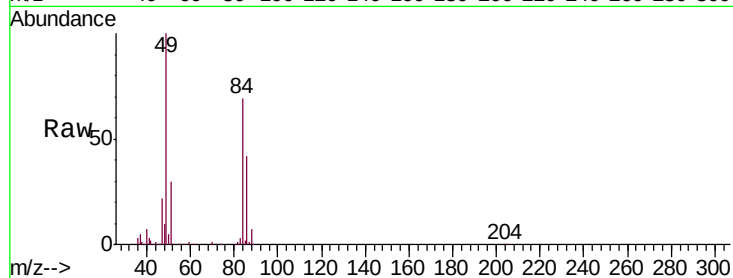
Tgt Ion: 41 Resp: 16556

Ion Ratio Lower Upper

41 100

76 0.0 25.0 37.4#

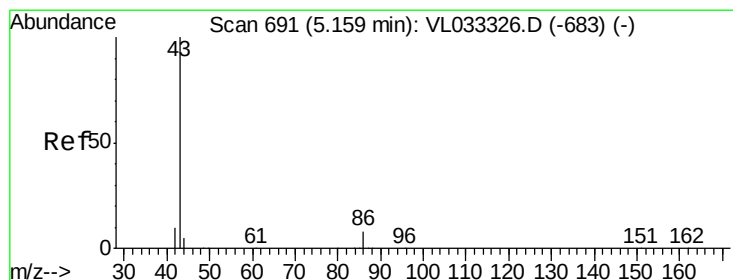
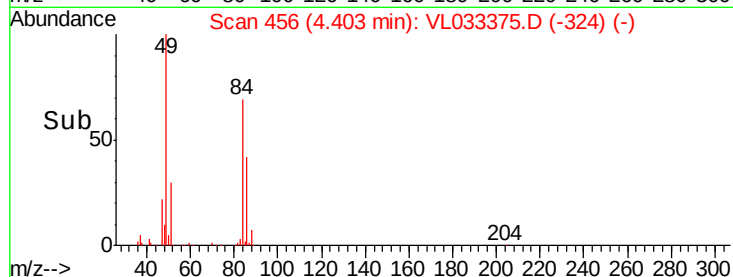
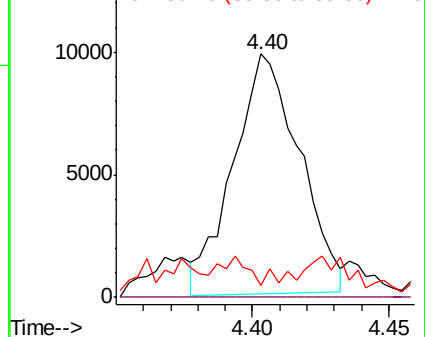
39 23.3 65.9 98.9#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

Ion 39.10 (38.80 to 39.80): VL0



#23

Vinyl Acetate

Concen: 0.161 ppbv

RT: 5.14 min Scan# 685

Delta R.T. -0.02 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Tgt Ion: 43 Resp: 21715

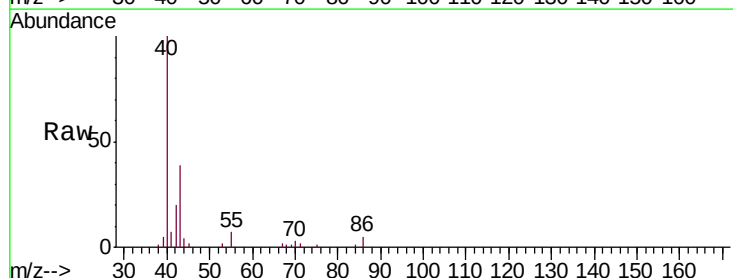
Ion Ratio Lower Upper

43 100

86 11.9 6.2 9.2#

42 48.0 8.1 12.1#

44 3.2 4.1 6.1#

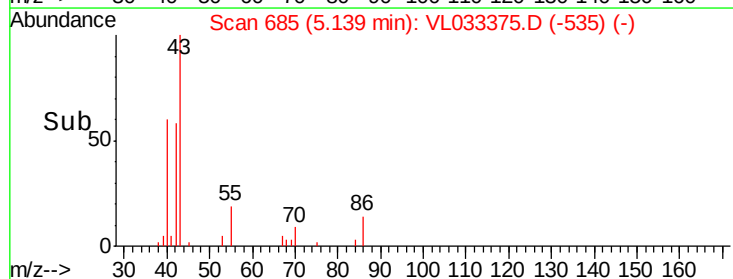
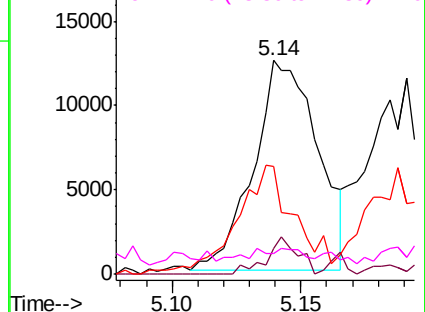


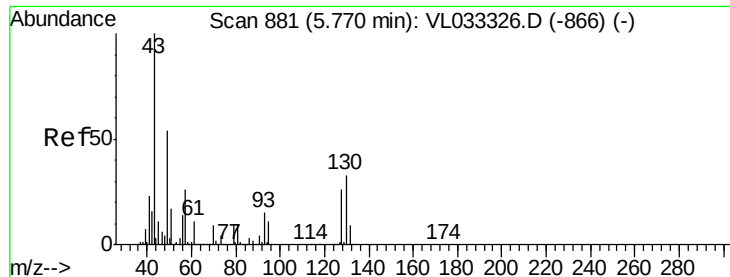
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0





