

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL032019\
 Data File : VL033415.D
 Acq On : 21 Mar 2019 9:36
 Operator : SY/AP
 Sample : K1975-02DL2 40X
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

Quant Time: Mar 21 12:43:44 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

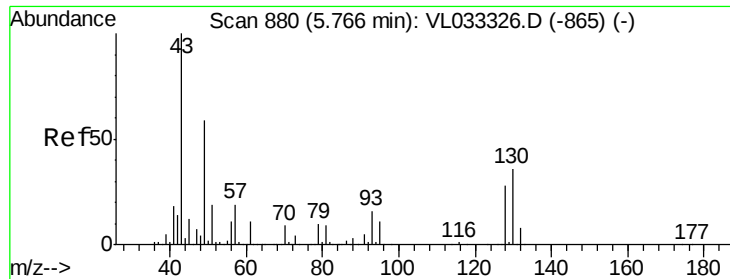
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	670752	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1578109	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.24	117	1539729	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1191766	10.45	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	4238	0.036	ppbv #	85
3) Chlorodifluoromethane	3.01	51	3222	0.042	ppbv	97
4) Chloromethane	3.17	50	3052	0.073	ppbv	96
8) Dichlorotetrafluoroethane	3.08	85	4238	0.042	ppbv #	17
9) Propene	3.04	41	2162	0.063	ppbv	85
10) Heptane	8.25	43	16476	0.193	ppbv	99
13) Ethanol	3.65	45	53574	3.270	ppbv	98
15) Acetone	3.90	43	906592	8.695	ppbv	97
17) tert-Butyl alcohol	4.38	59	1018	0.069	ppbv #	74
19) Isopropyl Alcohol	4.04	45	2848	0.057	ppbv #	95
20) Methylene Chloride	4.41	84	9645	0.284	ppbv #	79
21) Allyl Chloride	4.43	41	5694	0.113	ppbv #	50
23) Vinyl Acetate	5.14	43	6907	0.057	ppbv #	1
25) Ethyl Acetate	5.77	43	26573	0.175	ppbv #	76
26) Hexane	5.78	57	33350	0.492	ppbv #	38
30) Cyclohexane	7.24	84	2224	0.041	ppbv #	1
34) 2-Butanone	5.34	43	29120	0.281	ppbv	100
36) Benzene	7.01	78	15243	0.108	ppbv #	82
39) 1,2-Dichloropropane	7.29	63	424822	8.032	ppbv #	25
44) 2,2,4-Trimethylpentane	7.98	57	14845	0.063	ppbv #	21
52) Tetrachloroethene	11.37	164	801755	13.626	ppbv	98
53) Toluene	9.94	91	499176	3.111	ppbv	99
58) Ethyl Benzene	12.87	91	9967	0.046	ppbv	93
59) m/p-Xylene	13.12	91	40747	0.218	ppbv #	100
60) o-Xylene	13.85	91	7453	0.041	ppbv #	1
72) 4-Ethyltoluene	16.00	105	6658	0.032	ppbv #	53
74) 1,2,4-Trimethylbenzene	16.92	105	12124	0.057	ppbv #	65

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

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ClientSampleId :

IA1DL

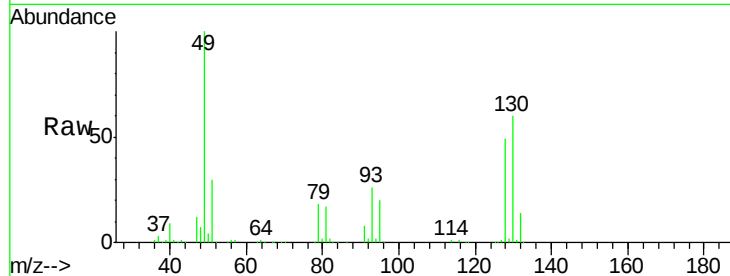
Tgt Ion: 49 Resp: 670752

Ion Ratio Lower Upper

49 100

128 47.6 23.5 70.6

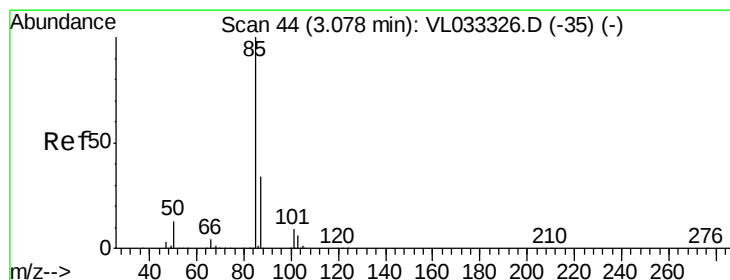
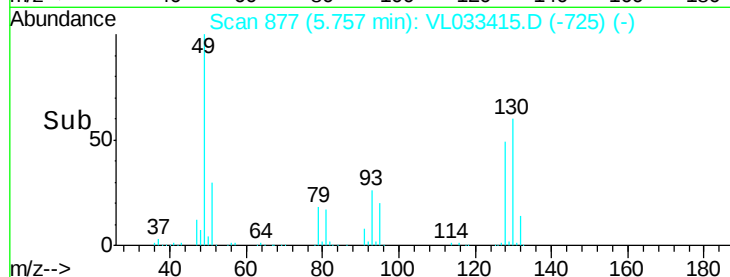
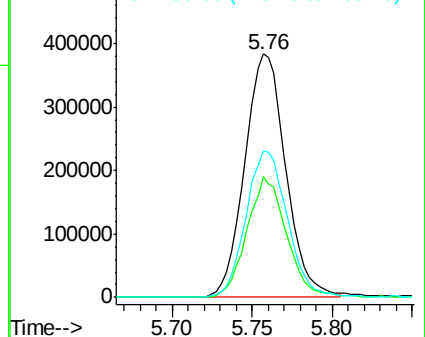
130 61.3 30.1 90.3



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: 0.036 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL033415.D

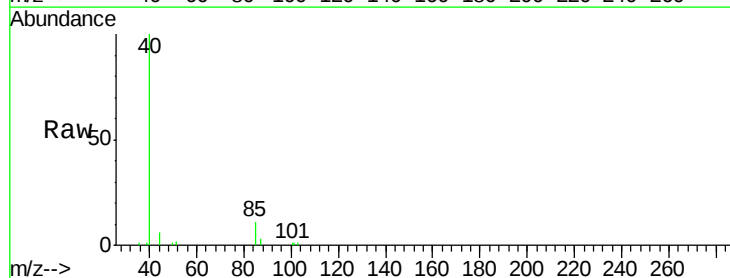
Acq: 21 Mar 2019 9:36

Tgt Ion: 85 Resp: 4238

Ion Ratio Lower Upper

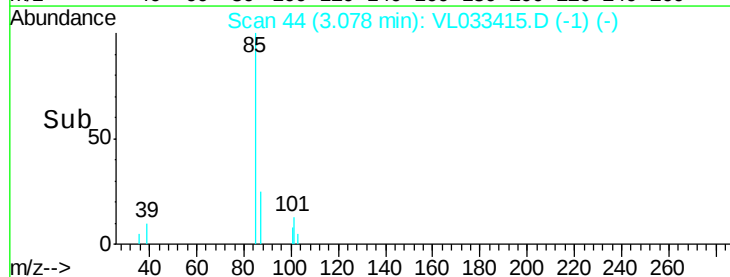
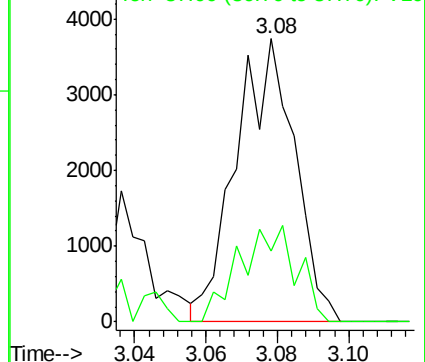
85 100

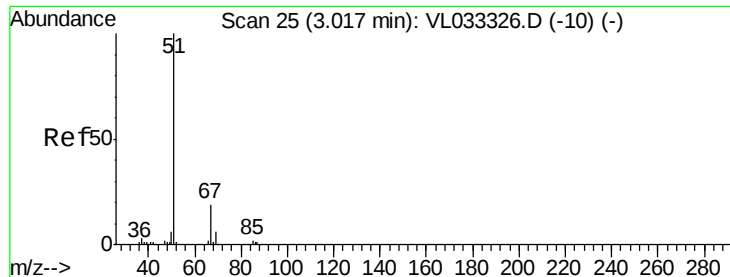
87 24.9 26.9 40.3#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

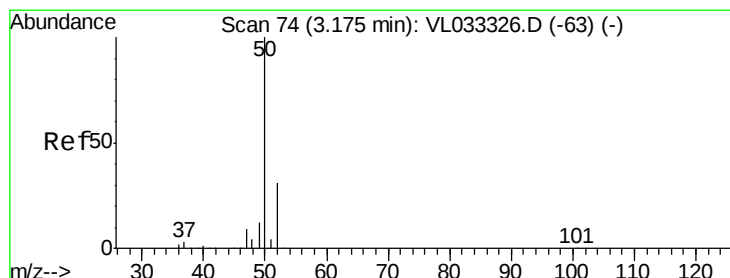
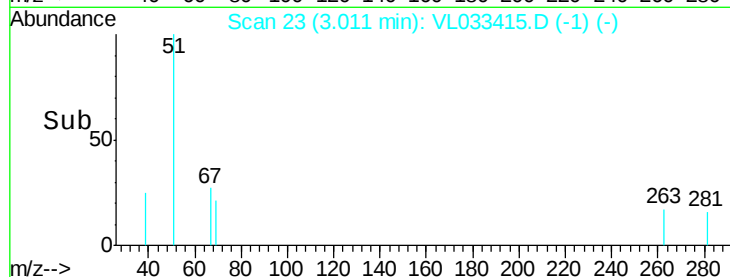
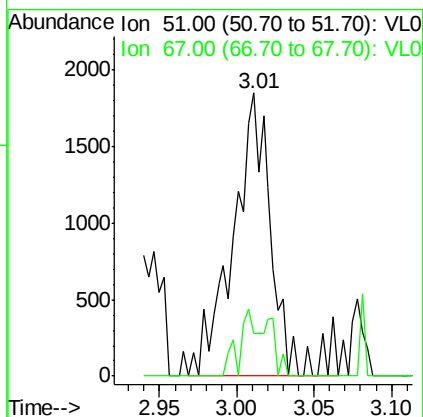
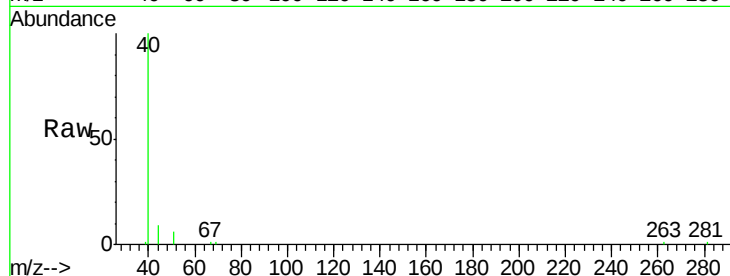




