

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL032019\
 Data File : VL033407.D
 Acq On : 21 Mar 2019 2:18
 Operator : SY/AP
 Sample : K1976-04DL 10X
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1DL

Quant Time: Mar 21 12:41:33 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	799640	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1977865	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.24	117	1864171	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	1389349	10.06	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.60%

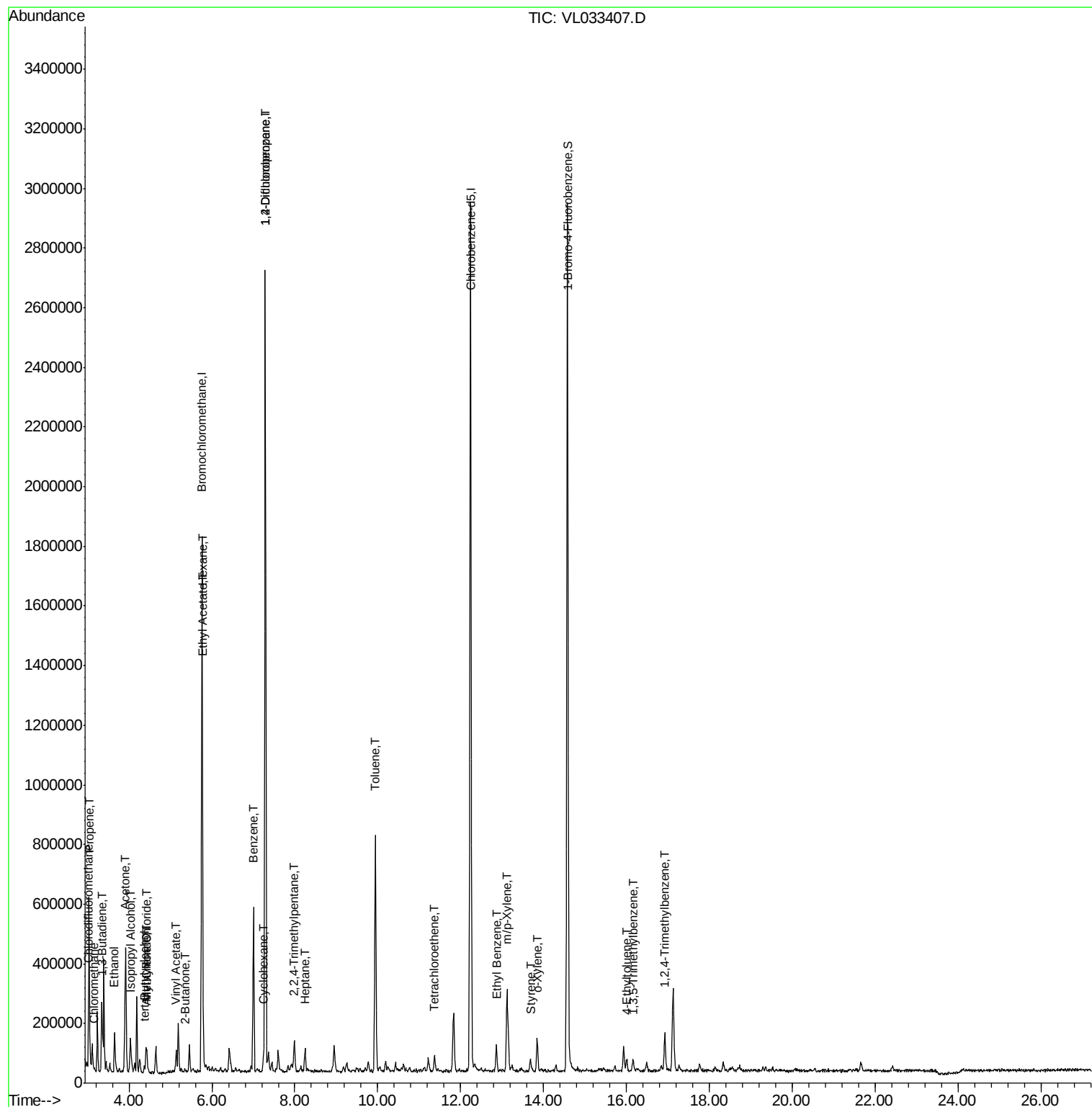
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Chlorodifluoromethane	3.01	51	8757	0.095	ppbv #	92
4) Chloromethane	3.17	50	4199	0.084	ppbv #	85
9) Propene	3.04	41	222109	5.421	ppbv	100
10) Heptane	8.24	43	8166	0.080	ppbv #	27
13) Ethanol	3.65	45	137027	7.016	ppbv	100
15) Acetone	3.91	43	355286	2.858	ppbv #	88
16) 1,3-Butadiene	3.36	39	27359	0.678	ppbv #	60
17) tert-Butyl alcohol	4.37	59	819	0.047	ppbv #	74
19) Isopropyl Alcohol	4.03	45	129435	2.189	ppbv #	95
20) Methylene Chloride	4.41	84	27235	0.672	ppbv	92
21) Allyl Chloride	4.44	41	2998	0.050	ppbv #	1
23) Vinyl Acetate	5.14	43	25426	0.177	ppbv #	1
25) Ethyl Acetate	5.78	43	54520	0.302	ppbv #	85
26) Hexane	5.78	57	69297	0.858	ppbv #	43
30) Cyclohexane	7.24	84	8229	0.127	ppbv #	27
34) 2-Butanone	5.34	43	4542	0.035	ppbv #	54
36) Benzene	7.00	78	434070	2.452	ppbv	98
39) 1,2-Dichloropropane	7.29	63	498981	7.527	ppbv #	24
44) 2,2,4-Trimethylpentane	7.99	57	48411	0.165	ppbv #	28
52) Tetrachloroethene	11.36	164	2699	0.037	ppbv #	45
53) Toluene	9.94	91	621458	3.090	ppbv	99
58) Ethyl Benzene	12.86	91	76659	0.291	ppbv #	87
59) m/p-Xylene	13.12	91	274849	1.213	ppbv #	100
60) o-Xylene	13.84	91	86667	0.392	ppbv	98
61) Styrene	13.68	104	9604	0.062	ppbv #	11
72) 4-Ethyltoluene	16.00	105	26426	0.105	ppbv #	91
73) 1,3,5-Trimethylbenzene	16.15	105	11863	0.049	ppbv	98
74) 1,2,4-Trimethylbenzene	16.93	105	91550	0.353	ppbv #	71

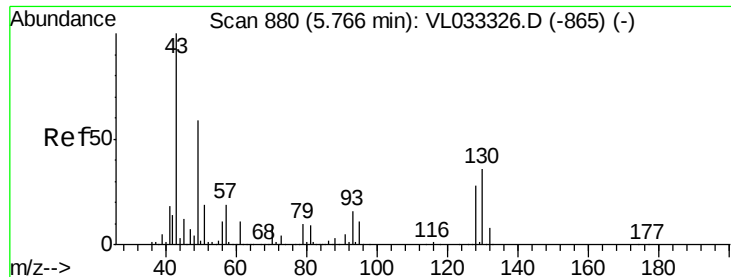
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Fri Mar 15 14:52:14 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleId :

QA1DL

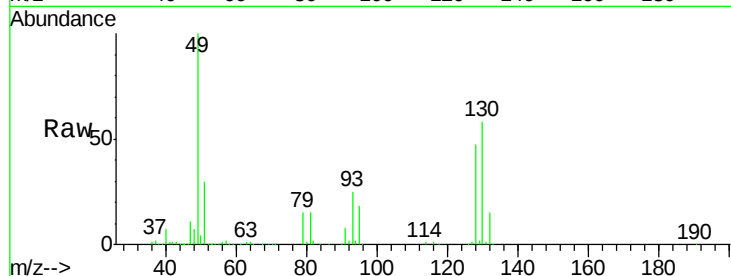
Tgt Ion: 49 Resp: 799640

Ion Ratio Lower Upper

49 100

128 49.1 23.5 70.6

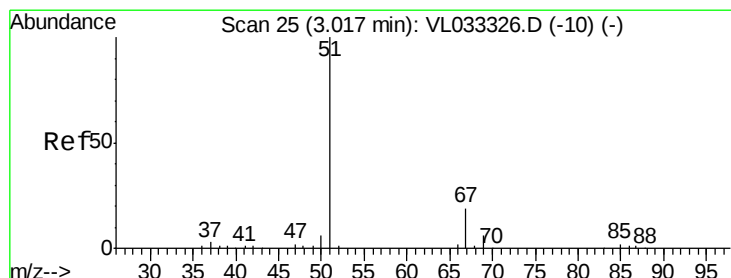
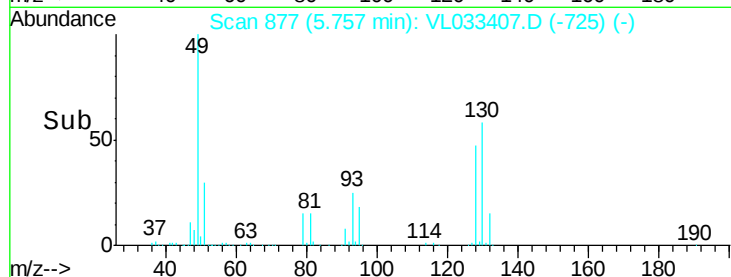
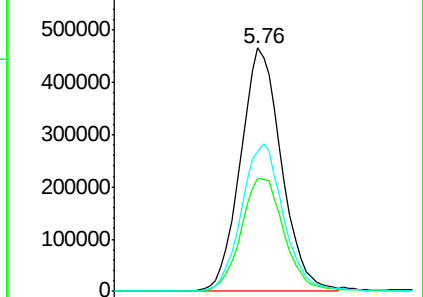
130 62.6 30.1 90.3



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



#3

Chlorodifluoromethane

Concen: 0.095 ppbv

RT: 3.01 min Scan# 24

Delta R.T. -0.00 min

Lab File: VL033407.D

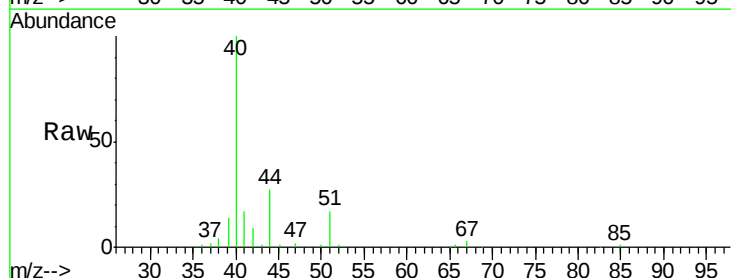
Acq: 21 Mar 2019 2:18

Tgt Ion: 51 Resp: 8757

Ion Ratio Lower Upper

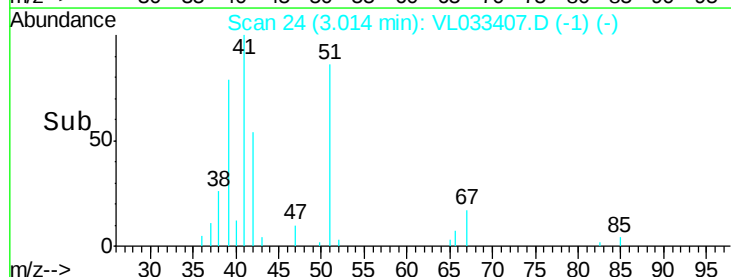
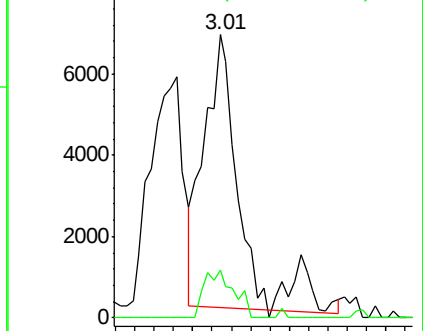
51 100