#25

Ethyl Acetate

Concen: 1.009 ppbv

RT: 5.77 min Scan# 882

Delta R.T. 0.00 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

L1HA-IA3

Tgt Ion: 43 Resp: 171232

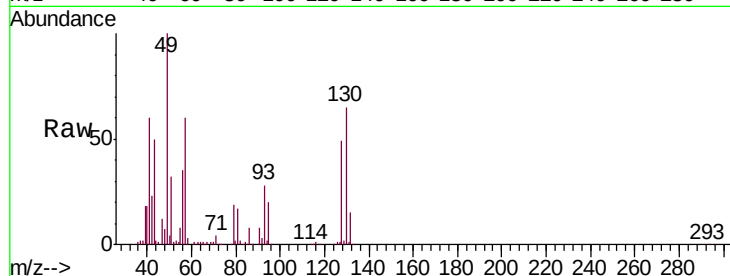
Ion Ratio Lower Upper

43 100

45 2.4 7.9 11.9#

61 1.9 7.4 11.2#

70 2.8 5.7 8.5#

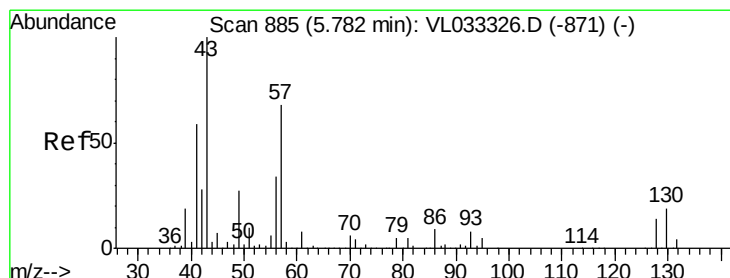
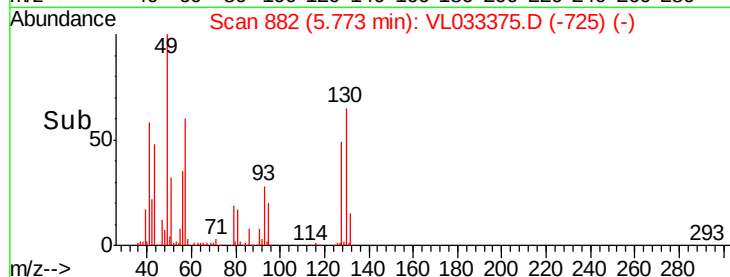
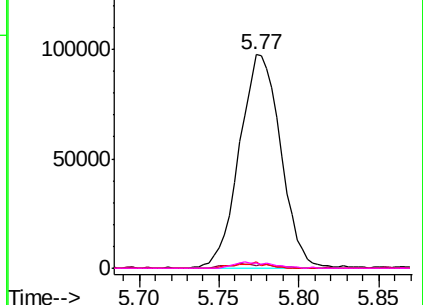


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 2.843 ppbv

RT: 5.78 min Scan# 883

Delta R.T. -0.01 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Tgt Ion: 57 Resp: 215762

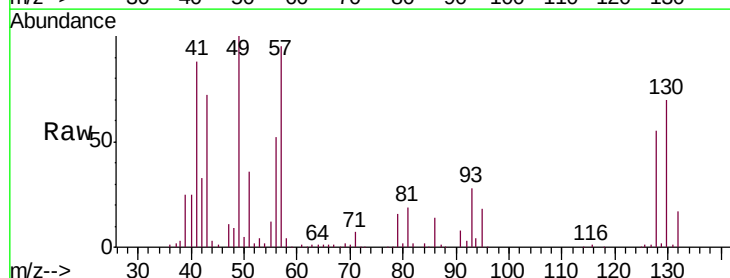
Ion Ratio Lower Upper

57 100

41 93.6 70.5 105.7

43 79.8 181.8 272.8#

56 54.9 42.2 63.2

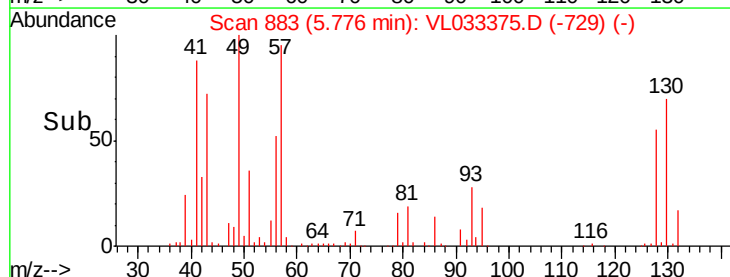
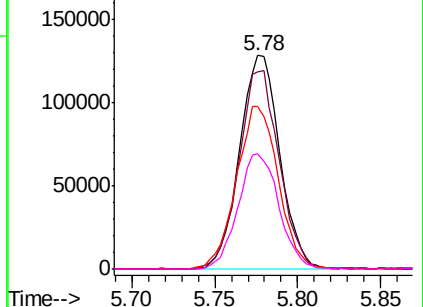


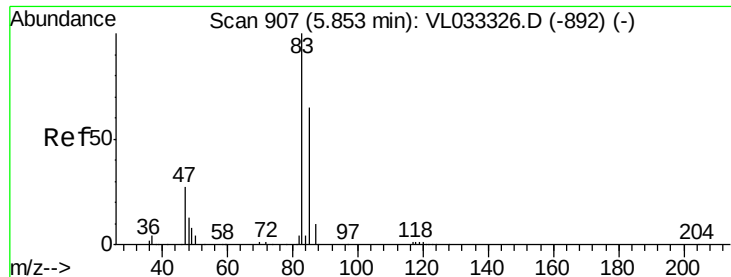
Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

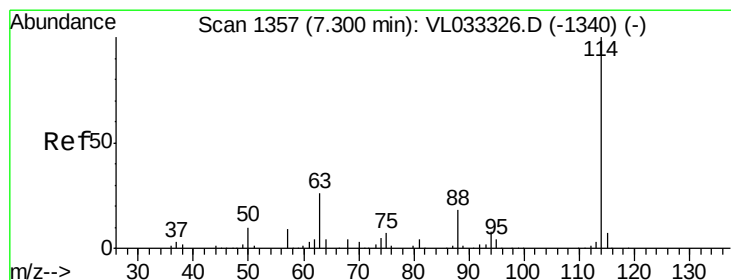
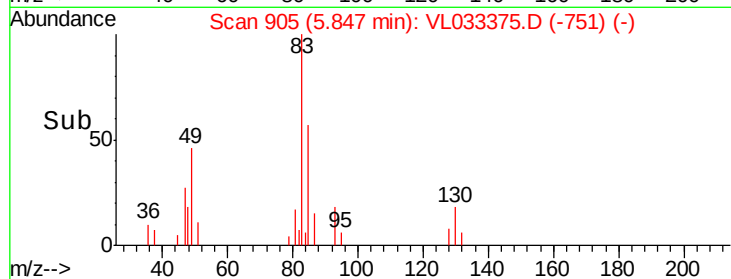
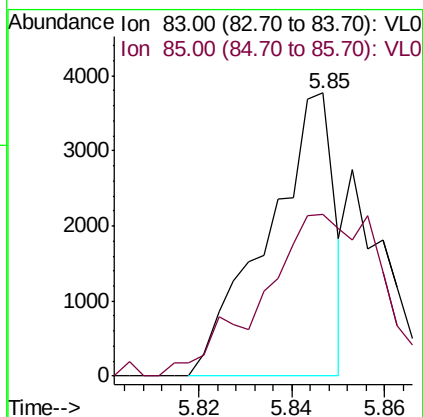
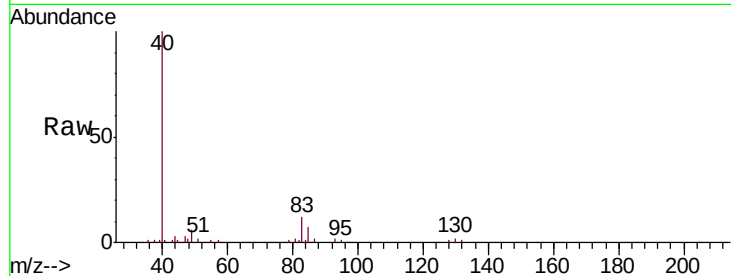