#3
Chlorodifluoromethane
Concen: 0.042 ppbv
RT: 3.01 min Scan# 23
Delta R.T. -0.01 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

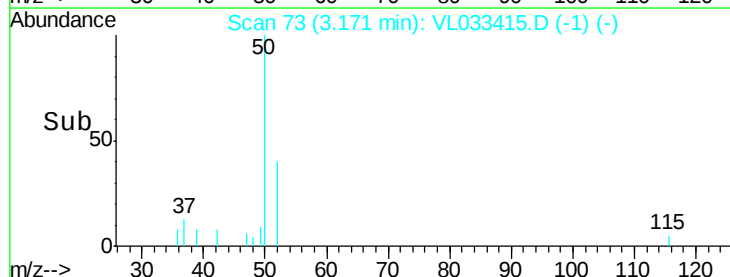
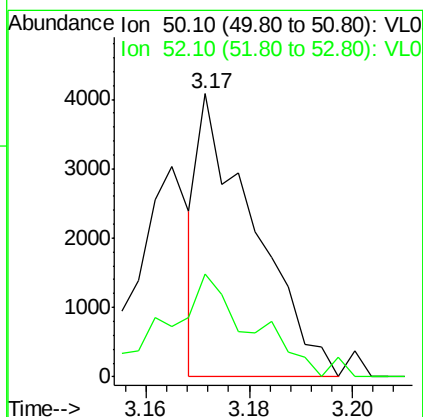
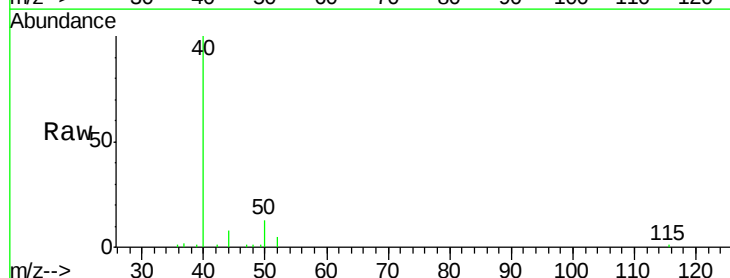
Instrument :
MSVOA_L
ClientSampled :
IA1DL

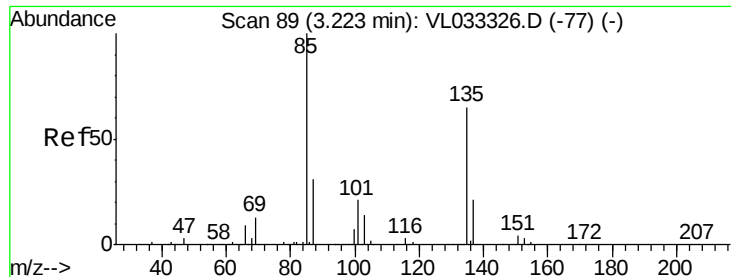
Tgt Ion: 51 Resp: 3222
Ion Ratio Lower Upper
51 100
67 17.4 14.9 22.3



#4
Chloromethane
Concen: 0.073 ppbv
RT: 3.17 min Scan# 73
Delta R.T. -0.00 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

Tgt Ion: 50 Resp: 3052
Ion Ratio Lower Upper
50 100
52 29.3 25.0 37.6





#8

Dichlorotetrafluoroethane

Concen: 0.042 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.14 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Instrument :

MSVOA_L

ClientSampleId :

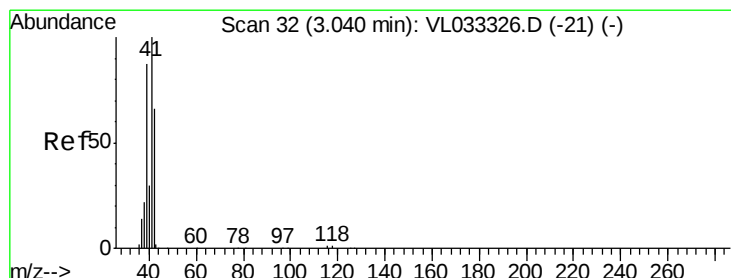
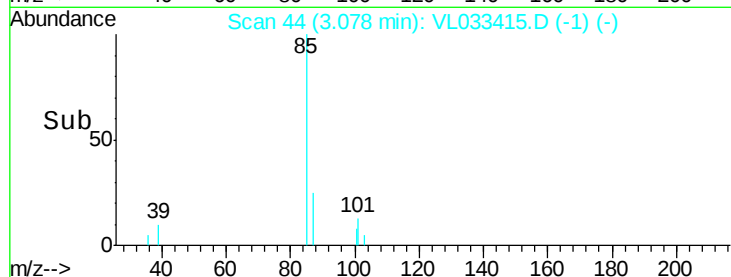
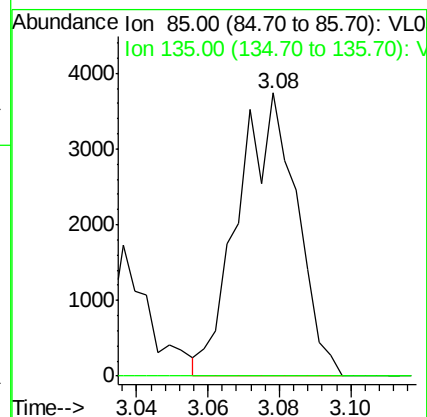
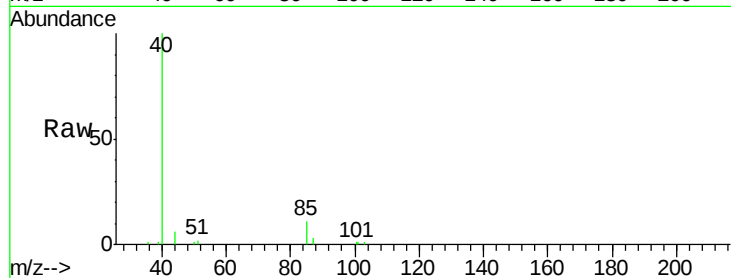
IA1DL

Tgt Ion: 85 Resp: 4238

Ion Ratio Lower Upper

85 100

135 0.0 53.4 80.2#



#9

Propene

Concen: 0.063 ppbv

RT: 3.04 min Scan# 33

Delta R.T. 0.00 min

Lab File: VL033415.D

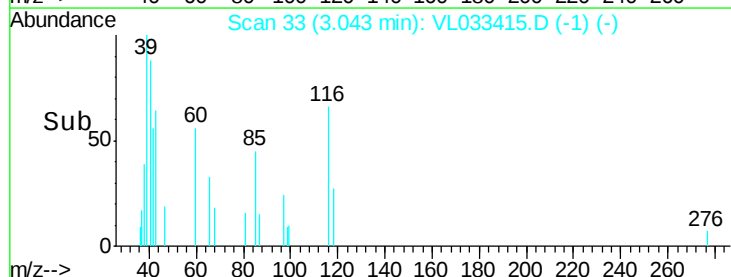
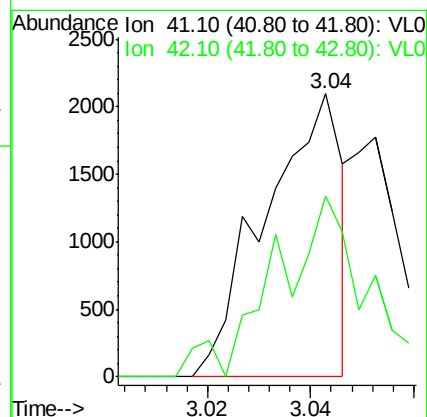
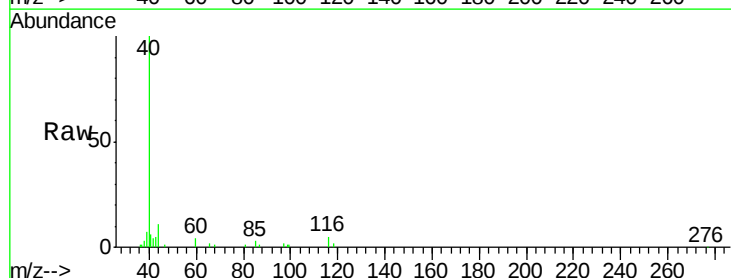
Acq: 21 Mar 2019 9:36

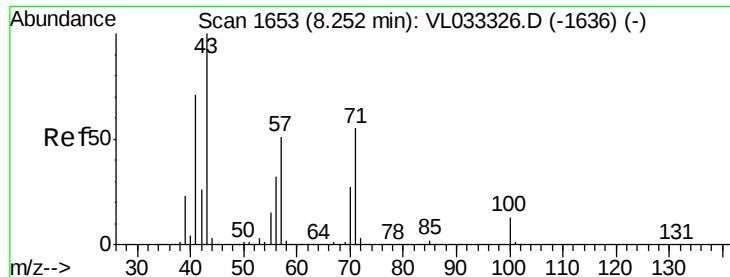
Tgt Ion: 41 Resp: 2162

Ion Ratio Lower Upper

41 100

42 81.0 55.2 82.8





#10

Heptane

Concen: 0.193 ppbv

RT: 8.25 min Scan# 1653

Delta R.T. -0.00 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Instrument :

MSVOA_L

ClientSampled :

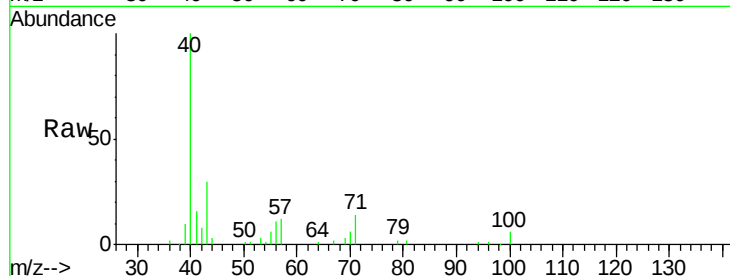
IA1DL

Tgt Ion: 43 Resp: 16476

Ion Ratio Lower Upper

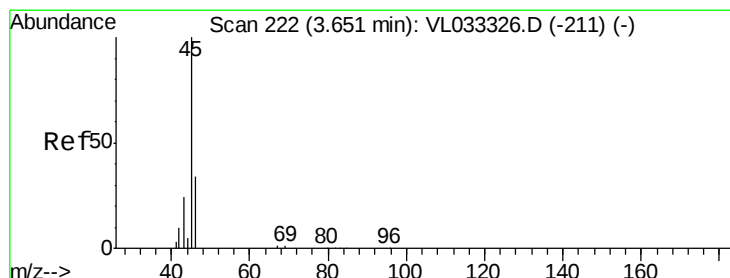
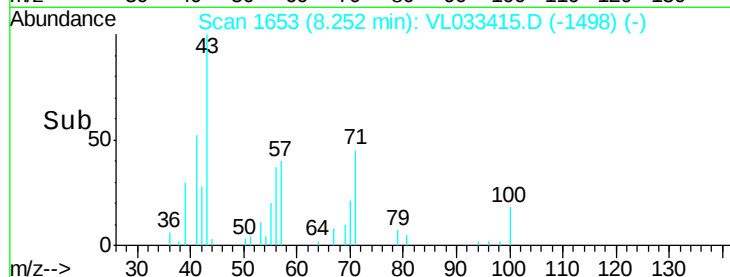
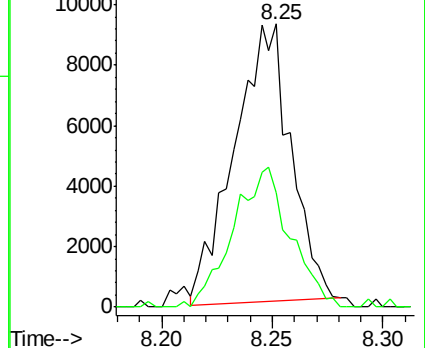
43 100