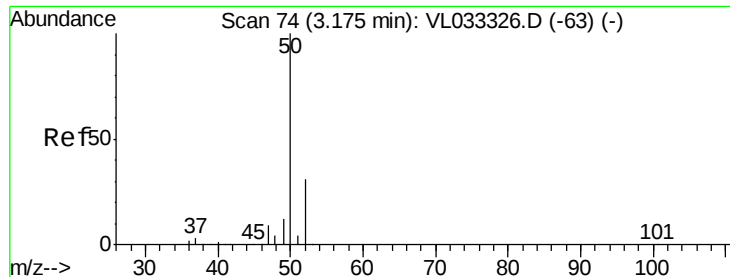
67 14.8 14.9 22.3#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.084 ppbv

RT: 3.17 min Scan# 71

Delta R.T. -0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleId :

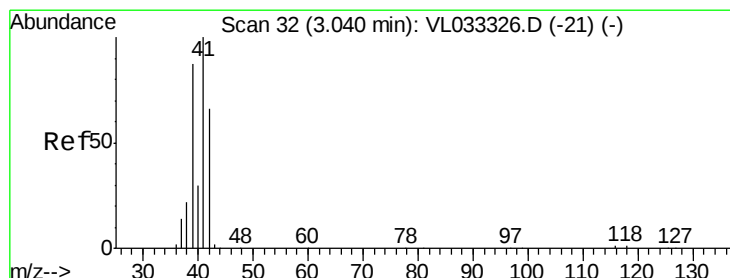
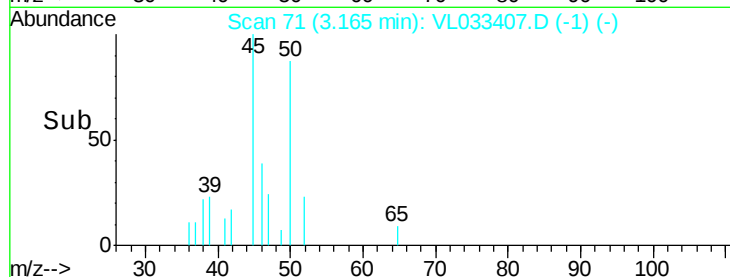
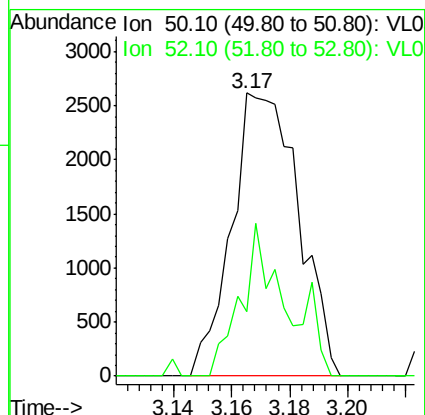
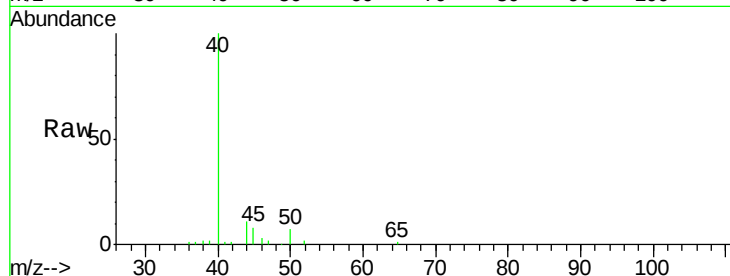
OA1DL

Tgt Ion: 50 Resp: 4199

Ion Ratio Lower Upper

50 100

52 22.8 25.0 37.6#



#9

Propene

Concen: 5.421 ppbv

RT: 3.04 min Scan# 31

Delta R.T. -0.00 min

Lab File: VL033407.D

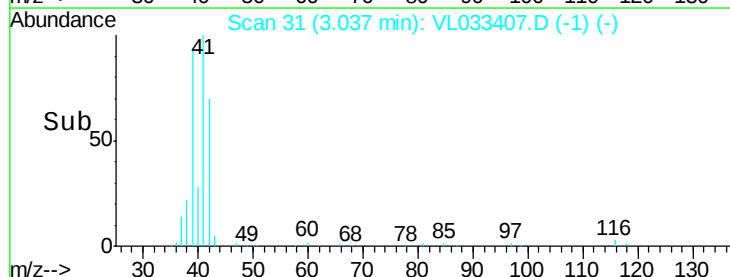
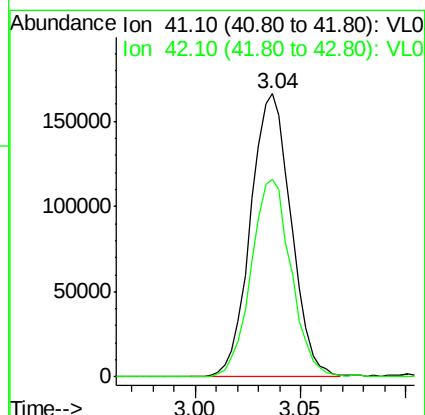
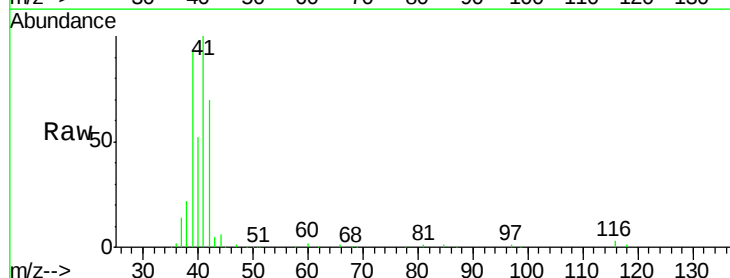
Acq: 21 Mar 2019 2:18

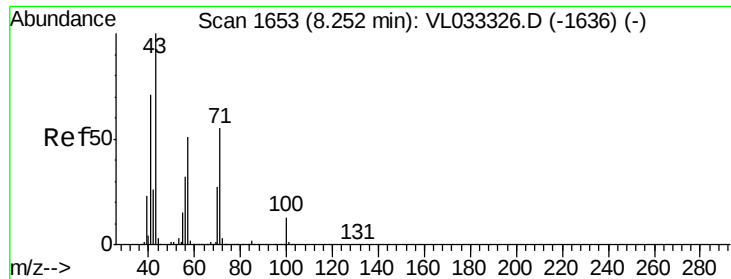
Tgt Ion: 41 Resp: 222109

Ion Ratio Lower Upper

41 100

42 69.0 55.2 82.8

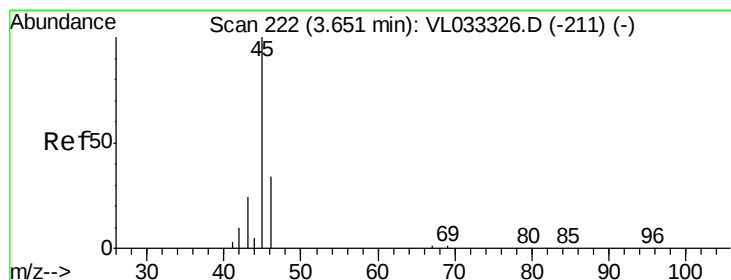
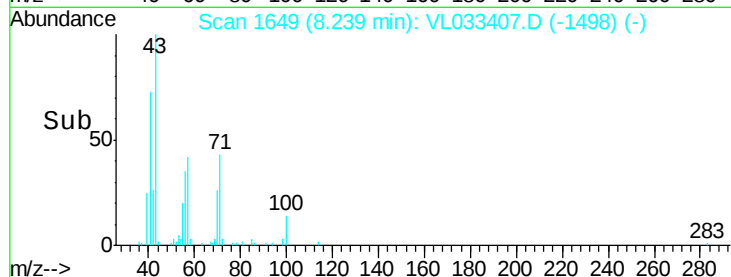
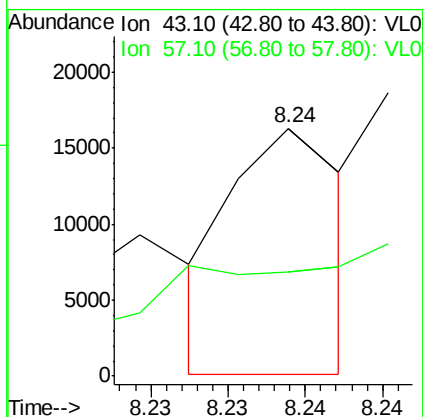
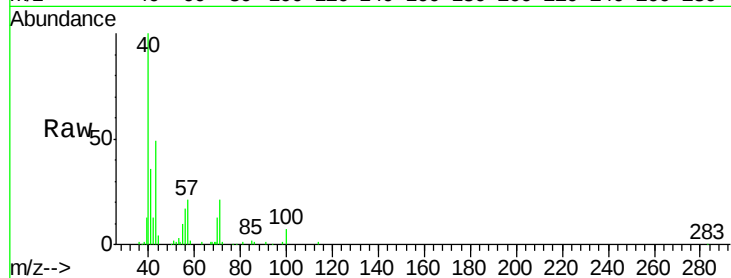




#10
Heptane
Concen: 0.080 ppbv
RT: 8.24 min Scan# 1649
Delta R.T. -0.01 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

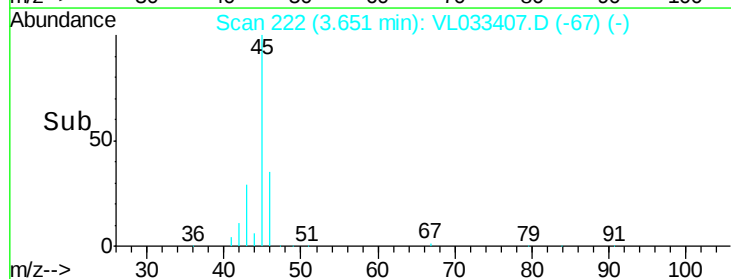
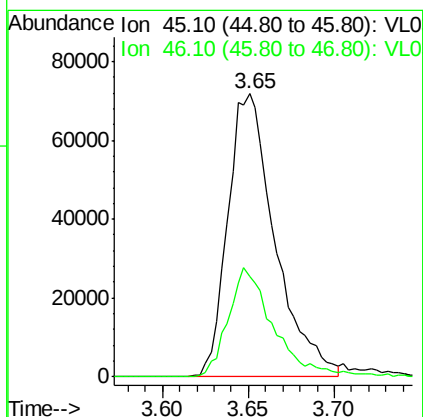
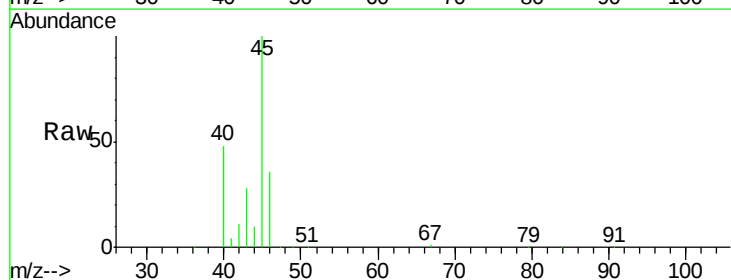
Instrument :
MSVOA_L
ClientSampleId :
QA1DL