#29
Chloroform
Concen: 0.030 ppbv
RT: 5.85 min Scan# 905
Delta R.T. -0.01 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

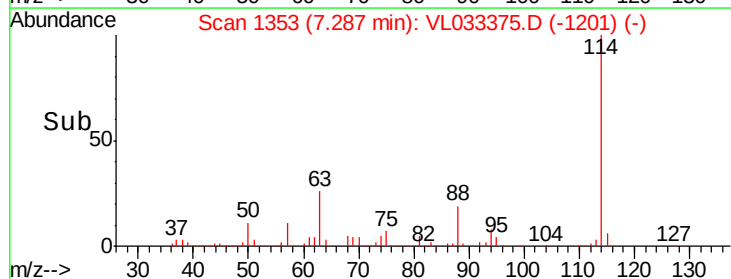
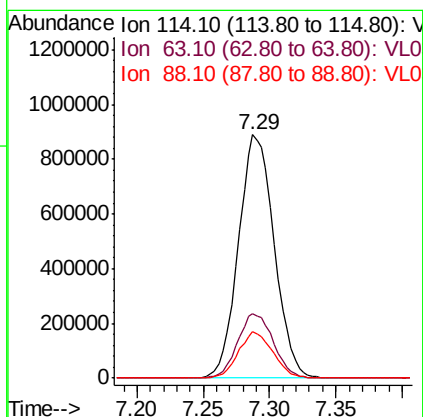
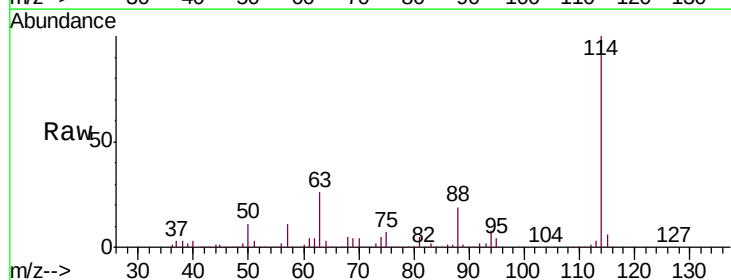
Instrument :
MSVOA_L
ClientSampleId :
L1HA-IA3

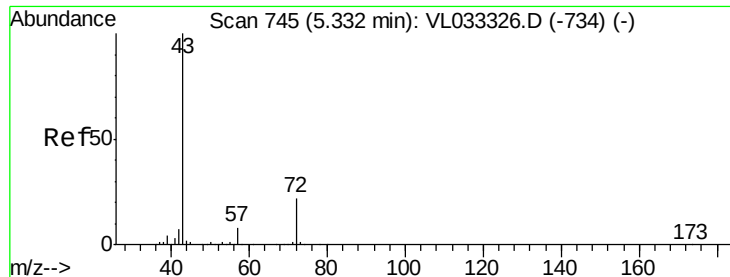
Tgt Ion: 83 Resp: 3780
Ion Ratio Lower Upper
83 100
85 52.3 52.0 78.0



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1353
Delta R.T. -0.01 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

Tgt Ion: 114 Resp: 1663495
Ion Ratio Lower Upper
114 100
63 26.5 21.4 32.2
88 18.4 14.5 21.7

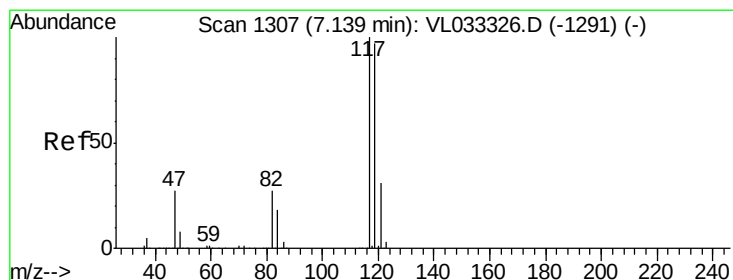
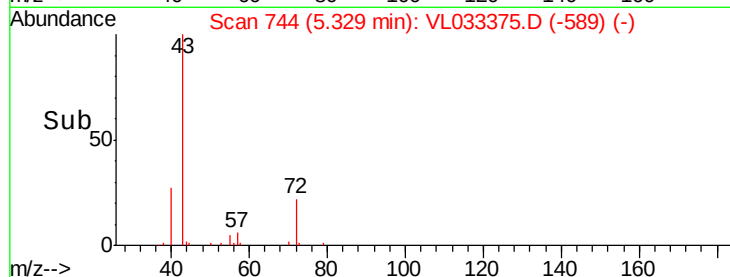
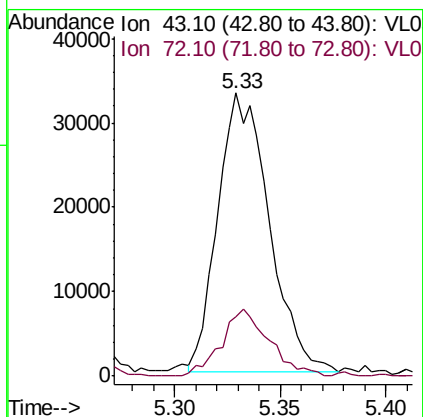
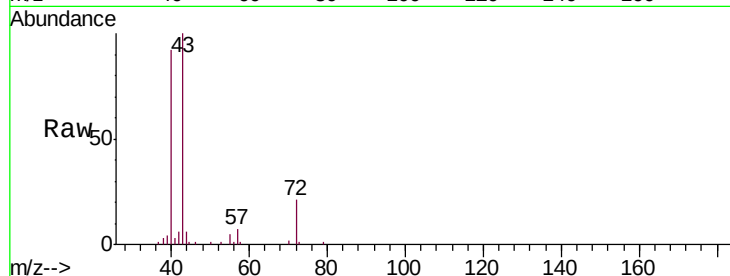




#34
2-Butanone
Concen: 0.510 ppbv
RT: 5.33 min Scan# 744
Delta R.T. -0.00 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