57 50.9 40.4 60.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#13

Ethanol

Concen: 3.270 ppbv

RT: 3.65 min Scan# 222

Delta R.T. -0.00 min

Lab File: VL033415.D

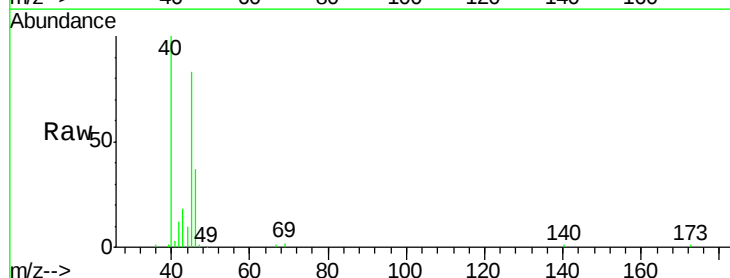
Acq: 21 Mar 2019 9:36

Tgt Ion: 45 Resp: 53574

Ion Ratio Lower Upper

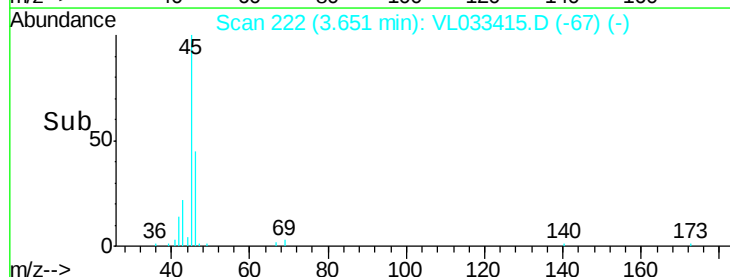
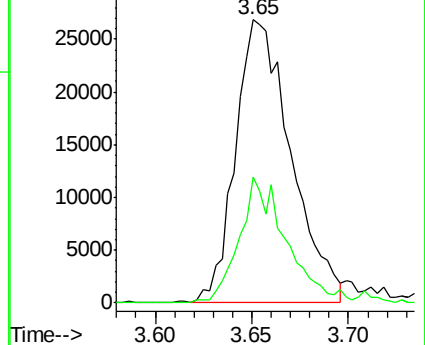
45 100

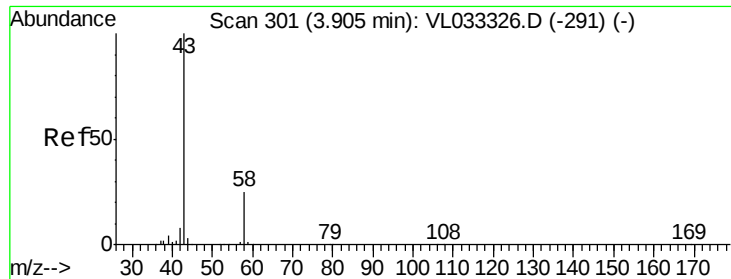
46 38.7 14.9 59.7



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 8.695 ppbv

RT: 3.90 min Scan# 299

Delta R.T. -0.01 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Instrument :

MSVOA_L

ClientSampleId :

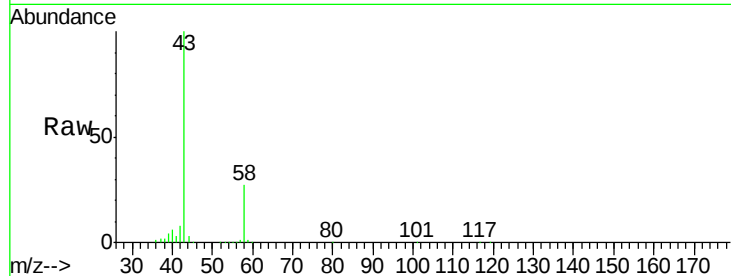
IA1DL

Tgt Ion: 43 Resp: 906592

Ion Ratio Lower Upper

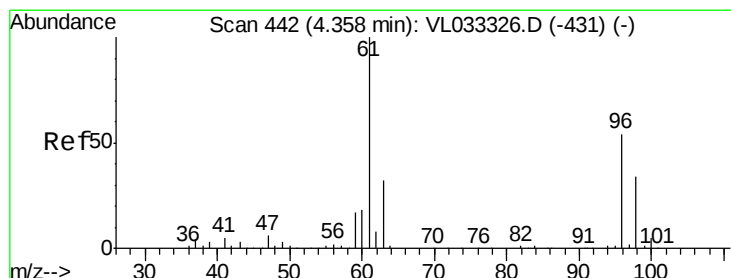
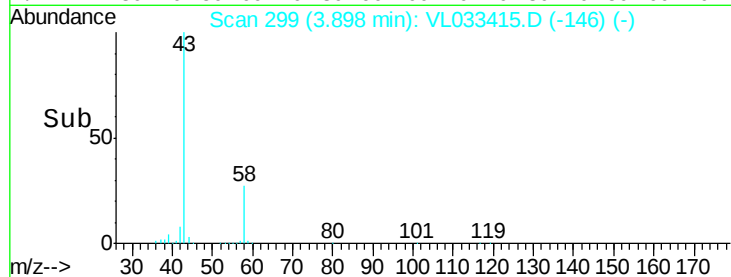
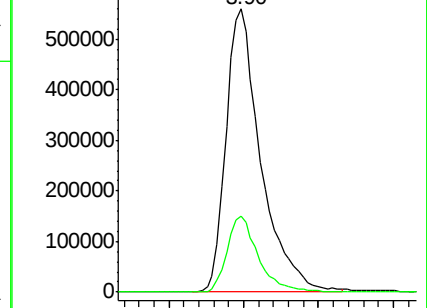
43 100

58 24.2 20.4 30.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#17

tert-Butyl alcohol

Concen: 0.069 ppbv

RT: 4.38 min Scan# 449

Delta R.T. 0.02 min

Lab File: VL033415.D

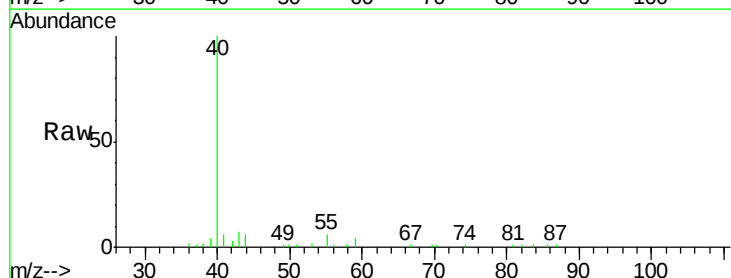
Acq: 21 Mar 2019 9:36

Tgt Ion: 59 Resp: 1018

Ion Ratio Lower Upper

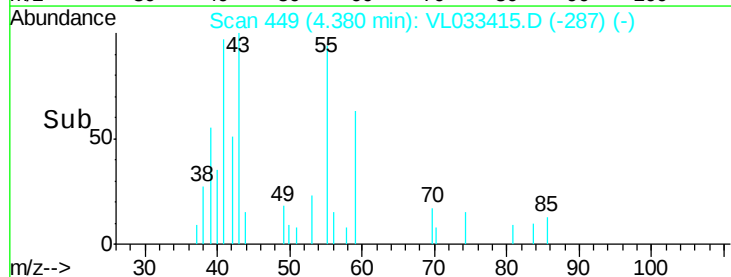
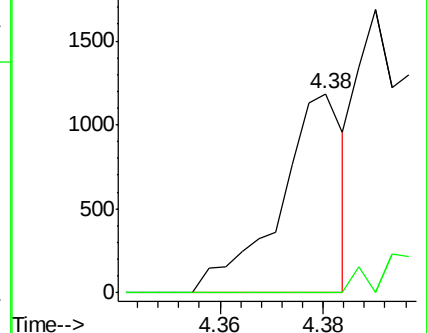
59 100

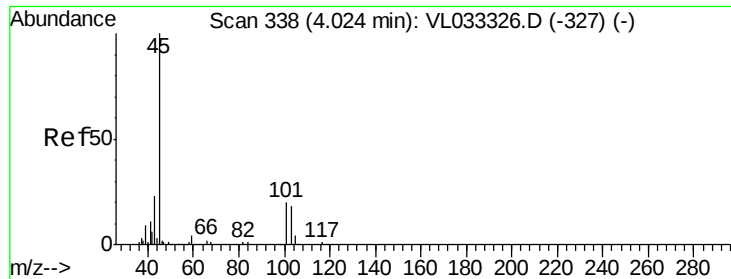
57 0.0 7.7 11.5#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#19

Isopropyl Alcohol

Concen: 0.057 ppbv

RT: 4.04 min Scan# 344

Delta R.T. 0.02 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Instrument :

MSVOA_L

ClientSampleId :

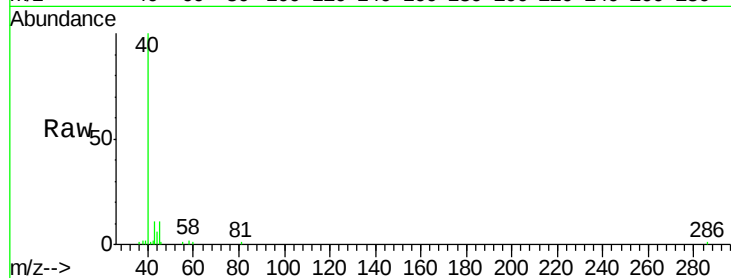
IA1DL

Tgt Ion: 45 Resp: 2848

Ion Ratio Lower Upper

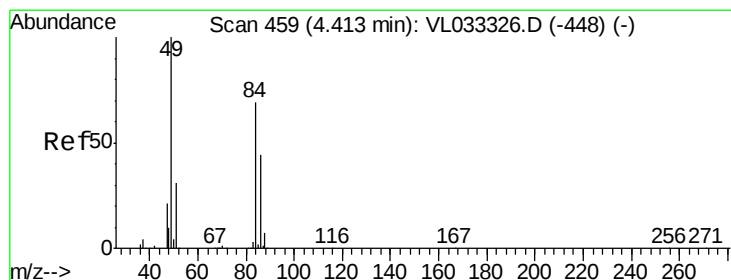
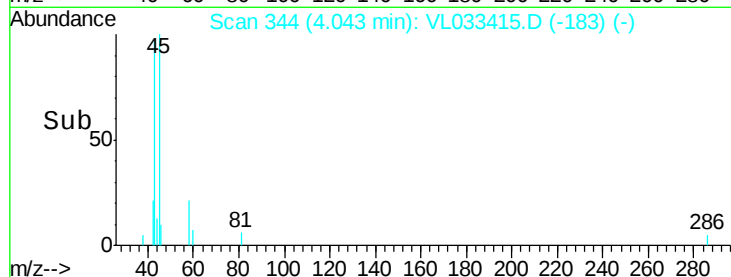
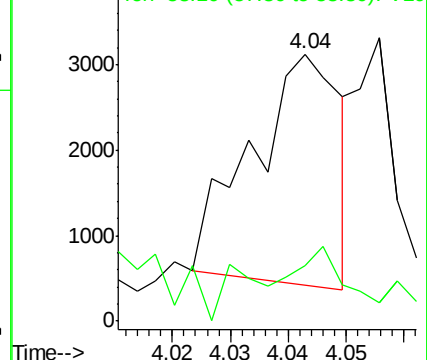
45 100