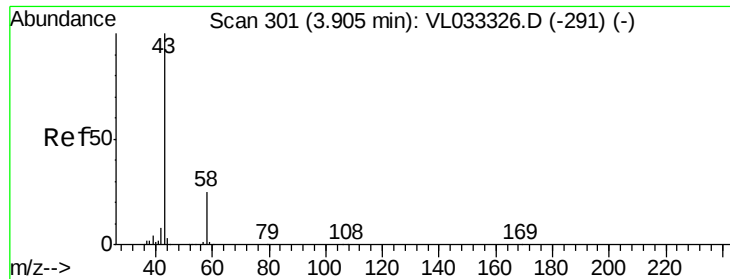
Tgt Ion: 43 Resp: 8166
Ion Ratio Lower Upper
43 100
57 0.0 40.4 60.6#



#13
Ethanol
Concen: 7.016 ppbv
RT: 3.65 min Scan# 222
Delta R.T. -0.00 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

Tgt Ion: 45 Resp: 137027
Ion Ratio Lower Upper
45 100
46 37.3 14.9 59.7





#15

Acetone

Concen: 2.858 ppbv

RT: 3.91 min Scan# 302

Delta R.T. 0.00 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleId :

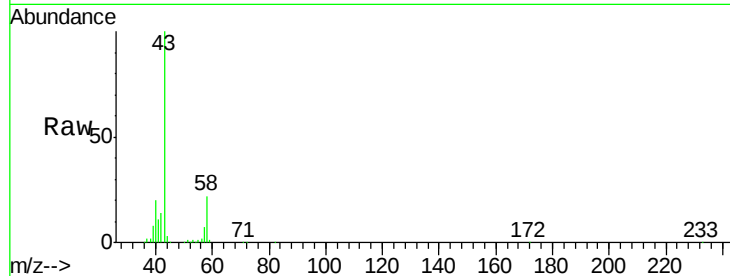
QA1DL

Tgt Ion: 43 Resp: 355286

Ion Ratio Lower Upper

43 100

58 19.3 20.4 30.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

200000

150000

100000

50000

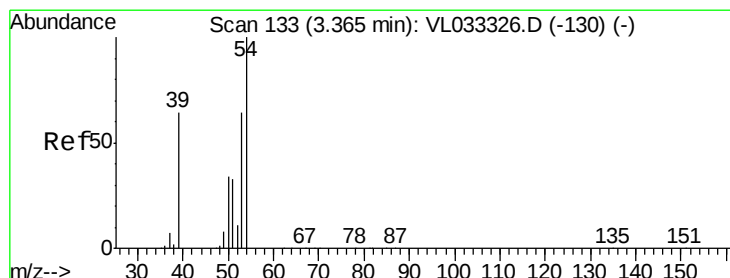
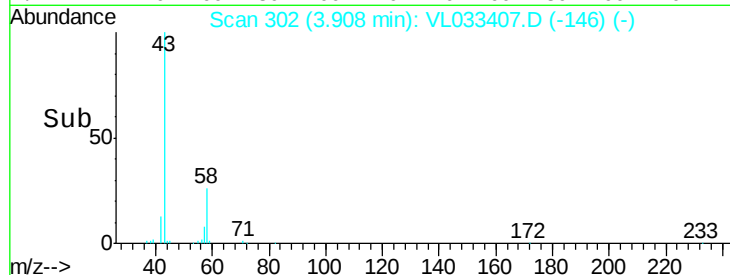
0

3.85

3.90

3.95

Time-->



#16

1,3-Butadiene

Concen: 0.678 ppbv

RT: 3.36 min Scan# 132

Delta R.T. -0.00 min

Lab File: VL033407.D

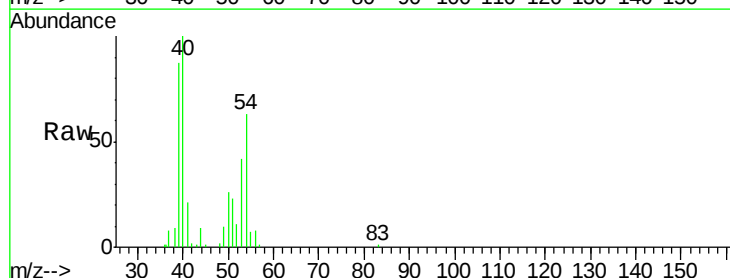
Acq: 21 Mar 2019 2:18

Tgt Ion: 39 Resp: 27359

Ion Ratio Lower Upper

39 100

54 134.6 76.8 115.2#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

40000

30000

20000

10000

0

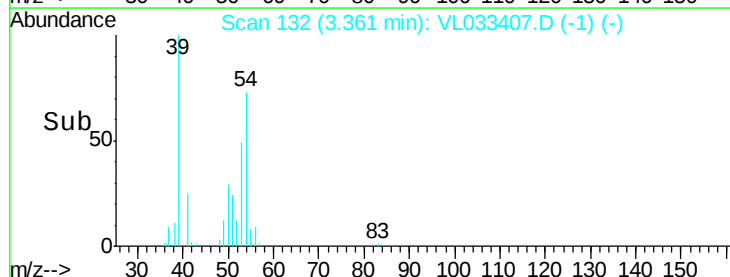
3.35

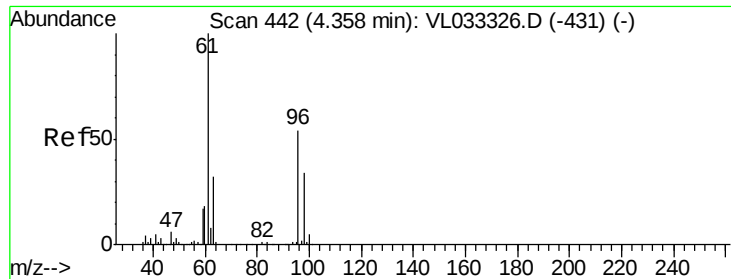
3.36

3.37

3.38

Time-->





#17

tert-Butyl alcohol

Concen: 0.047 ppbv

RT: 4.37 min Scan# 446

Delta R.T. 0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleID :

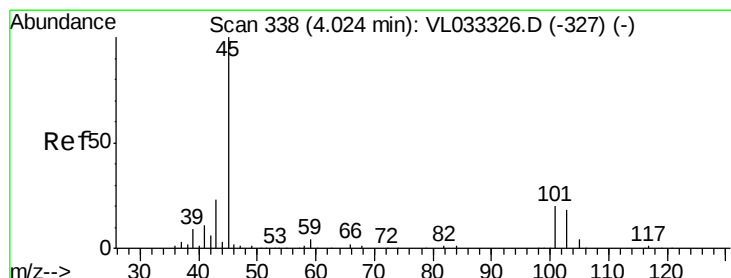
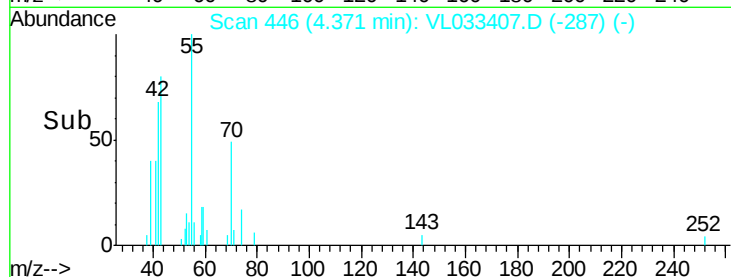
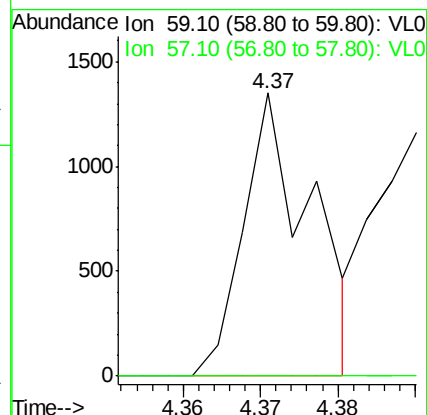
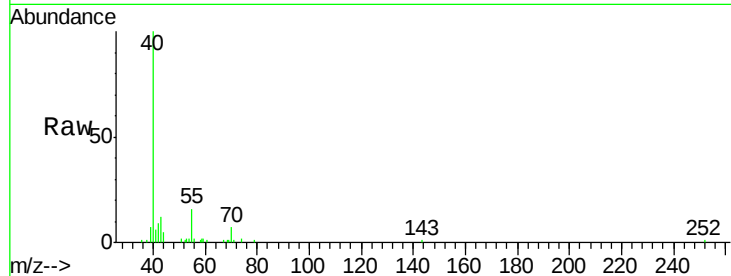
QA1DL

Tgt Ion: 59 Resp: 819

Ion Ratio Lower Upper

59 100

57 0.0 7.7 11.5#



#19

Isopropyl Alcohol

Concen: 2.189 ppbv

RT: 4.03 min Scan# 341

Delta R.T. 0.01 min

Lab File: VL033407.D

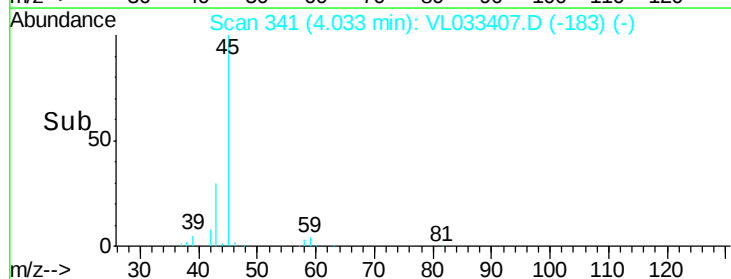
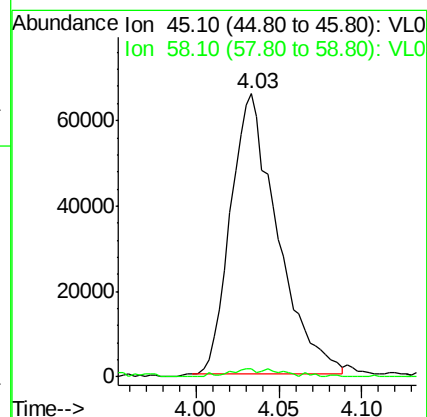
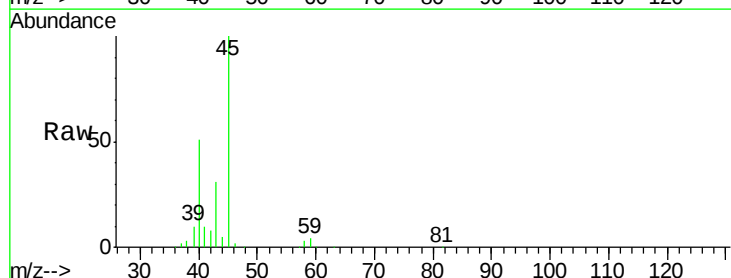
Acq: 21 Mar 2019 2:18