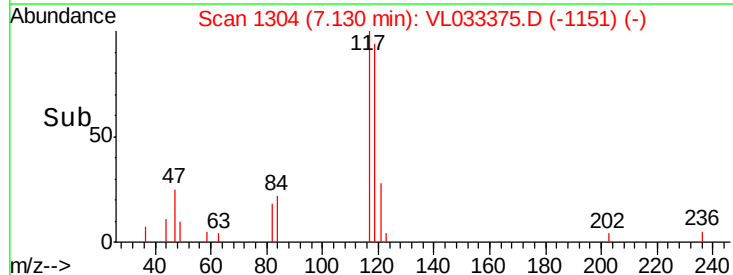
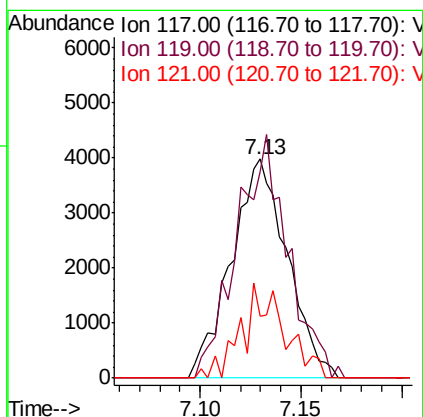
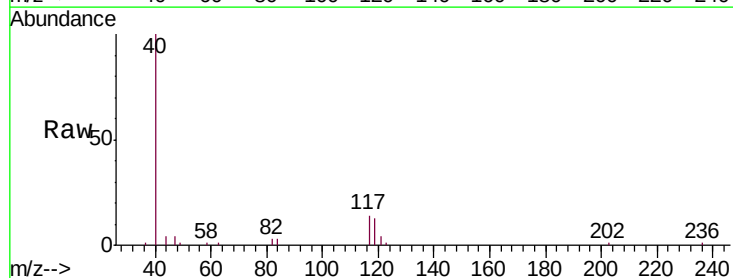
Instrument :
MSVOA_L
ClientSampleId :
L1HA-IA3

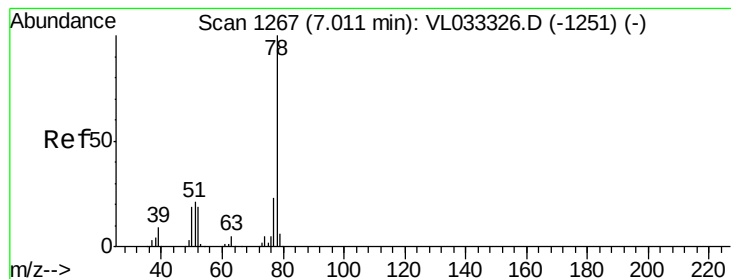
Tgt Ion: 43 Resp: 55722
Ion Ratio Lower Upper
43 100
72 23.0 17.7 26.5



#35
Carbon Tetrachloride
Concen: 0.066 ppbv
RT: 7.13 min Scan# 1304
Delta R.T. -0.01 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

Tgt Ion: 117 Resp: 7739
Ion Ratio Lower Upper
117 100
119 94.1 77.4 116.0
121 28.1 24.9 37.3





#36

Benzene

Concen: 0.102 ppbv

RT: 6.99 min Scan# 1262

Delta R.T. -0.02 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

L1HA-IA3

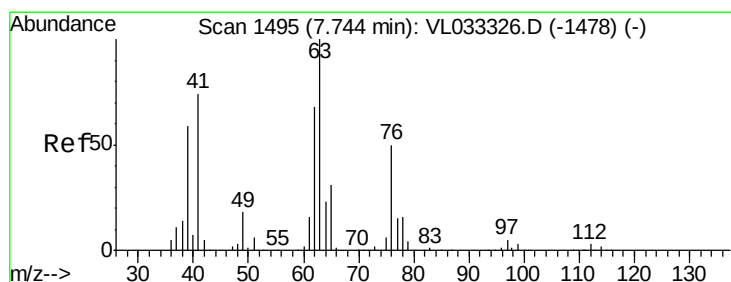
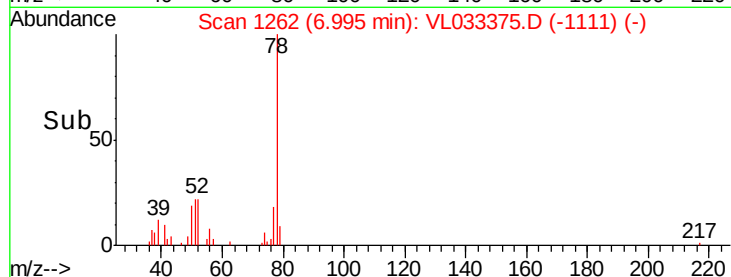
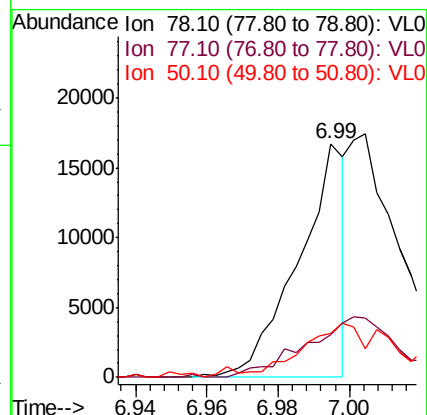
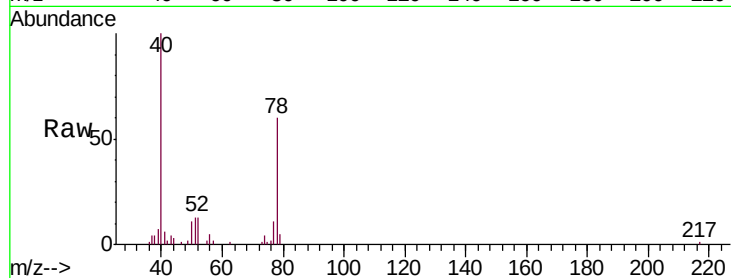
Tgt Ion: 78 Resp: 15131