58 0.0 1.5 2.3#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 0.284 ppbv

RT: 4.41 min Scan# 457

Delta R.T. -0.01 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Tgt Ion: 84 Resp: 9645

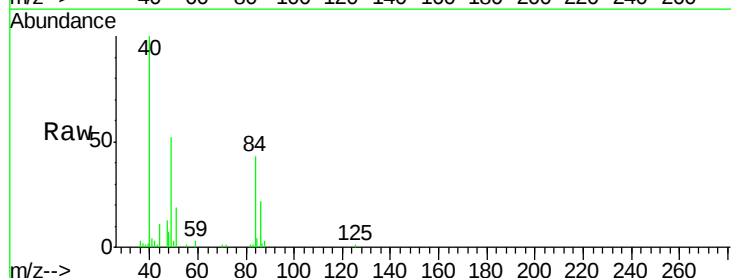
Ion Ratio Lower Upper

84 100

49 116.5 115.4 173.0

51 35.2 35.8 53.6#

86 46.3 50.6 75.8#

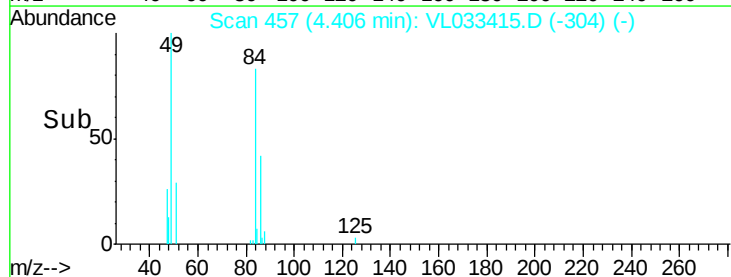
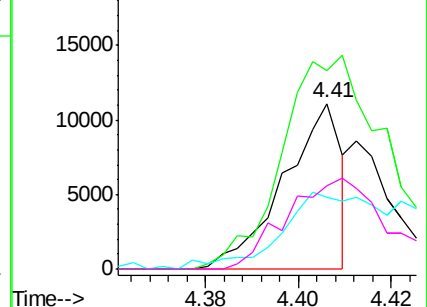


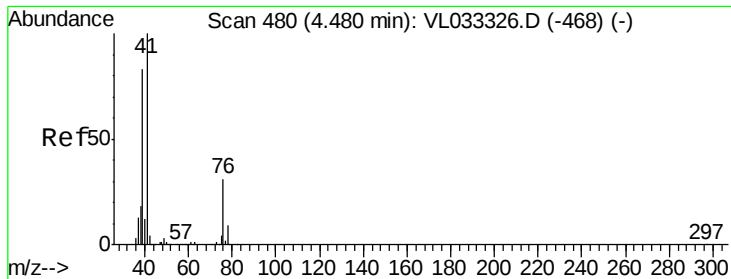
Abundance Ion 84.00 (83.70 to 84.70): VL0

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

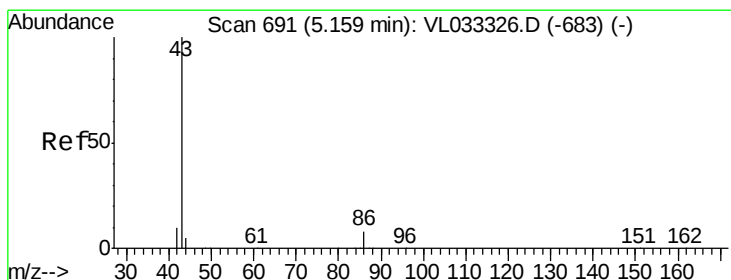
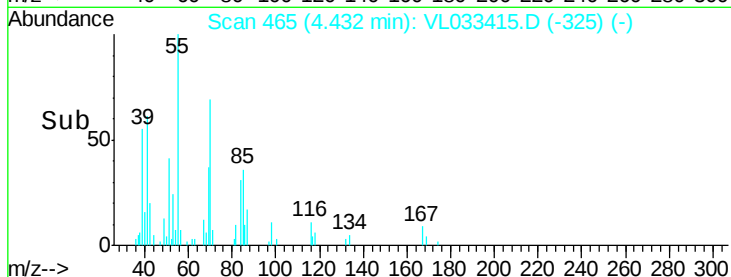
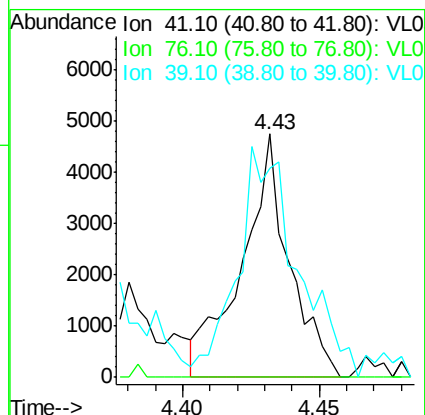
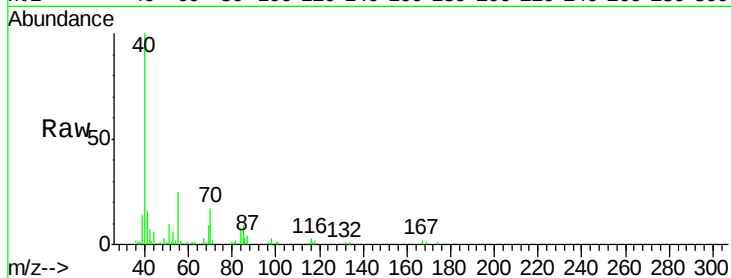




#21
 Allyl Chloride
 Concen: 0.113 ppbv
 RT: 4.43 min Scan# 465
 Delta R.T. -0.05 min
 Lab File: VL033415.D
 Acq: 21 Mar 2019 9:36

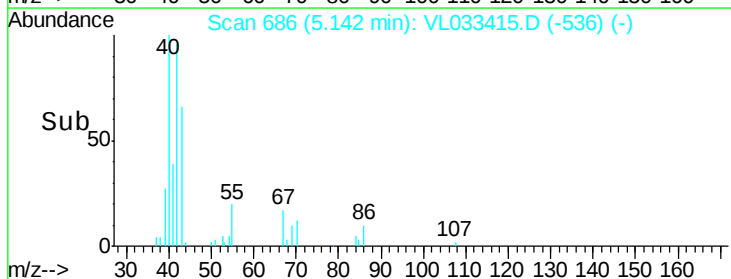
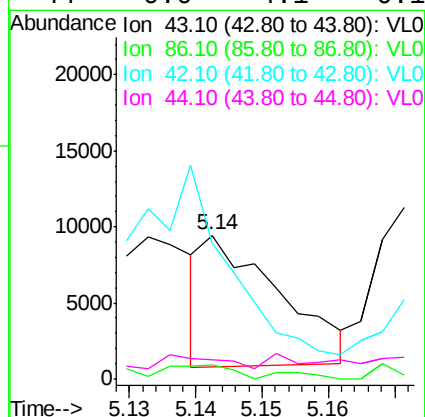
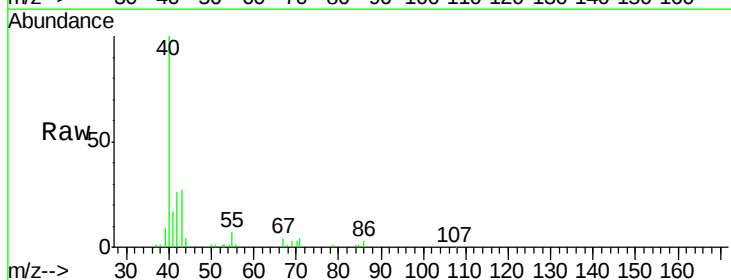
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

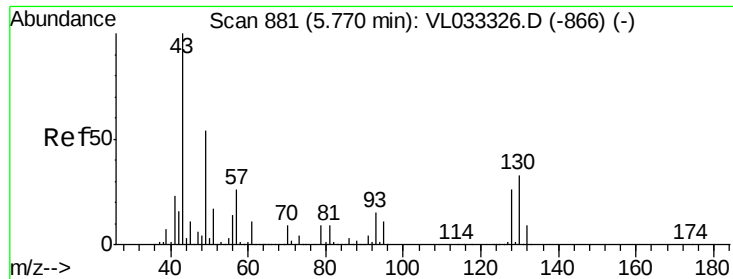
Tgt Ion: 41 Resp: 5694
 Ion Ratio Lower Upper
 41 100
 76 0.0 25.0 37.4#
 39 125.6 65.9 98.9#



#23
 Vinyl Acetate
 Concen: 0.057 ppbv
 RT: 5.14 min Scan# 686
 Delta R.T. -0.02 min
 Lab File: VL033415.D
 Acq: 21 Mar 2019 9:36

Tgt Ion: 43 Resp: 6907
 Ion Ratio Lower Upper
 43 100
 86 14.4 6.2 9.2#
 42 117.7 8.1 12.1#
 44 0.0 4.1 6.1#

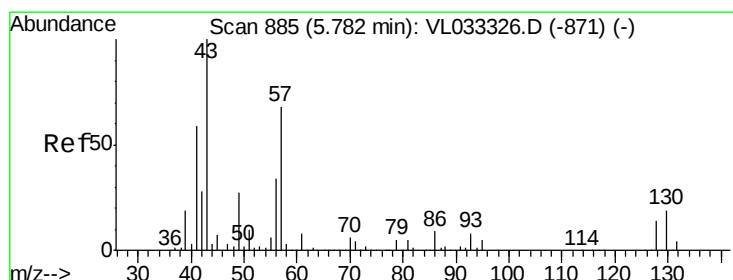
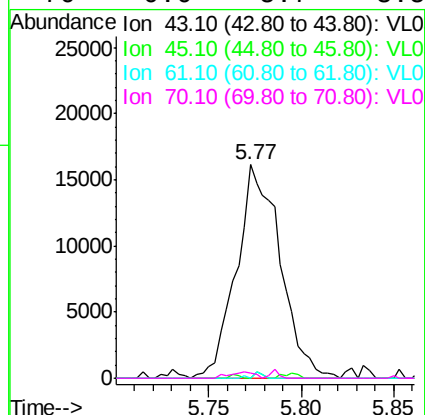
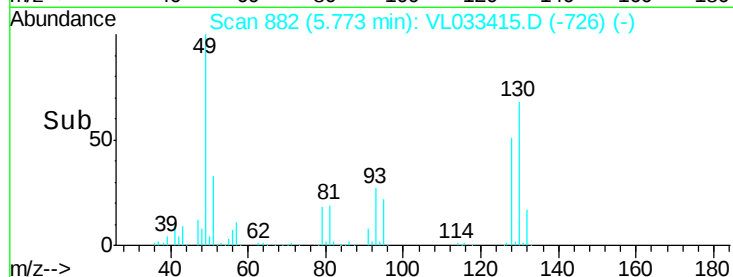
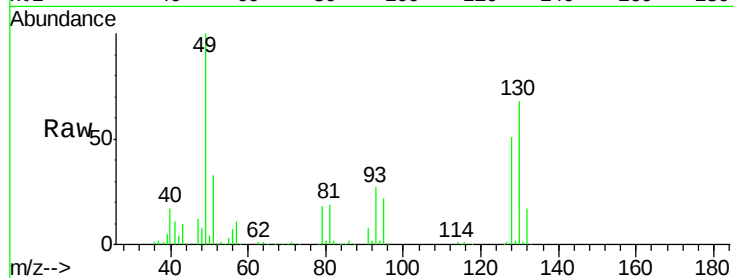