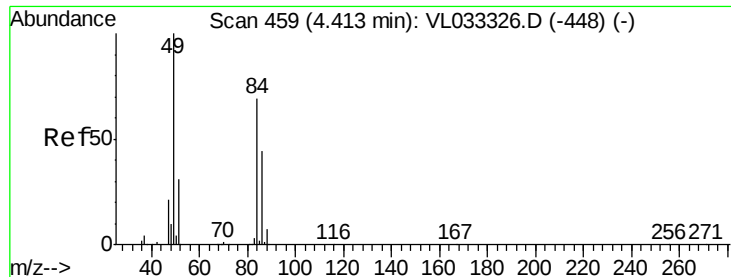
Tgt Ion: 45 Resp: 129435

Ion Ratio Lower Upper

45 100

58 3.5 1.5 2.3#

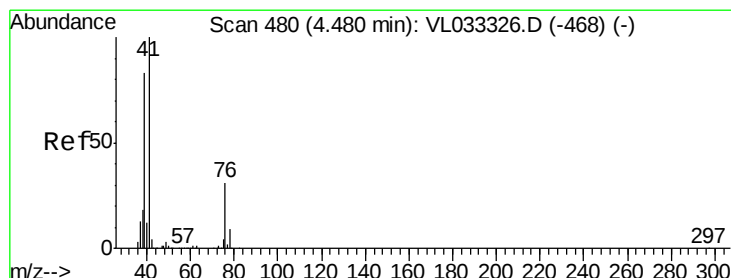
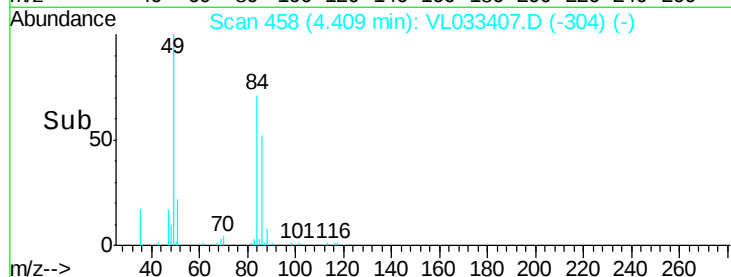
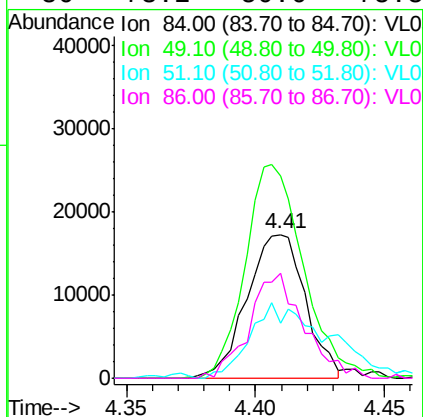
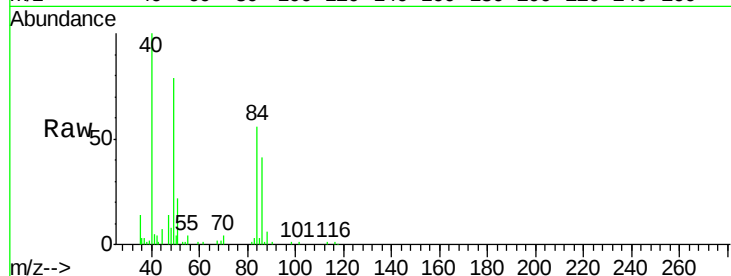




#20
Methylene Chloride
Concen: 0.672 ppbv
RT: 4.41 min Scan# 458
Delta R.T. -0.00 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

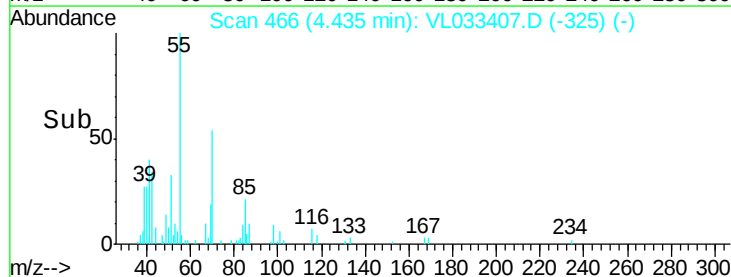
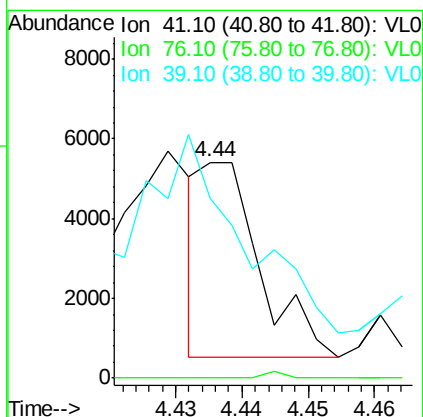
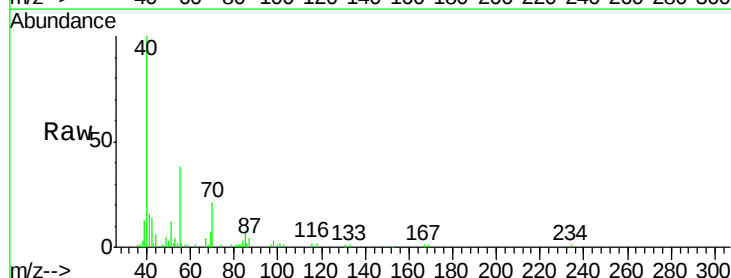
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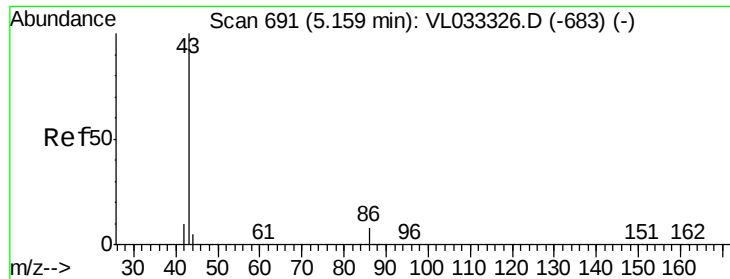
Tgt Ion:	84	Resp:	27235
Ion	Ratio	Lower	Upper
84	100		
49	138.1	115.4	173.0
51	37.0	35.8	53.6
86	73.2	50.6	75.8



#21
Allyl Chloride
Concen: 0.050 ppbv
RT: 4.44 min Scan# 466
Delta R.T. -0.05 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

Tgt Ion:	41	Resp:	2998
Ion	Ratio	Lower	Upper
41	100		
76	1.1	25.0	37.4#
39	333.3	65.9	98.9#

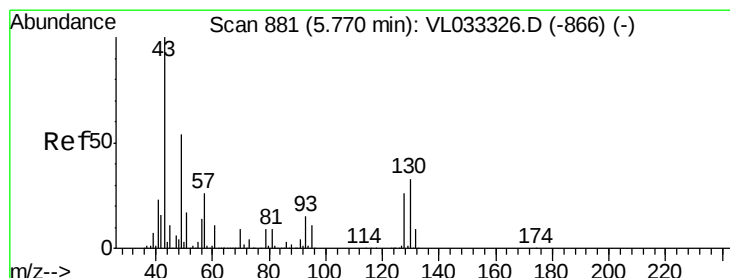
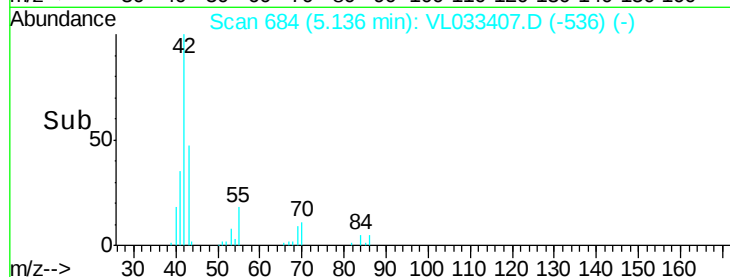
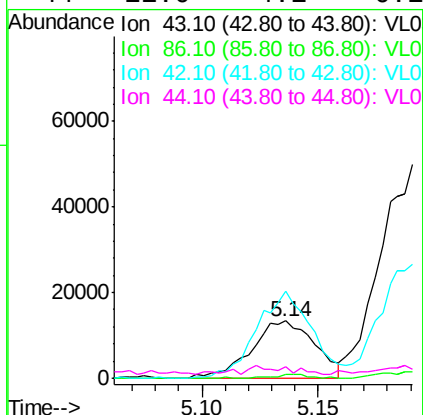
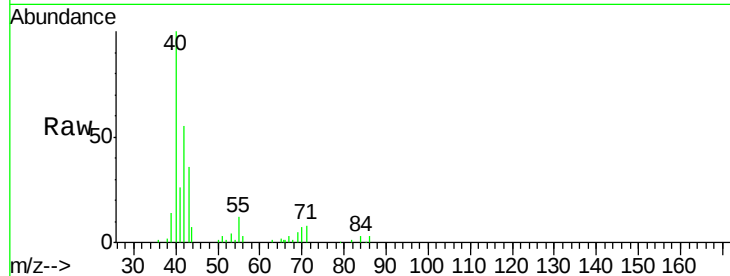




#23
 Vinyl Acetate
 Concen: 0.177 ppbv
 RT: 5.14 min Scan# 684
 Delta R.T. -0.02 min
 Lab File: VL033407.D
 Acq: 21 Mar 2019 2:18