Ion Ratio Lower Upper

78 100

77 17.1 18.1 27.1#

50 17.3 15.2 22.8



#39

1,2-Dichloropropane

Concen: 7.886 ppbv

RT: 7.29 min Scan# 1353

Delta R.T. -0.46 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

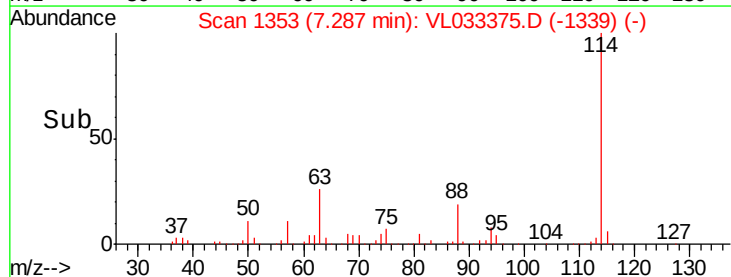
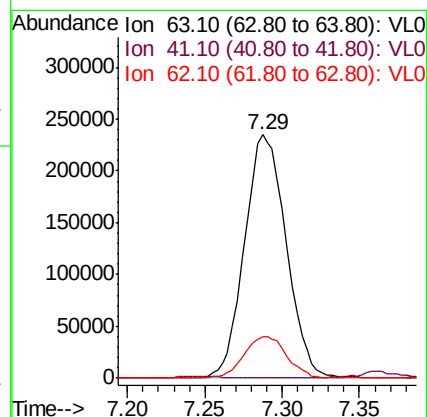
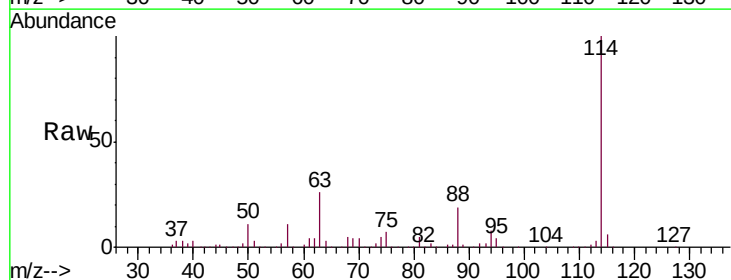
Tgt Ion: 63 Resp: 439650

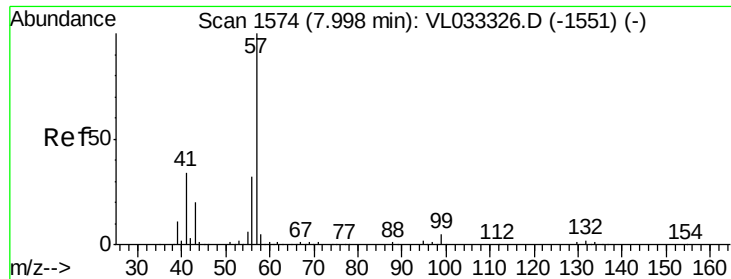
Ion Ratio Lower Upper

63 100

41 0.0 59.5 89.3#

62 16.9 54.7 82.1#

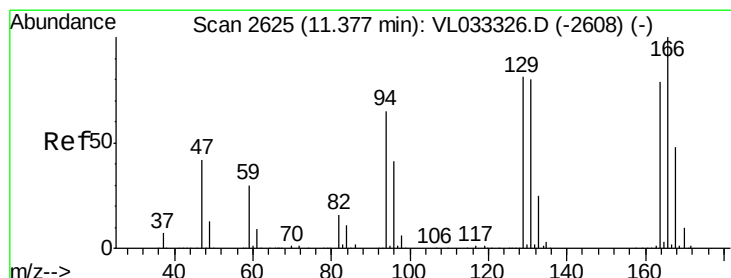
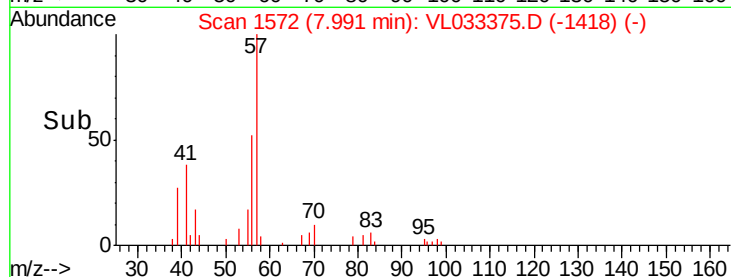
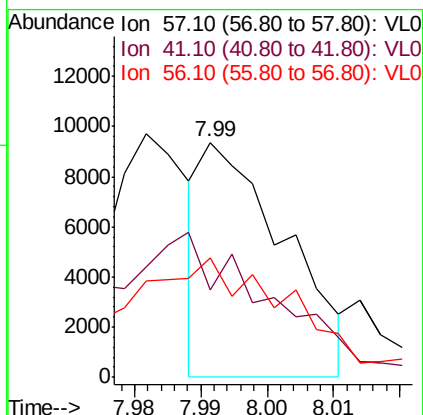
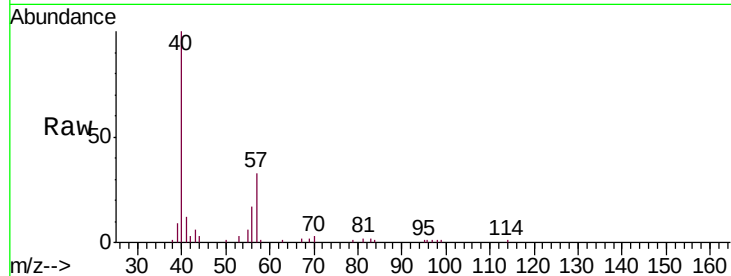




#44
2,2,4-Trimethylpentane
Concen: 0.033 ppbv
RT: 7.99 min Scan# 1572
Delta R.T. -0.01 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

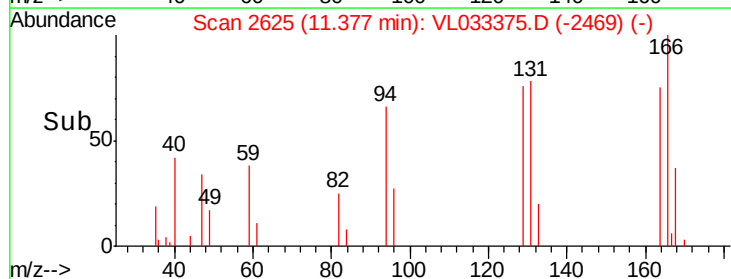
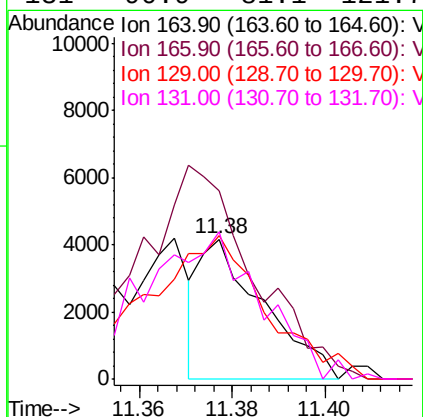
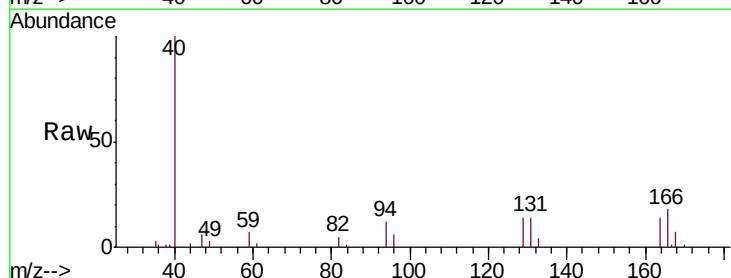
Instrument :
MSVOA_L
ClientSampled :
L1HA-IA3