#25
Ethyl Acetate
Concen: 0.175 ppbv
RT: 5.77 min Scan# 882
Delta R.T. 0.00 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

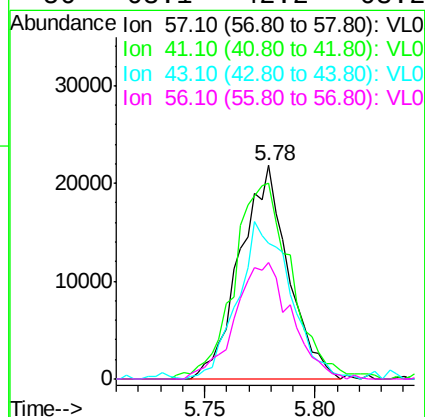
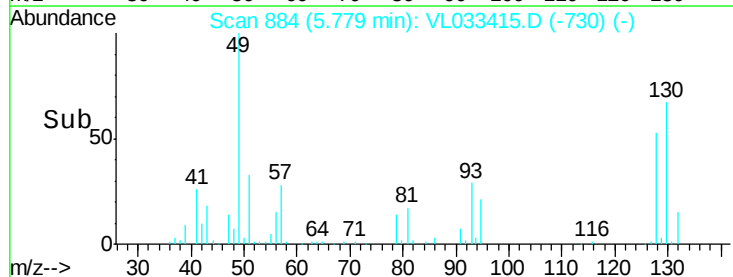
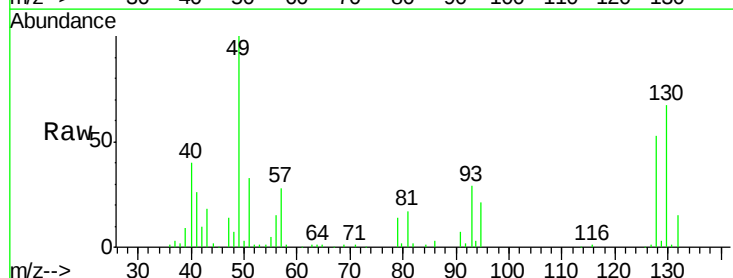
Instrument :
MSVOA_L
ClientSampled :
IA1DL

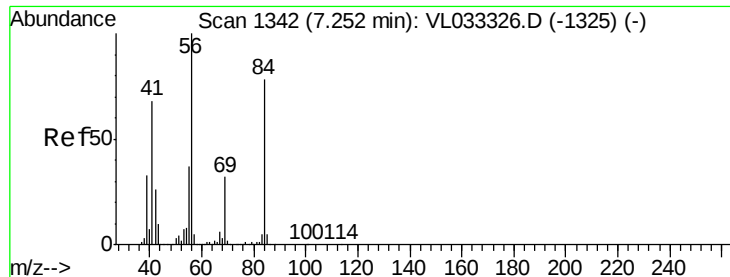
Tgt Ion:	43	Resp:	26573
Ion	Ratio	Lower	Upper
43	100		
45	0.9	7.9	11.9#
61	0.0	7.4	11.2#
70	0.0	5.7	8.5#



#26
Hexane
Concen: 0.492 ppbv
RT: 5.78 min Scan# 884
Delta R.T. -0.00 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

Tgt Ion:	57	Resp:	33350
Ion	Ratio	Lower	Upper
57	100		
41	108.4	70.5	105.7#
43	81.1	181.8	272.8#
56	63.1	42.2	63.2

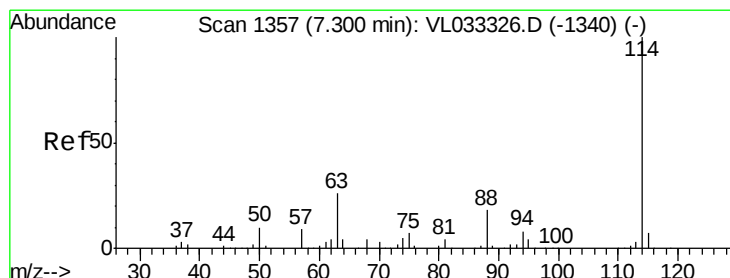
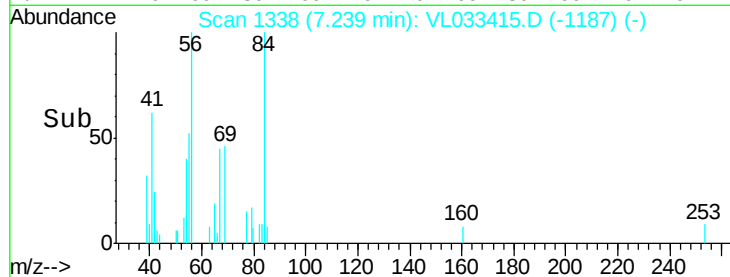
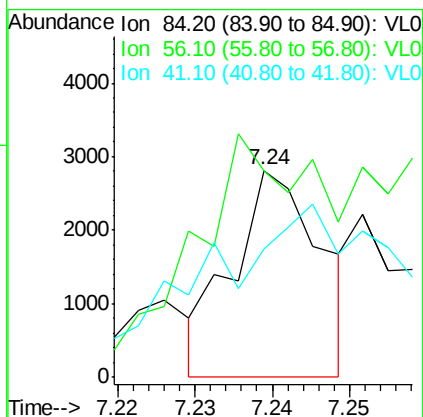
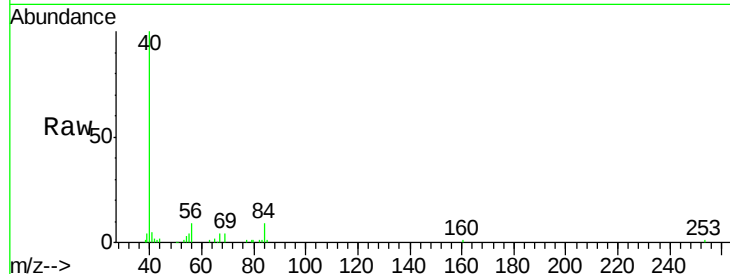




#30
Cyclohexane
Concen: 0.041 ppbv
RT: 7.24 min Scan# 1338
Delta R.T. -0.01 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

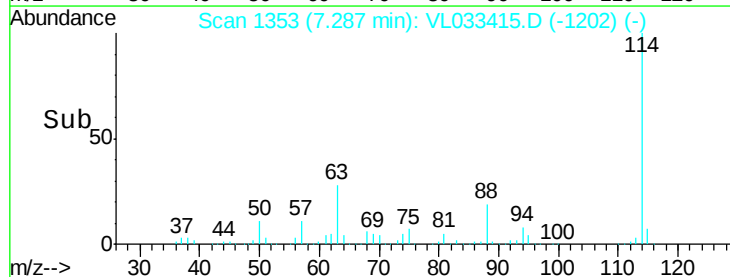
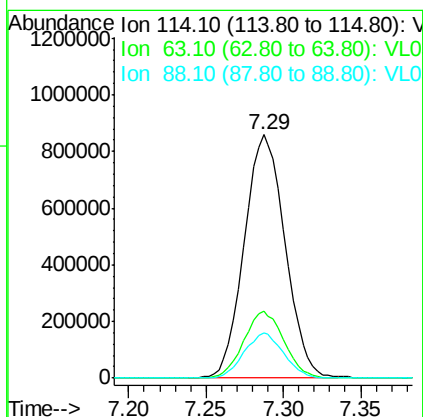
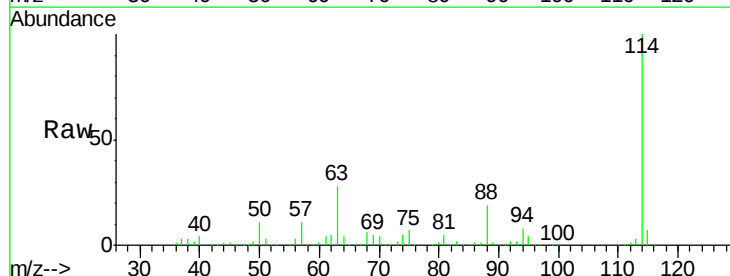
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

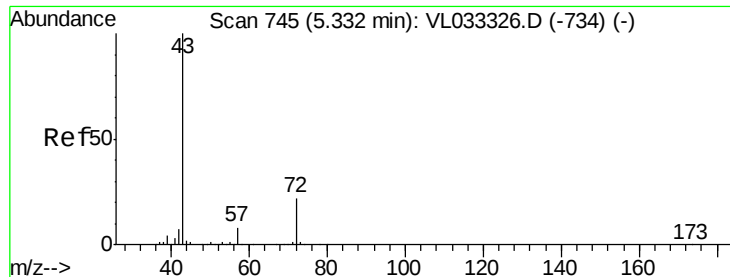
Tgt Ion: 84 Resp: 2224
Ion Ratio Lower Upper
84 100
56 0.0 111.3 166.9#
41 0.0 69.6 104.4#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1353
Delta R.T. -0.01 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

Tgt Ion: 114 Resp: 1578109
Ion Ratio Lower Upper
114 100
63 27.2 21.4 32.2
88 18.1 14.5 21.7