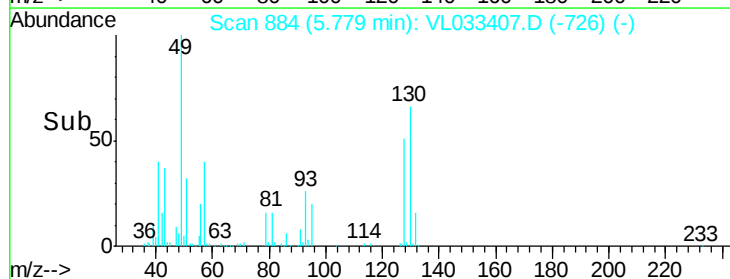
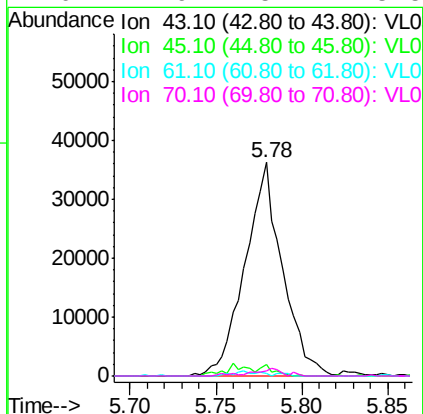
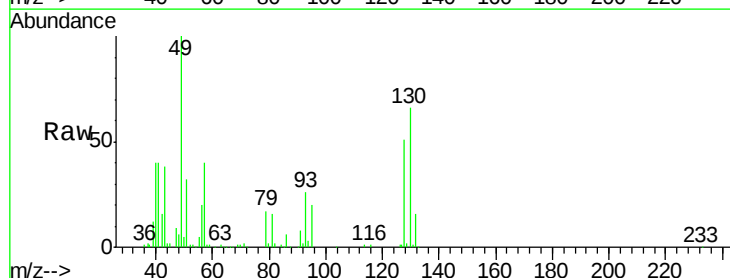
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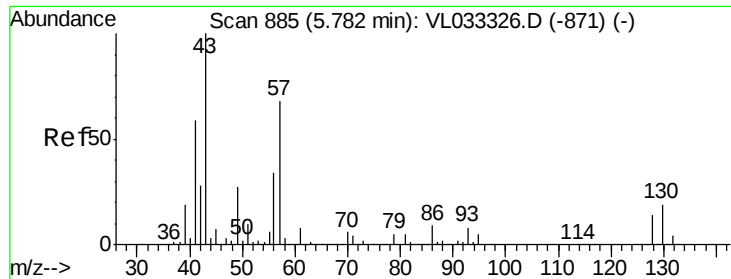
Tgt Ion:	43	Resp:	25426
Ion	Ratio	Lower	Upper
43	100		
86	7.7	6.2	9.2
42	151.8	8.1	12.1#
44	11.0	4.1	6.1#



#25
 Ethyl Acetate
 Concen: 0.302 ppbv
 RT: 5.78 min Scan# 884
 Delta R.T. 0.01 min
 Lab File: VL033407.D
 Acq: 21 Mar 2019 2:18

Tgt Ion:	43	Resp:	54520
Ion	Ratio	Lower	Upper
43	100		
45	5.4	7.9	11.9#
61	2.0	7.4	11.2#
70	2.9	5.7	8.5#

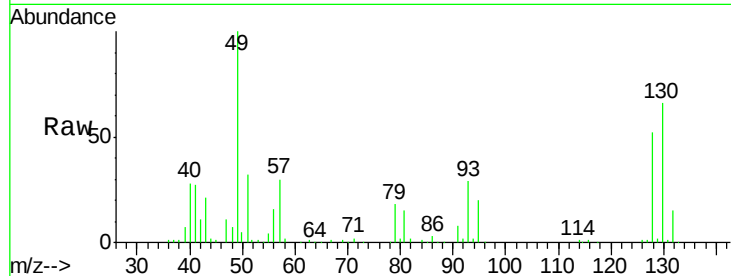




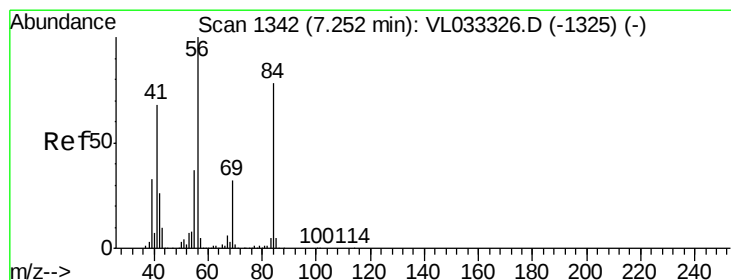
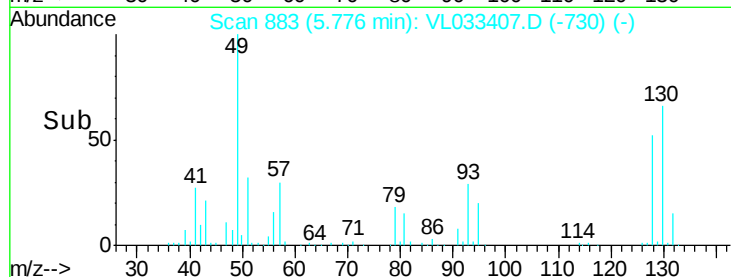
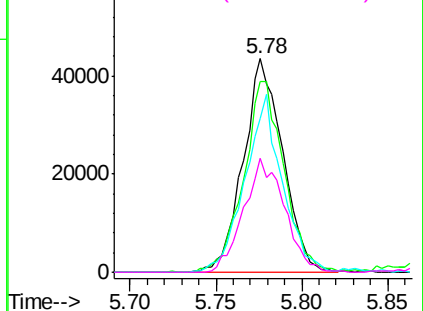
#26
Hexane
Concen: 0.858 ppbv
RT: 5.78 min Scan# 883
Delta R.T. -0.01 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

Instrument :
MSVOA_L
ClientSampleId :
OA1DL

Tgt Ion: 57 Resp: 69297
Ion Ratio Lower Upper
57 100
41 91.5 70.5 105.7
43 79.8 181.8 272.8#
56 55.1 42.2 63.2

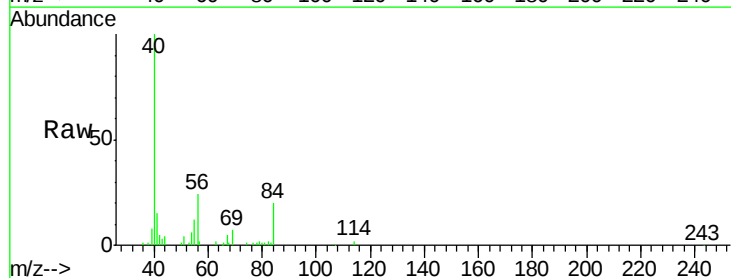


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

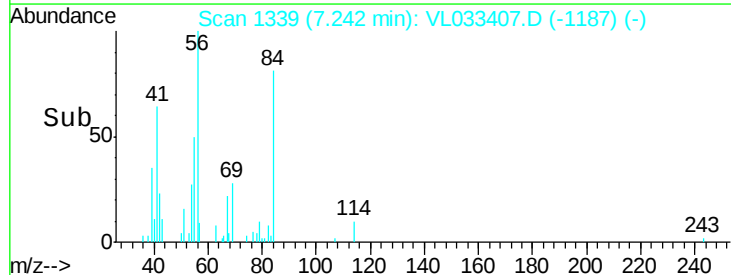
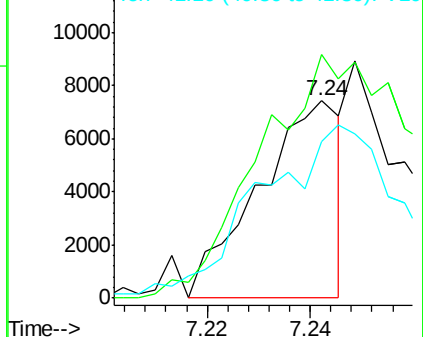


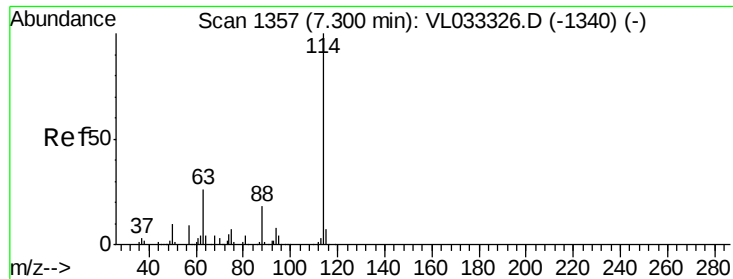
#30
Cyclohexane
Concen: 0.127 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

Tgt Ion: 84 Resp: 8229
Ion Ratio Lower Upper
84 100
56 210.8 111.3 166.9#
41 0.0 69.6 104.4#



Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

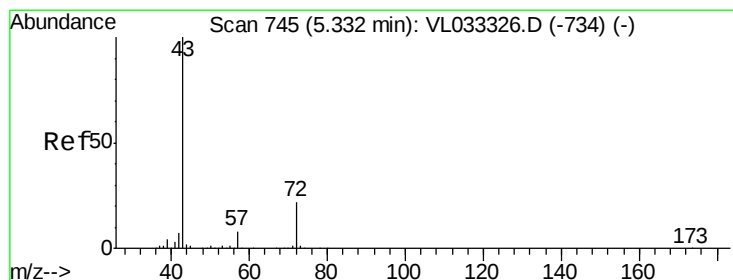
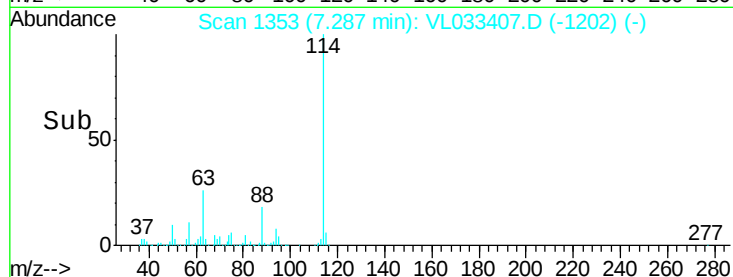
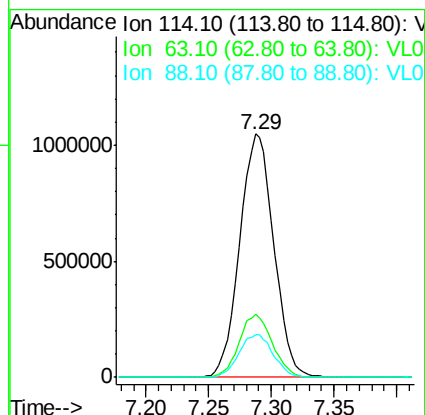
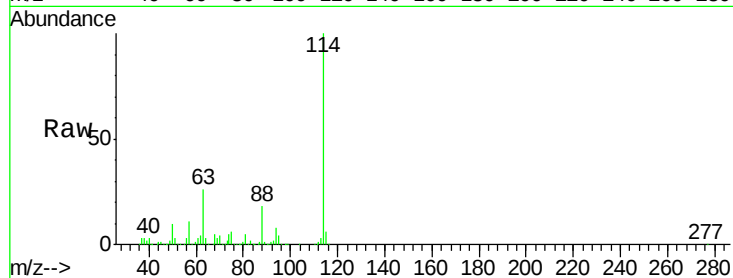




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.29 min Scan# 1353
 Delta R.T. -0.01 min
 Lab File: VL033407.D
 Acq: 21 Mar 2019 2:18