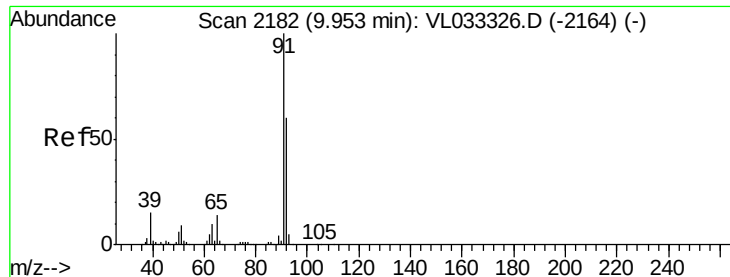
Tgt Ion: 57 Resp: 8204
Ion Ratio Lower Upper
57 100
41 135.6 26.0 39.0#
56 115.6 24.6 36.8#



#52
Tetrachloroethene
Concen: 0.064 ppbv
RT: 11.38 min Scan# 2625
Delta R.T. 0.00 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

Tgt Ion: 164 Resp: 3939
Ion Ratio Lower Upper
164 100
166 133.2 101.5 152.3
129 83.6 82.2 123.2
131 90.9 81.1 121.7





#53

Toluene

Concen: 9.040 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.01 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

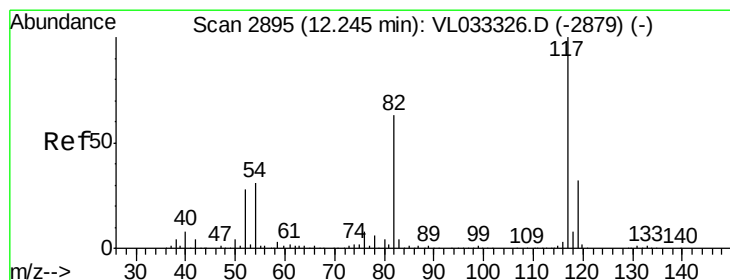
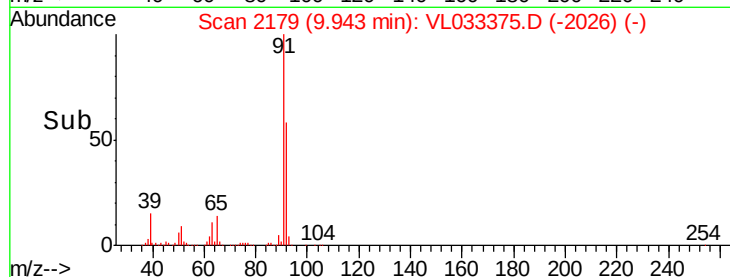
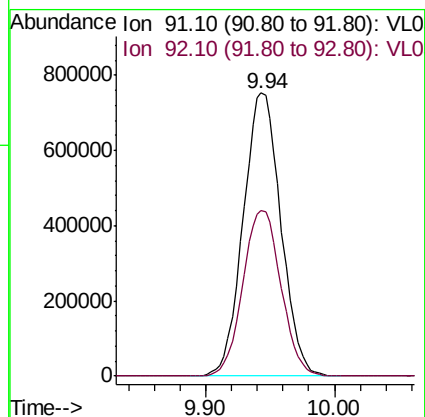
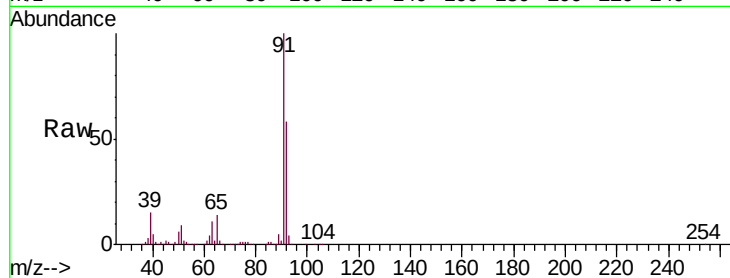
L1HA-IA3

Tgt Ion: 91 Resp: 1529204

Ion Ratio Lower Upper

91 100

92 59.6 47.4 71.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.01 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

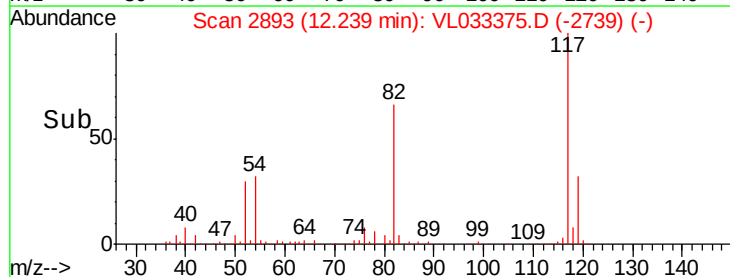
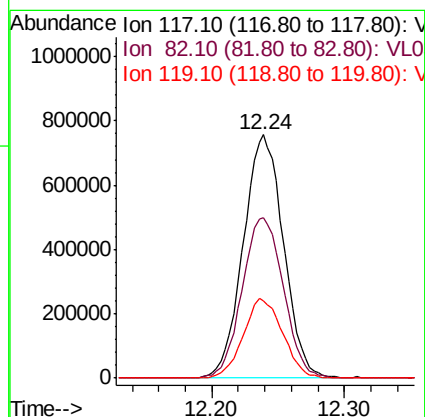
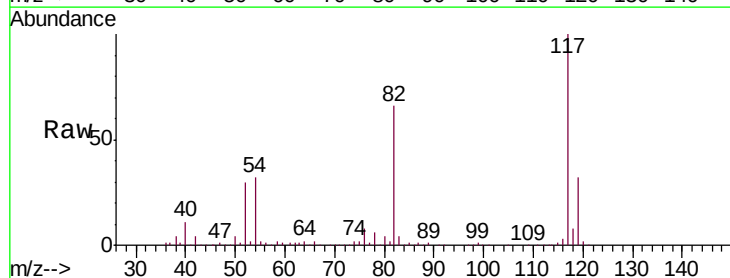
Tgt Ion: 117 Resp: 1597691