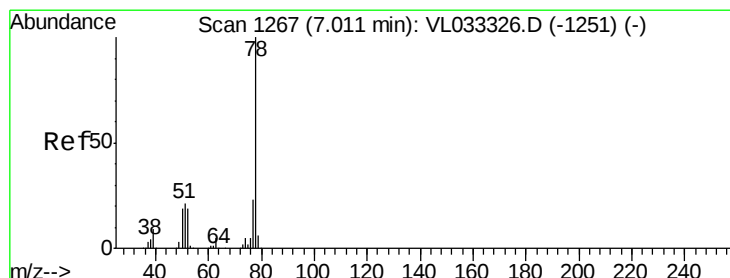
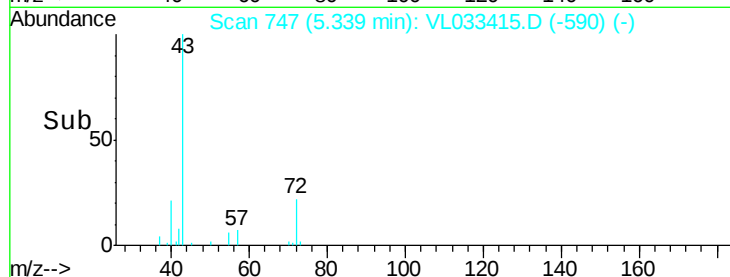
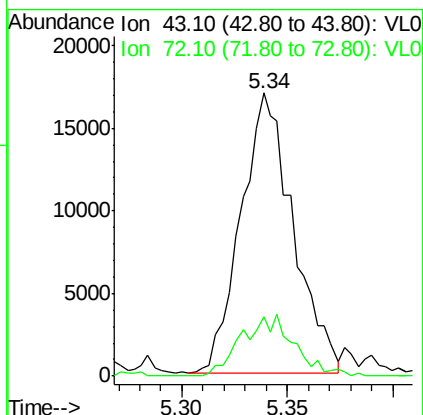
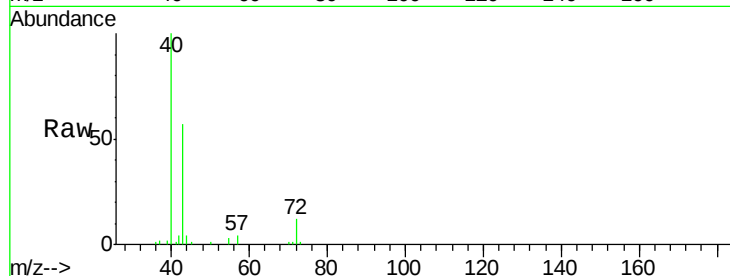




#34
2-Butanone
Concen: 0.281 ppbv
RT: 5.34 min Scan# 747
Delta R.T. 0.01 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

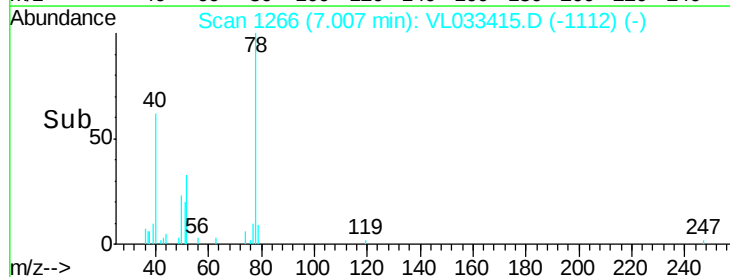
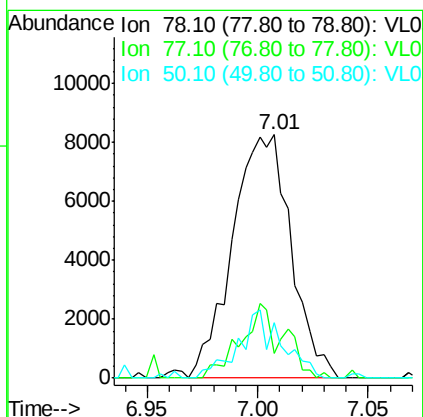
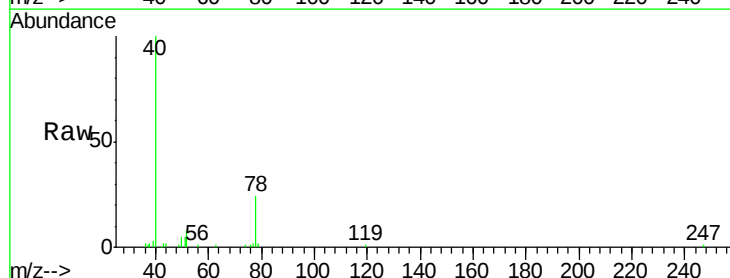
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

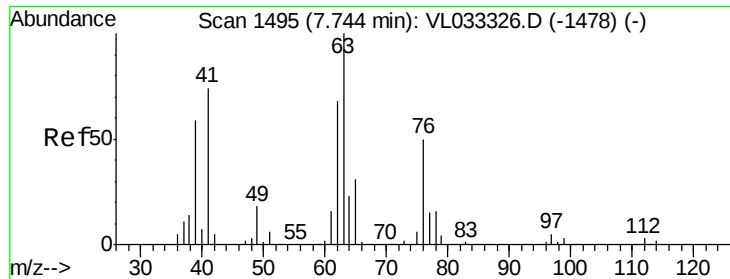
Tgt Ion: 43 Resp: 29120
Ion Ratio Lower Upper
43 100
72 22.0 17.7 26.5



#36
Benzene
Concen: 0.108 ppbv
RT: 7.01 min Scan# 1266
Delta R.T. -0.00 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

Tgt Ion: 78 Resp: 15243
Ion Ratio Lower Upper
78 100
77 10.2 18.1 27.1#
50 22.9 15.2 22.8#





#39

1,2-Dichloropropane

Concen: 8.032 ppbv

RT: 7.29 min Scan# 1353

Delta R.T. -0.46 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

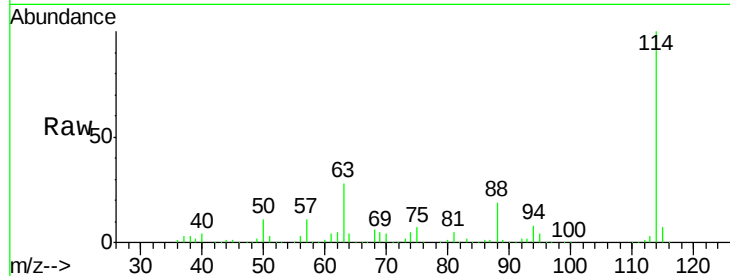
Tgt Ion: 63 Resp: 424822

Ion Ratio Lower Upper

63 100

41 0.0 59.5 89.3#

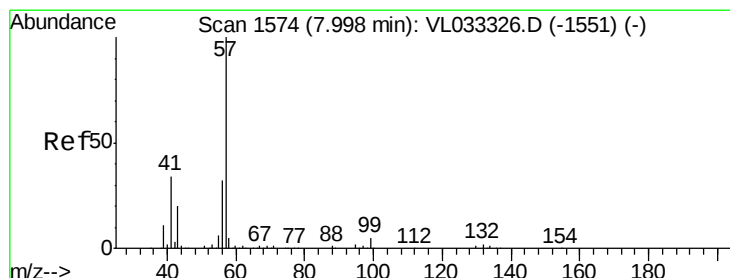
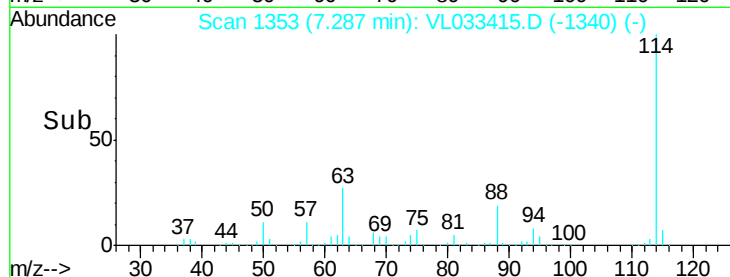
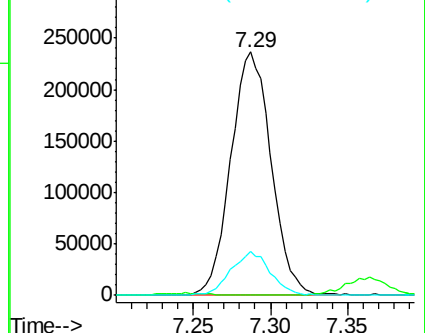
62 18.1 54.7 82.1#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.063 ppbv

RT: 7.98 min Scan# 1570

Delta R.T. -0.01 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

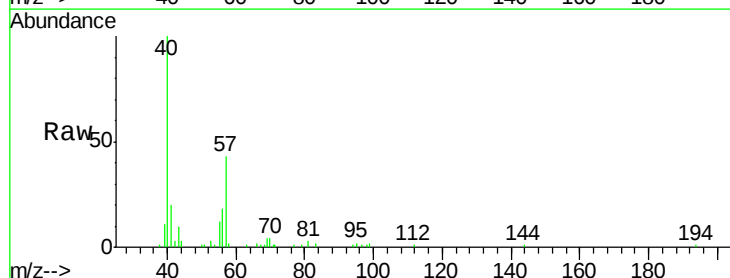
Tgt Ion: 57 Resp: 14845

Ion Ratio Lower Upper

57 100

41 0.0 26.0 39.0#

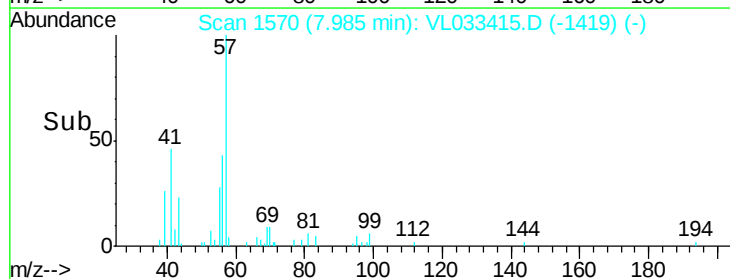
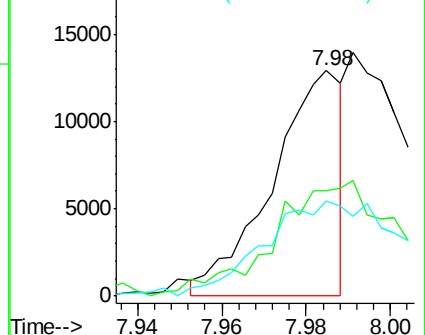
56 86.4 24.6 36.8#