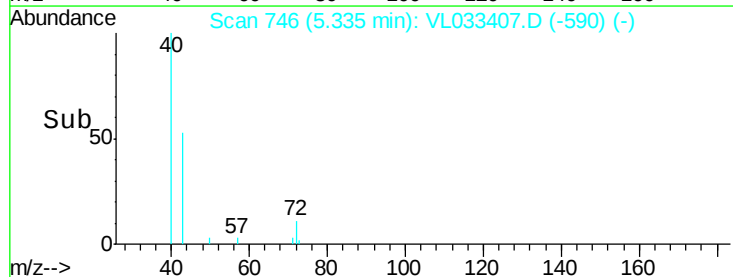
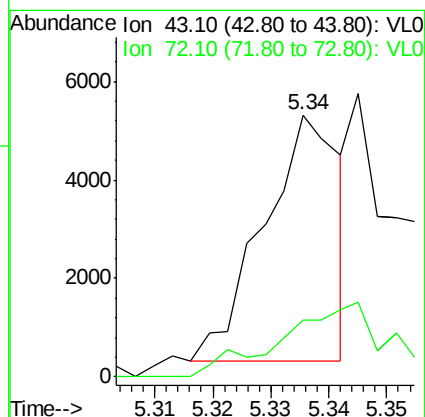
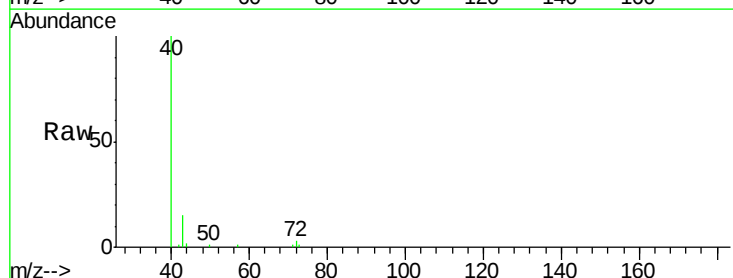
Instrument :
 MSVOA_L
 ClientSampleId :
 OA1DL

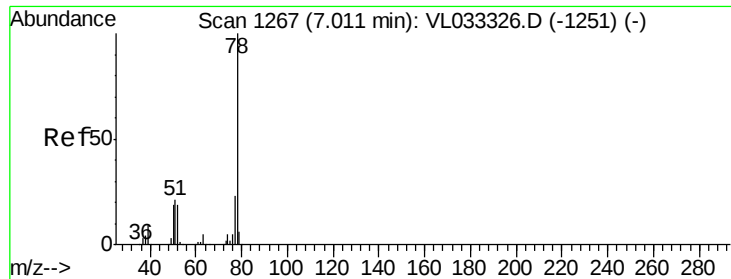
Tgt Ion:114 Resp: 1977865
 Ion Ratio Lower Upper
 114 100
 63 25.4 21.4 32.2
 88 17.8 14.5 21.7



#34
 2-Butanone
 Concen: 0.035 ppbv
 RT: 5.34 min Scan# 746
 Delta R.T. 0.00 min
 Lab File: VL033407.D
 Acq: 21 Mar 2019 2:18

Tgt Ion: 43 Resp: 4542
 Ion Ratio Lower Upper
 43 100
 72 0.0 17.7 26.5#

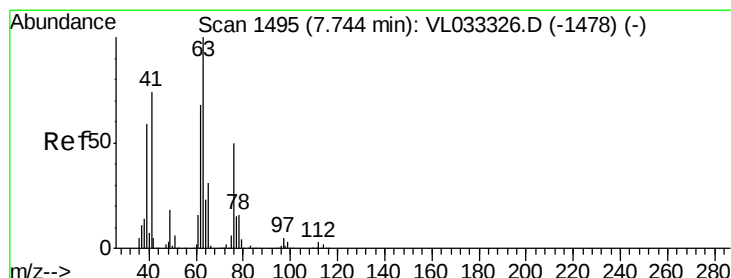
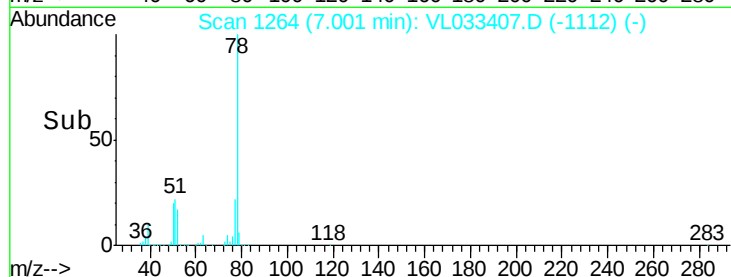
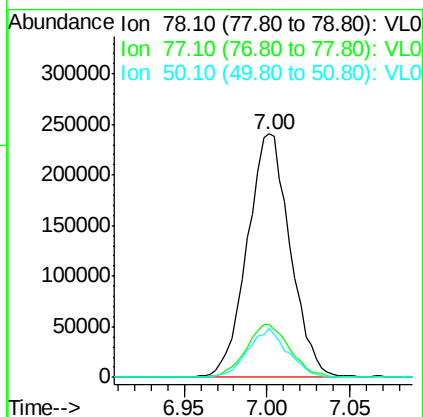
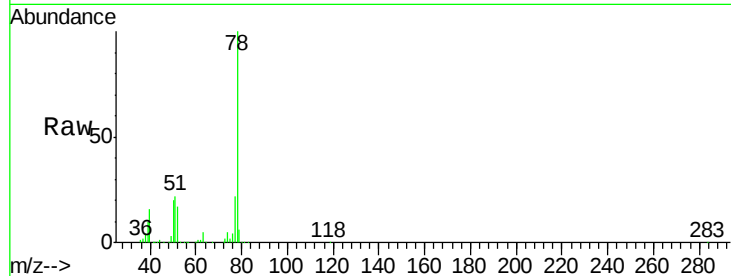




#36
Benzene
Concen: 2.452 ppbv
RT: 7.00 min Scan# 1264
Delta R.T. -0.01 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

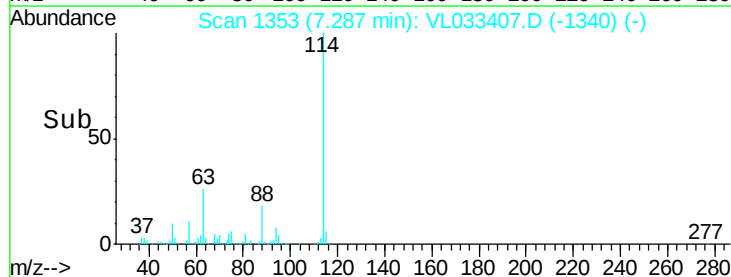
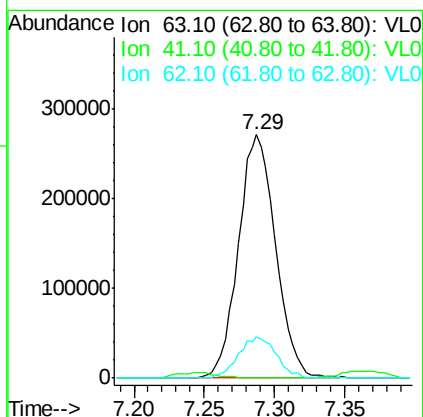
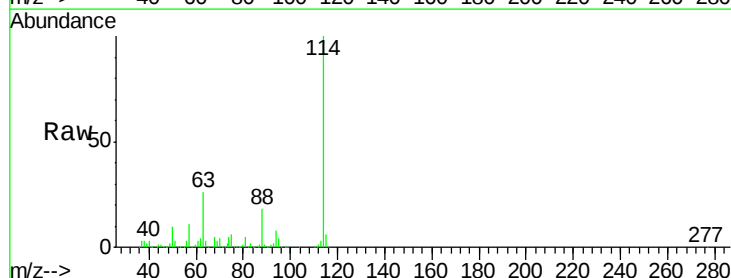
Instrument :
MSVOA_L
ClientSampleId :
OA1DL

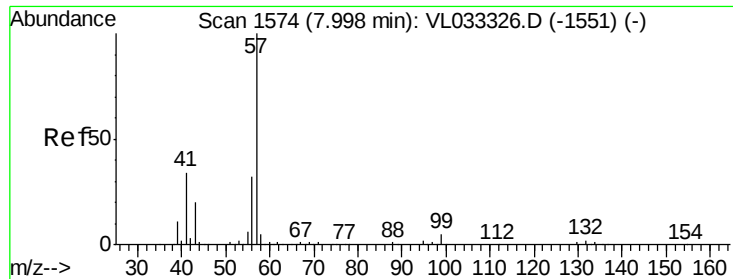
Tgt Ion: 78 Resp: 434070
Ion Ratio Lower Upper
78 100
77 21.6 18.1 27.1
50 19.9 15.2 22.8



#39
1,2-Dichloropropane
Concen: 7.527 ppbv
RT: 7.29 min Scan# 1353
Delta R.T. -0.46 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

Tgt Ion: 63 Resp: 498981
Ion Ratio Lower Upper
63 100
41 0.0 59.5 89.3#
62 16.8 54.7 82.1#





#44

2,2,4-Trimethylpentane

Concen: 0.165 ppbv

RT: 7.99 min Scan# 1571

Delta R.T. -0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleID :

QA1DL

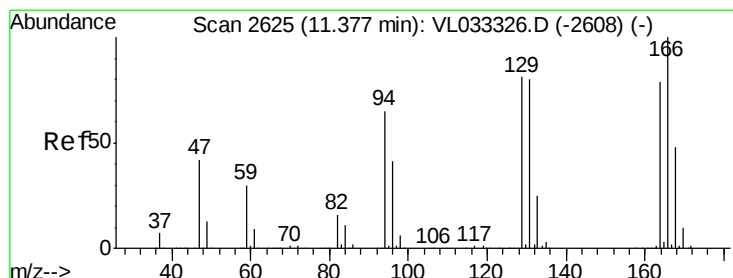
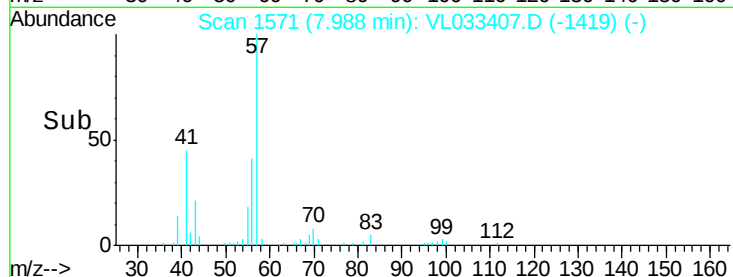
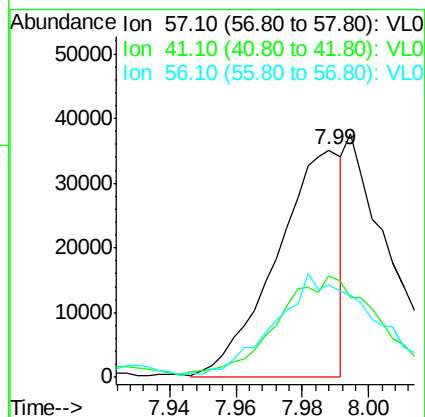
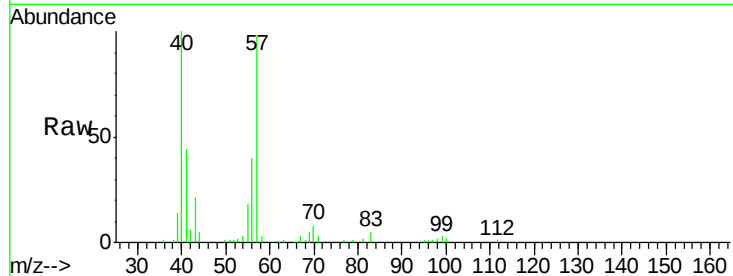
Tgt Ion: 57 Resp: 48411