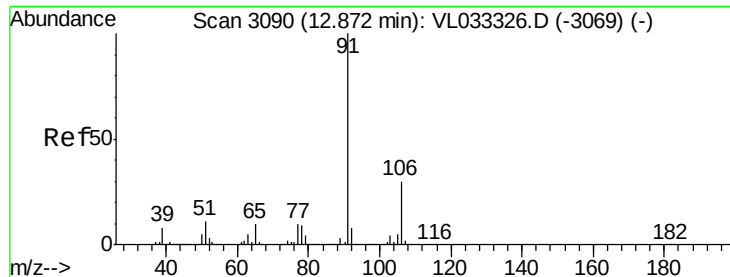
Ion Ratio Lower Upper

117 100

82 68.1 53.4 80.2

119 32.4 27.3 40.9





#58

Ethyl Benzene

Concen: 0.096 ppbv

RT: 13.12 min Scan# 3167

Delta R.T. 0.25 min

Lab File: VL033375.D

Acq: 19 Mar 2019 1:58

Instrument :

MSVOA_L

ClientSampleId :

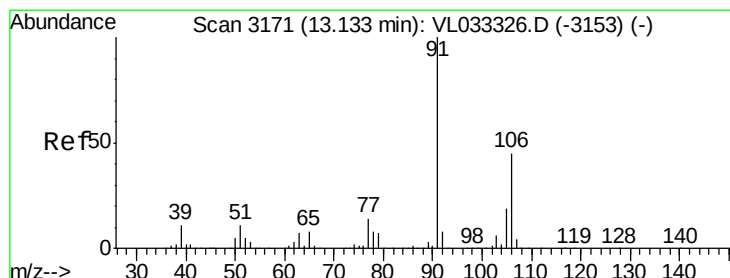
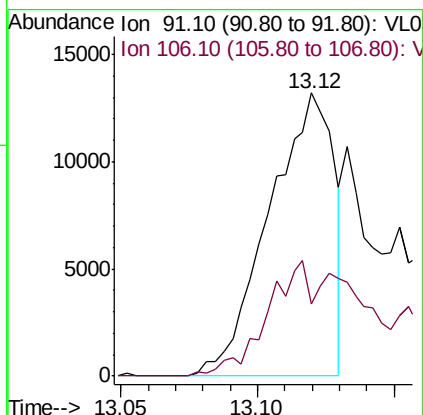
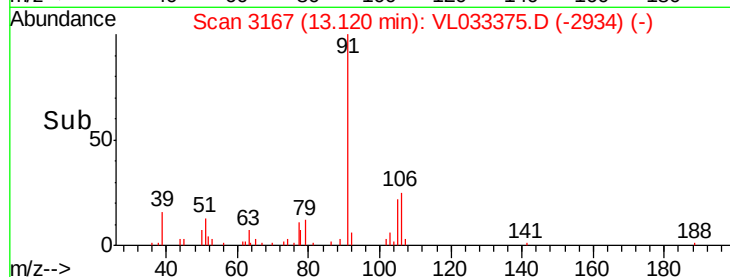
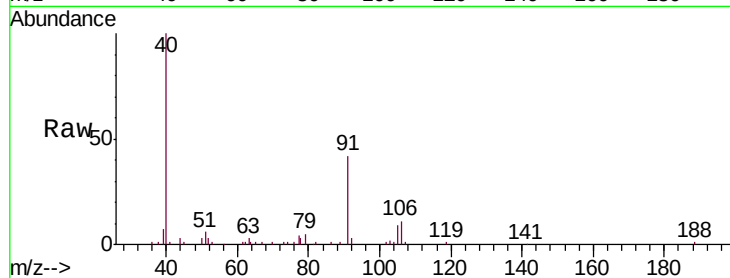
L1HA-IA3

Tgt Ion: 91 Resp: 21732

Ion Ratio Lower Upper

91 100

106 25.4 24.2 36.2



#59

m/p-Xylene

Concen: 0.037 ppbv

RT: 13.13 min Scan# 3171

Delta R.T. 0.00 min

Lab File: VL033375.D

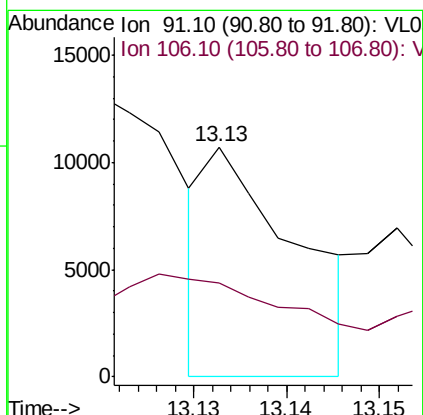
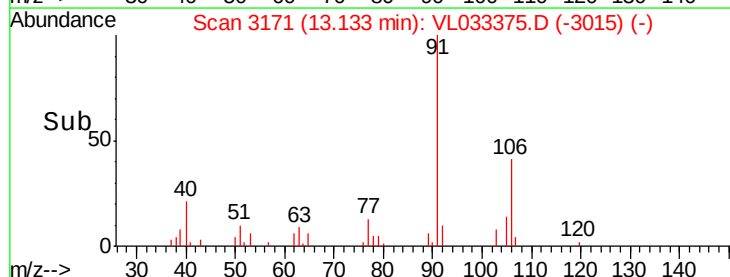
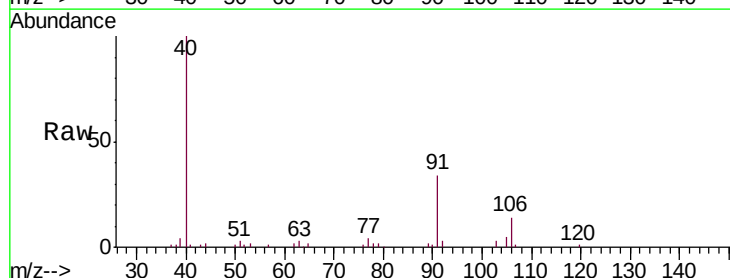
Acq: 19 Mar 2019 1:58