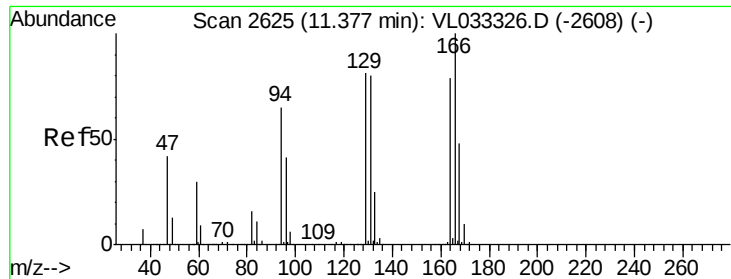


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 13.626 ppbv

RT: 11.37 min Scan# 2624

Delta R.T. -0.00 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

Tgt Ion:164 Resp: 801755

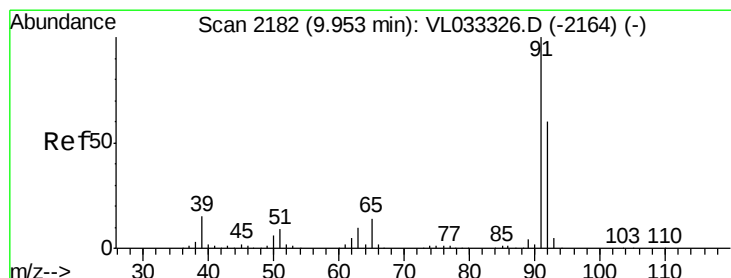
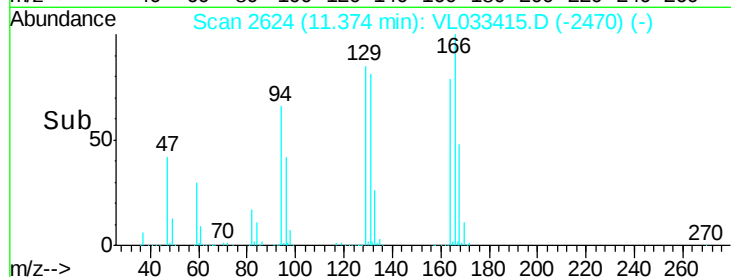
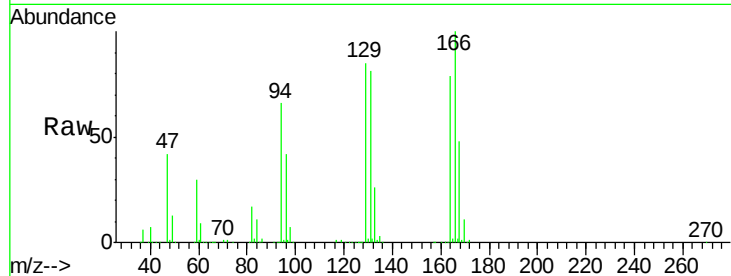
Ion Ratio Lower Upper

164 100

166 126.6 101.5 152.3

129 107.6 82.2 123.2

131 102.0 81.1 121.7



#53

Toluene

Concen: 3.111 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.01 min

Lab File: VL033415.D

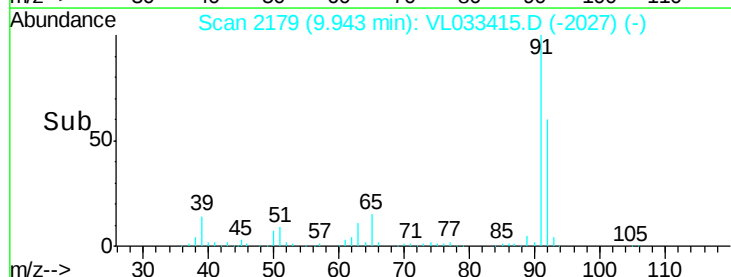
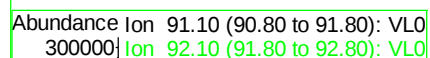
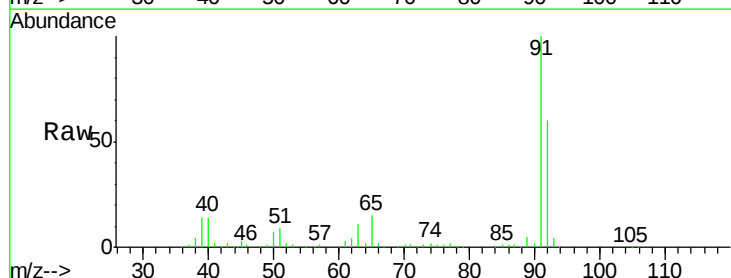
Acq: 21 Mar 2019 9:36

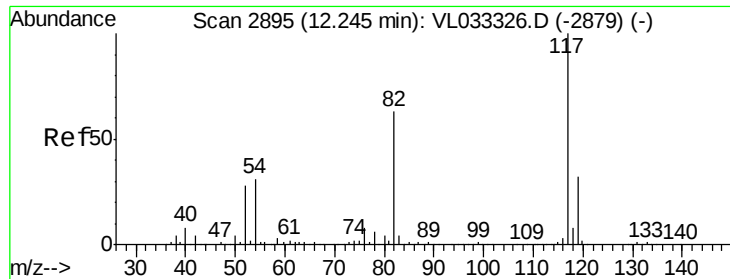
Tgt Ion: 91 Resp: 499176

Ion Ratio Lower Upper

91 100

92 58.6 47.4 71.0

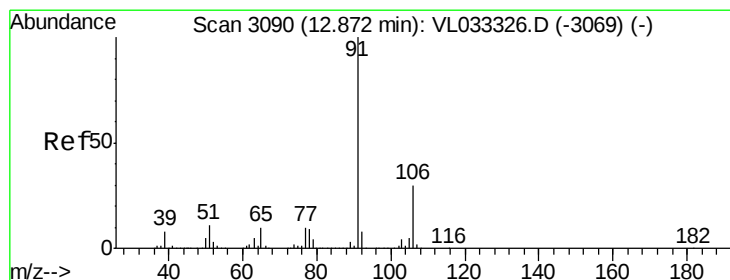
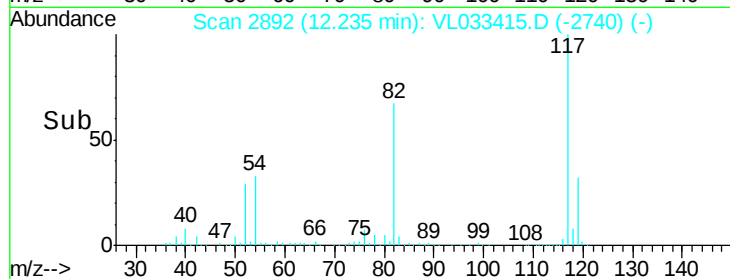
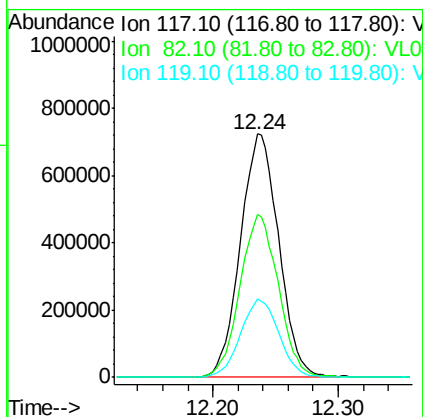
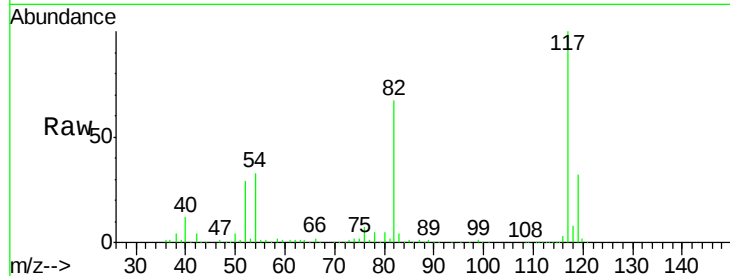




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2892
Delta R.T. -0.01 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

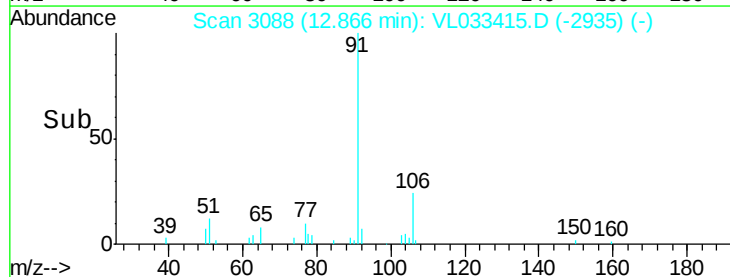
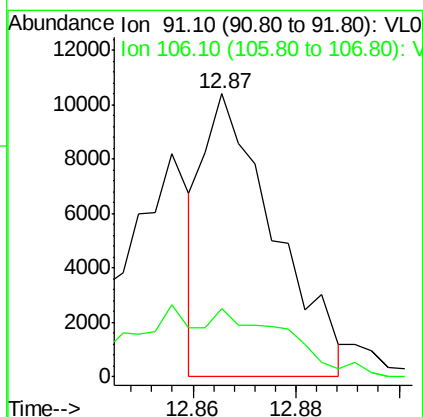
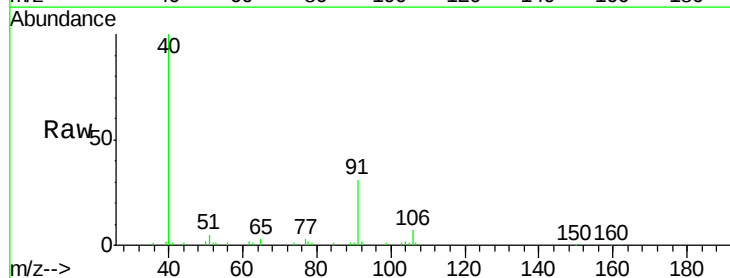
Instrument :
MSVOA_L
ClientSampled :
IA1DL

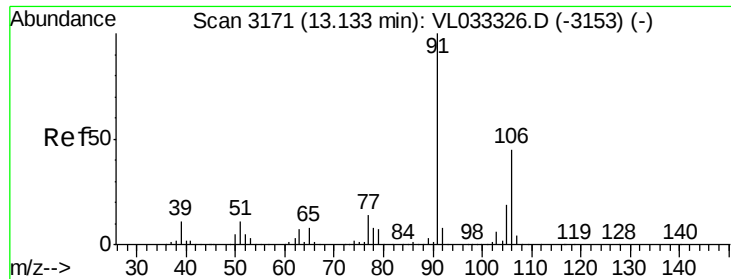
Tgt Ion:117 Resp: 1539729
Ion Ratio Lower Upper
117 100
82 66.9 53.4 80.2
119 32.3 27.3 40.9



#58
Ethyl Benzene
Concen: 0.046 ppbv
RT: 12.87 min Scan# 3088
Delta R.T. -0.01 min
Lab File: VL033415.D
Acq: 21 Mar 2019 9:36

Tgt Ion: 91 Resp: 9967
Ion Ratio Lower Upper
91 100
106 26.2 24.2 36.2





#59

m/p-Xylene

Concen: 0.218 ppbv

RT: 13.12 min Scan# 3166

Delta R.T. -0.02 min

Lab File: VL033415.D

Acq: 21 Mar 2019 9:36

Instrument :

MSVOA_L

ClientSampled :