Ion Ratio Lower Upper

57 100

41 71.4 26.0 39.0#

56 72.2 24.6 36.8#



#52

Tetrachloroethene

Concen: 0.037 ppbv

RT: 11.36 min Scan# 2620

Delta R.T. -0.02 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Tgt Ion:164 Resp: 2699

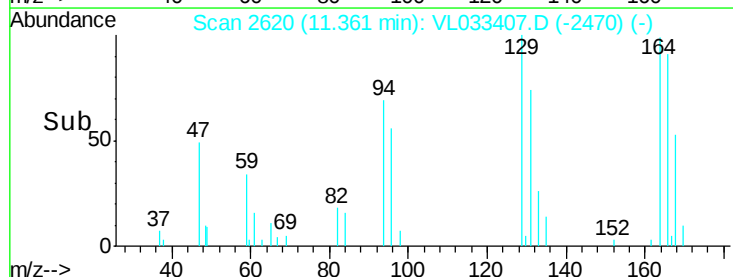
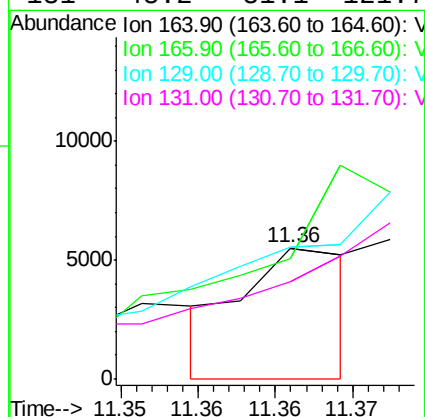
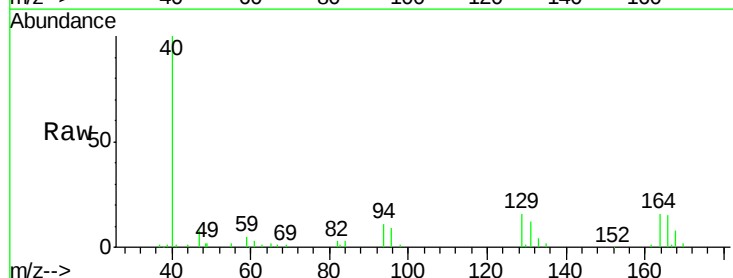
Ion Ratio Lower Upper

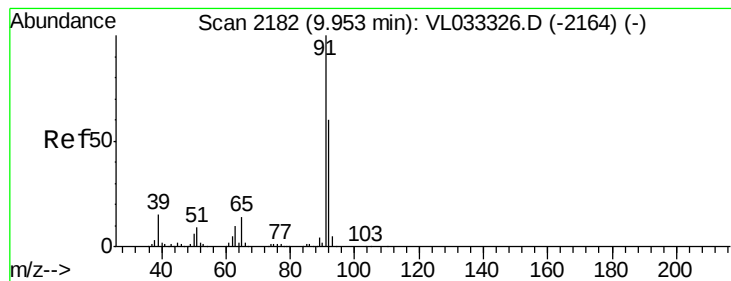
164 100

166 52.3 101.5 152.3#

129 58.0 82.2 123.2#

131 48.2 81.1 121.7#





#53

Toluene

Concen: 3.090 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. -0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleId :

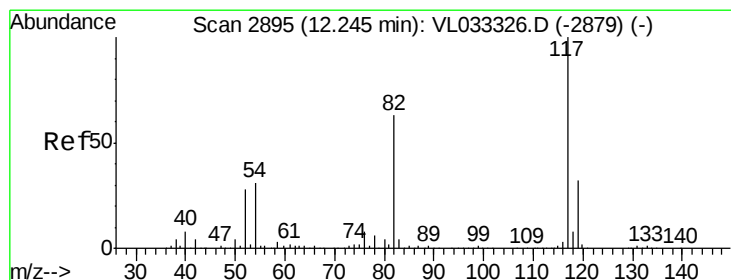
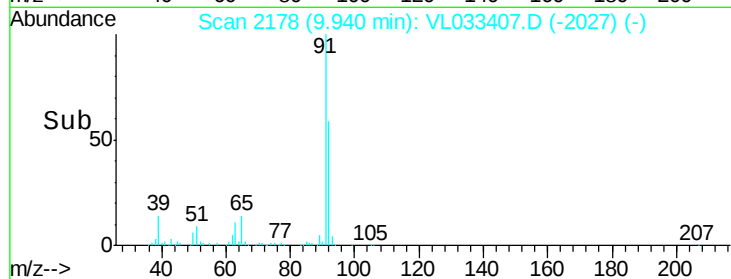
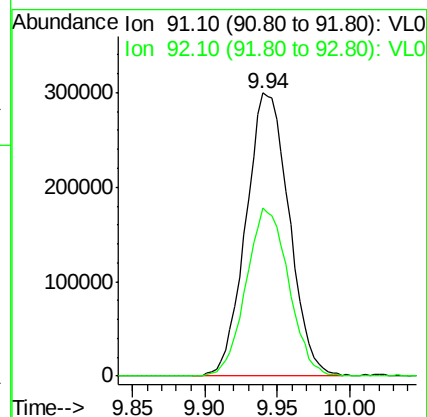
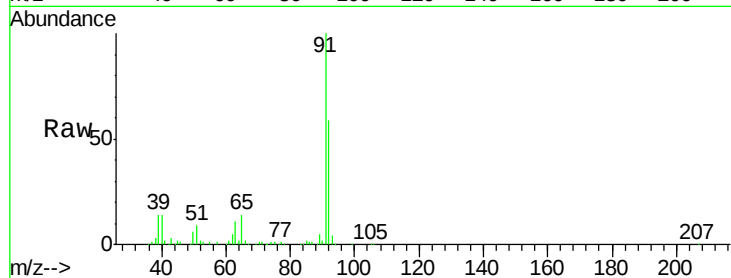
QA1DL

Tgt Ion: 91 Resp: 621458

Ion Ratio Lower Upper

91 100

92 58.4 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: VL033407.D

Acq: 21 Mar 2019 2:18

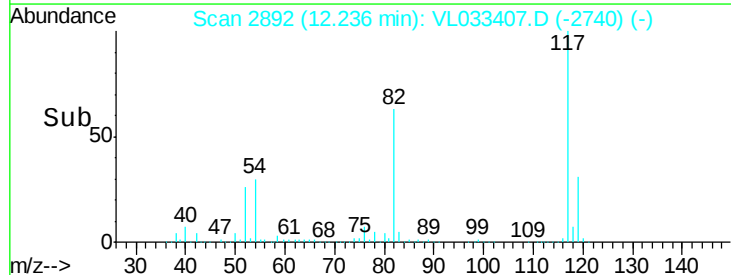
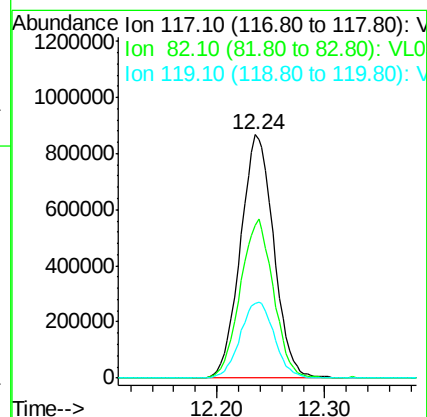
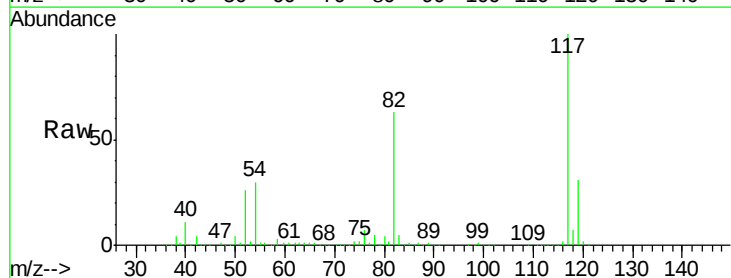
Tgt Ion: 117 Resp: 1864171

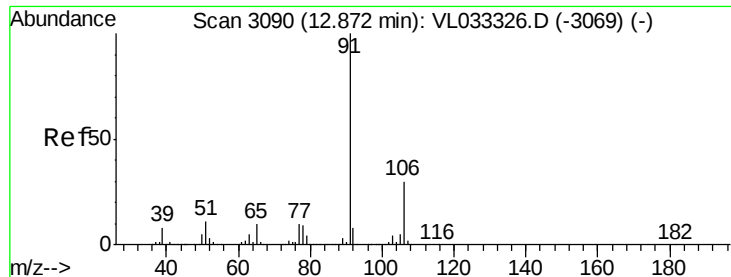
Ion Ratio Lower Upper

117 100

82 65.2 53.4 80.2

119 32.1 27.3 40.9





#58

Ethyl Benzene

Concen: 0.291 ppbv

RT: 12.86 min Scan# 3087

Delta R.T. -0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleId :