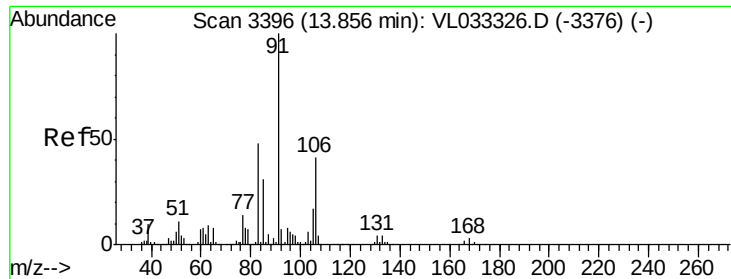
Tgt Ion: 91 Resp: 7230

Ion Ratio Lower Upper

91 100

106 0.0 0.0 0.0

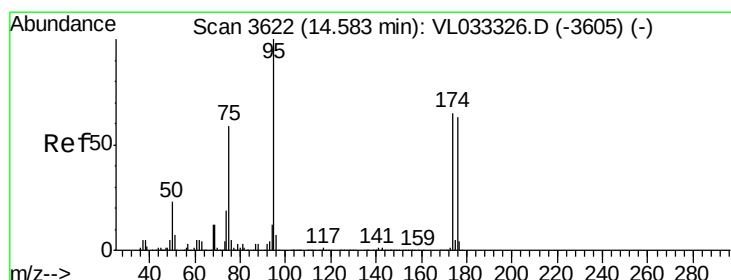
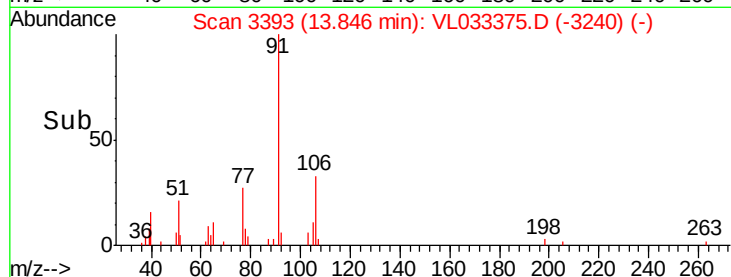
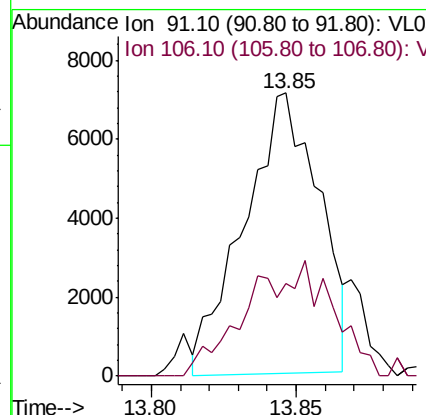
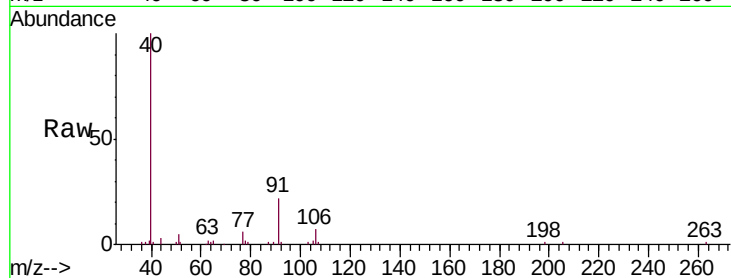




#60
o-Xylene
Concen: 0.067 ppbv
RT: 13.85 min Scan# 3393
Delta R.T. -0.01 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

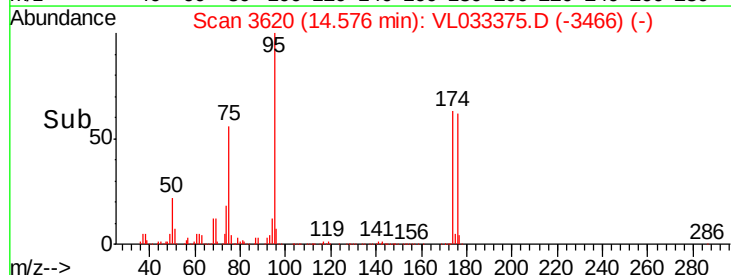
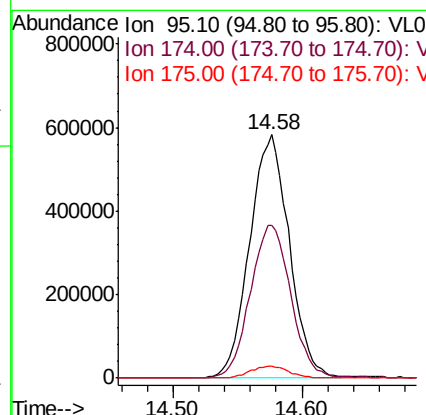
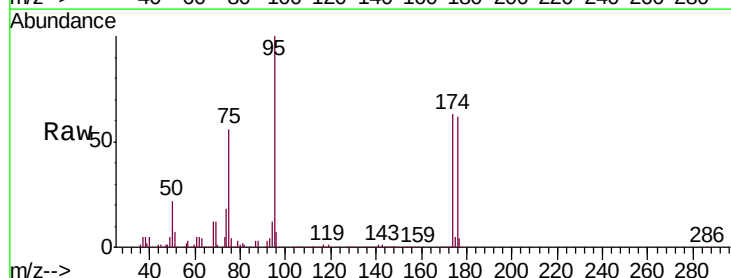
Instrument :
MSVOA_L
ClientSampleId :
L1HA-IA3

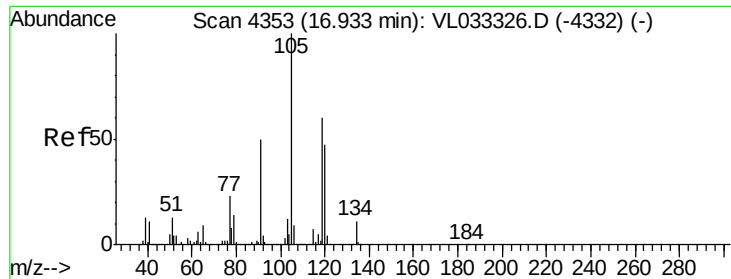
Tgt Ion: 91 Resp: 12776
Ion Ratio Lower Upper
91 100
106 47.2 21.3 63.9



#68
1-Bromo-4-Fluorobenzene
Concen: 10.545 ppbv
RT: 14.58 min Scan# 3620
Delta R.T. -0.01 min
Lab File: VL033375.D
Acq: 19 Mar 2019 1:58

Tgt Ion: 95 Resp: 1248376
Ion Ratio Lower Upper
95 100
174 64.7 51.5 77.3
175 4.8 3.8 5.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.126 ppbv
 RT: 16.92 min Scan# 4350
 Delta R.T. -0.01 min
 Lab File: VL033375.D
 Acq: 19 Mar 2019 1:58

Instrument :
 MSVOA_L
 ClientSampleId :
 L1HA-IA3

Tgt Ion:	105	Resp:	27907
Ion	Ratio	Lower	Upper
105	100		
120	49.8	37.4	56.2
91	12.8	41.0	61.4#
77	10.2	18.5	27.7#