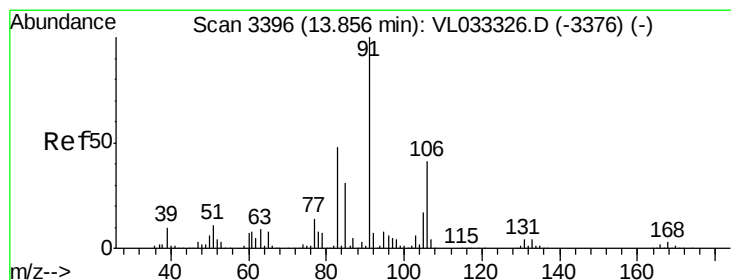
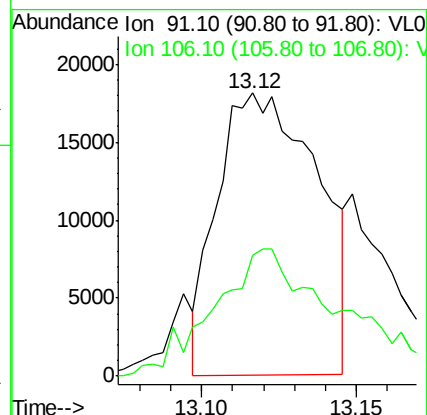
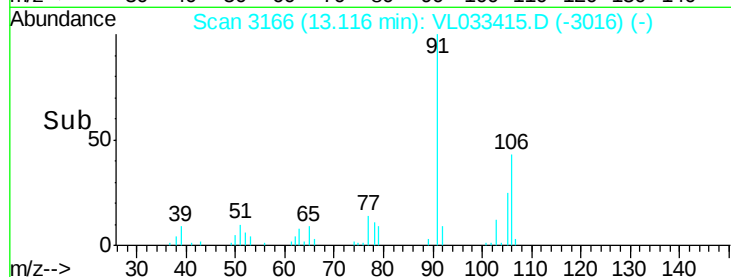
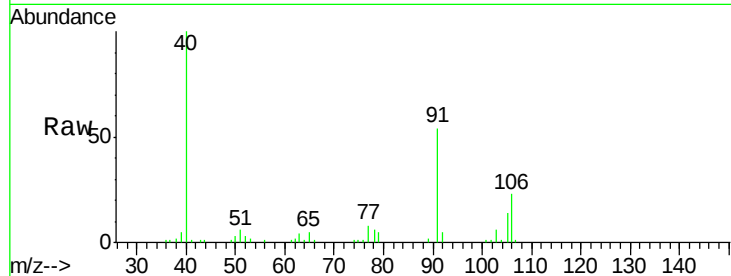
IA1DL

Tgt Ion: 91 Resp: 40747

Ion Ratio Lower Upper

91 100

106 57.8 0.0 0.0#



#60

o-Xylene

Concen: 0.041 ppbv

RT: 13.85 min Scan# 3393

Delta R.T. -0.01 min

Lab File: VL033415.D

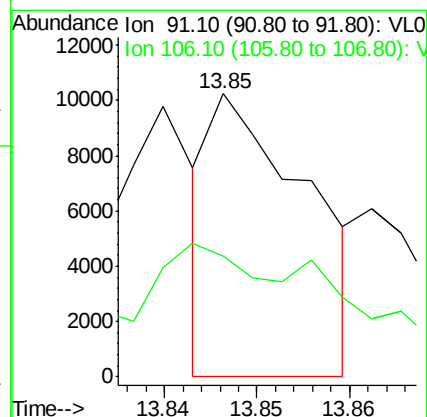
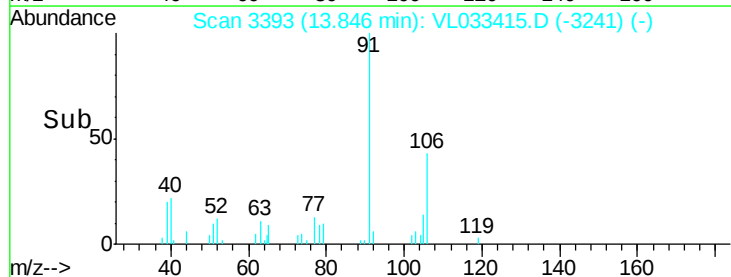
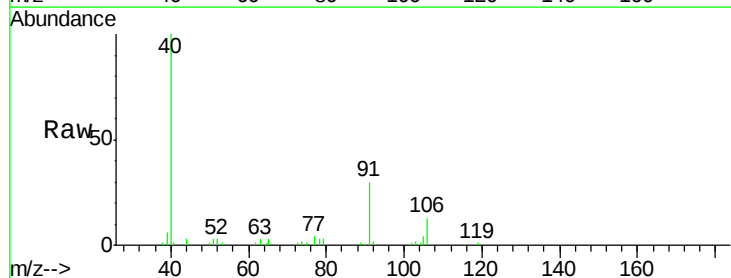
Acq: 21 Mar 2019 9:36

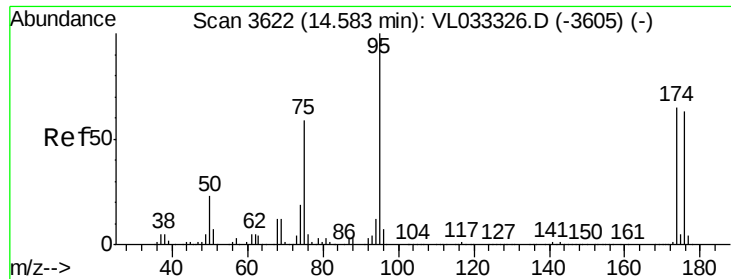
Tgt Ion: 91 Resp: 7453

Ion Ratio Lower Upper

91 100

106 114.9 21.3 63.9#

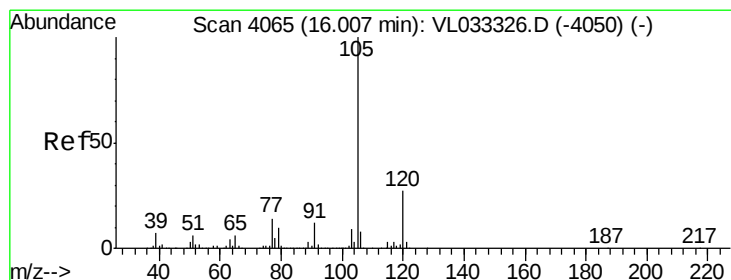
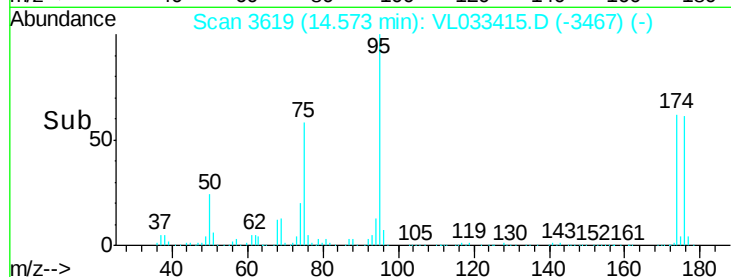
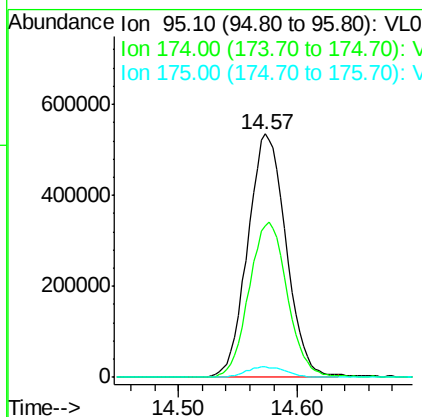
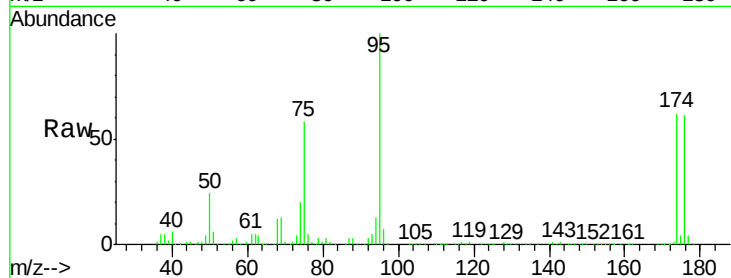




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.445 ppbv
 RT: 14.57 min Scan# 3619
 Delta R.T. -0.01 min
 Lab File: VL033415.D
 Acq: 21 Mar 2019 9:36

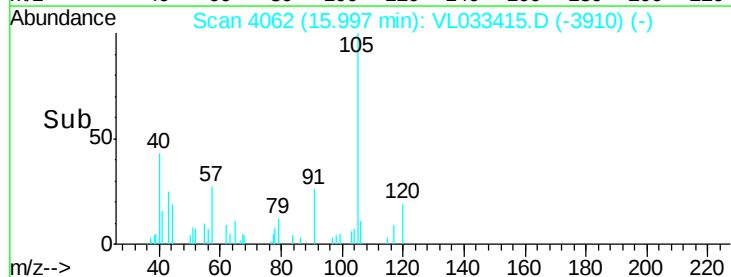
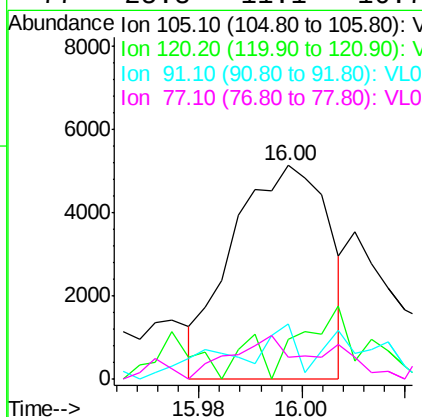
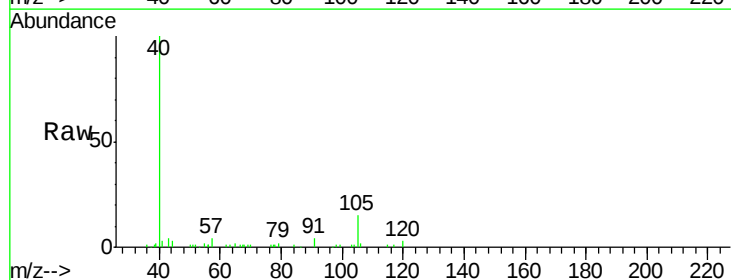
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

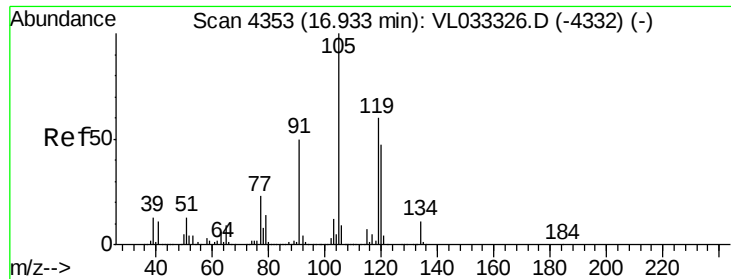
Tgt Ion: 95 Resp: 1191766
 Ion Ratio Lower Upper
 95 100
 174 64.1 51.5 77.3
 175 4.6 3.8 5.6



#72
 4-Ethyltoluene
 Concen: 0.032 ppbv
 RT: 16.00 min Scan# 4062
 Delta R.T. -0.01 min
 Lab File: VL033415.D
 Acq: 21 Mar 2019 9:36

Tgt Ion: 105 Resp: 6658
 Ion Ratio Lower Upper
 105 100
 120 0.0 22.9 34.3#
 91 32.6 10.2 15.2#
 77 25.8 11.1 16.7#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.057 ppbv
 RT: 16.92 min Scan# 4349
 Delta R.T. -0.01 min
 Lab File: VL033415.D
 Acq: 21 Mar 2019 9:36

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

Tgt Ion	Ratio	Lower	Upper
105	100		
120	31.1	37.4	56.2#
91	13.4	41.0	61.4#
77	16.3	18.5	27.7#