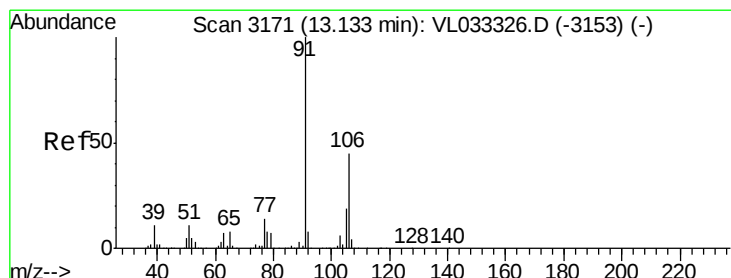
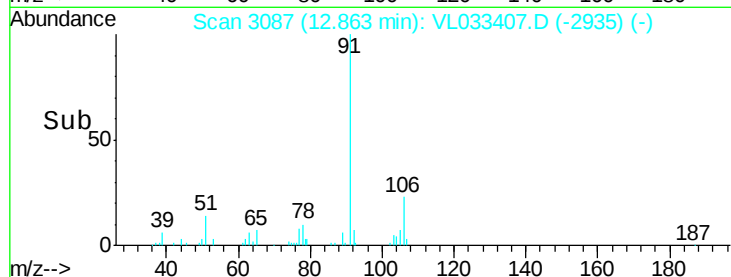
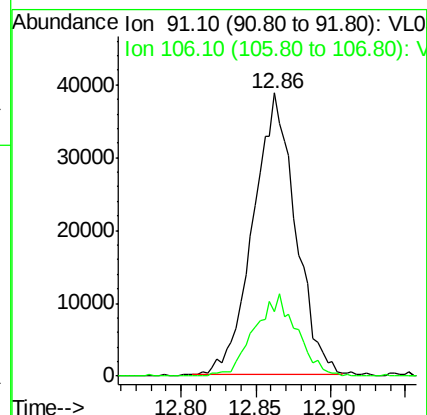
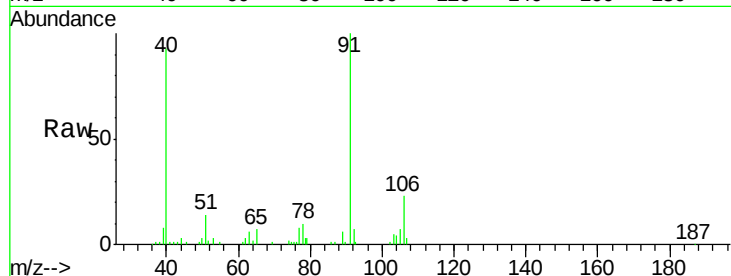
QA1DL

Tgt Ion: 91 Resp: 76659

Ion Ratio Lower Upper

91 100

106 23.1 24.2 36.2#



#59

m/p-Xylene

Concen: 1.213 ppbv

RT: 13.12 min Scan# 3167

Delta R.T. -0.01 min

Lab File: VL033407.D

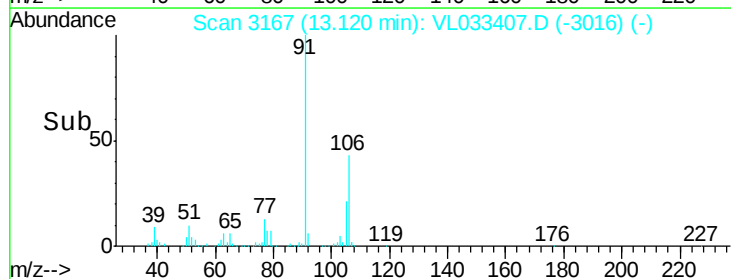
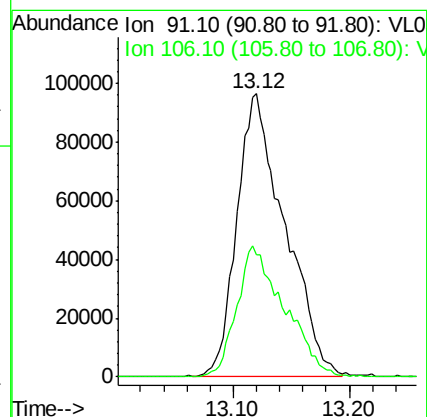
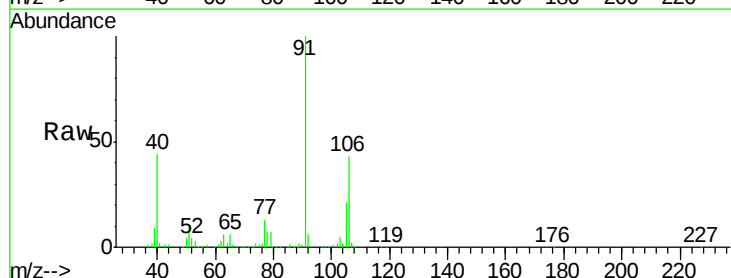
Acq: 21 Mar 2019 2:18

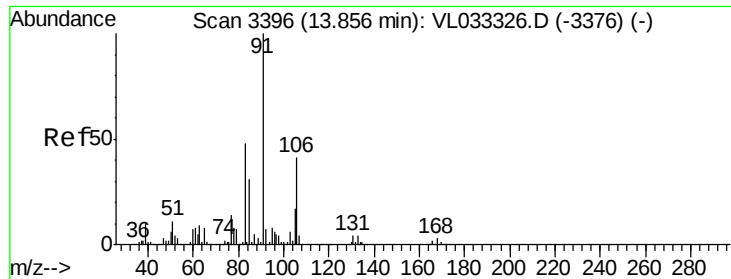
Tgt Ion: 91 Resp: 274849

Ion Ratio Lower Upper

91 100

106 46.2 0.0 0.0#

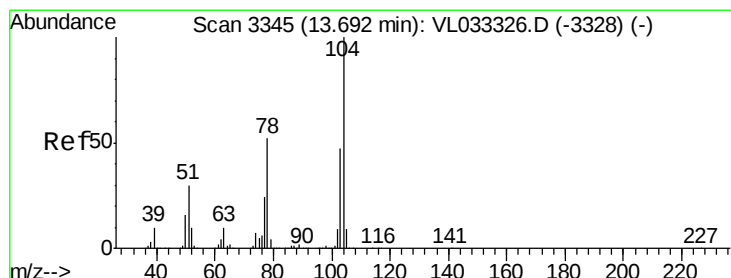
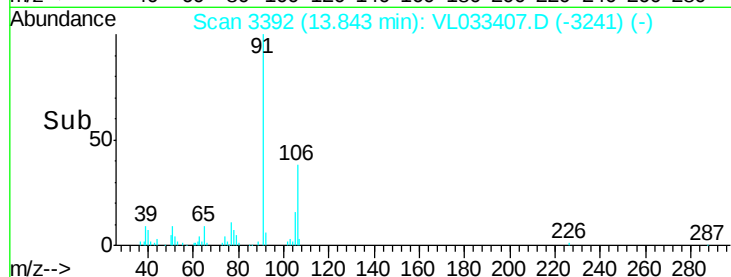
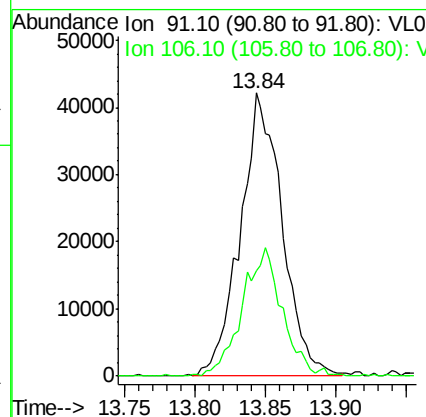
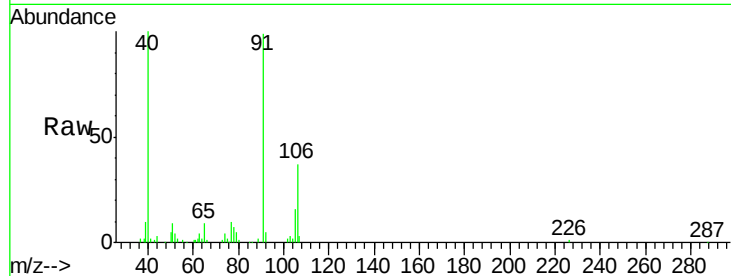




#60
o-Xylene
Concen: 0.392 ppbv
RT: 13.84 min Scan# 3392
Delta R.T. -0.01 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

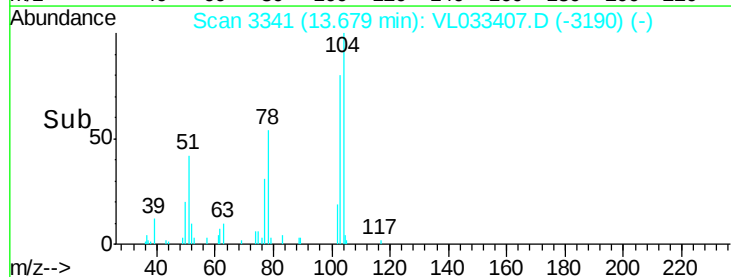
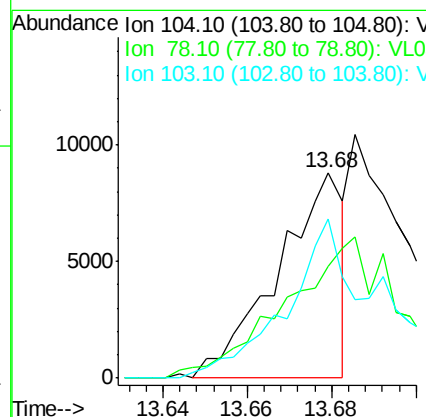
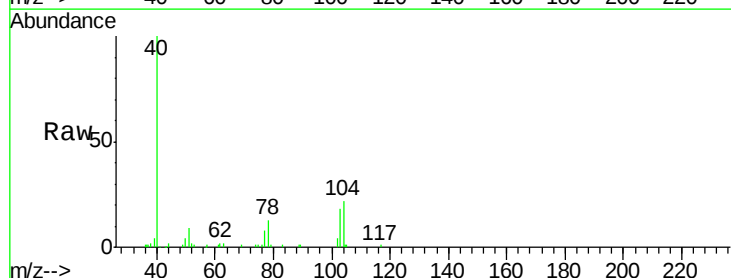
Instrument :
MSVOA_L
ClientSampleId :
OA1DL

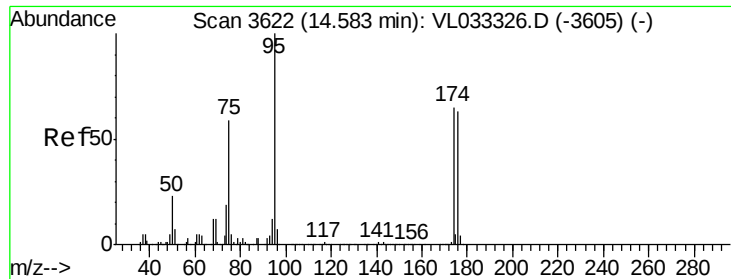
Tgt Ion: 91 Resp: 86667
Ion Ratio Lower Upper
91 100
106 43.9 21.3 63.9



#61
Styrene
Concen: 0.062 ppbv
RT: 13.68 min Scan# 3341
Delta R.T. -0.01 min
Lab File: VL033407.D
Acq: 21 Mar 2019 2:18

Tgt Ion: 104 Resp: 9604
Ion Ratio Lower Upper
104 100
78 0.0 42.7 64.1#
103 117.3 38.0 57.0#

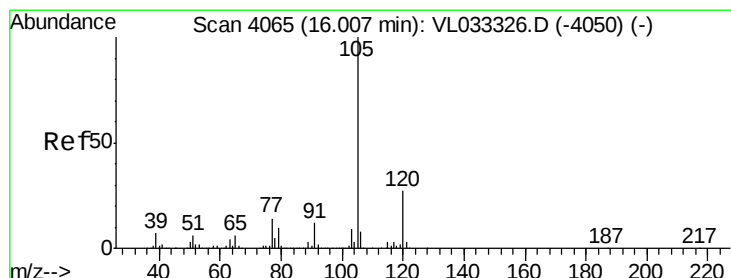
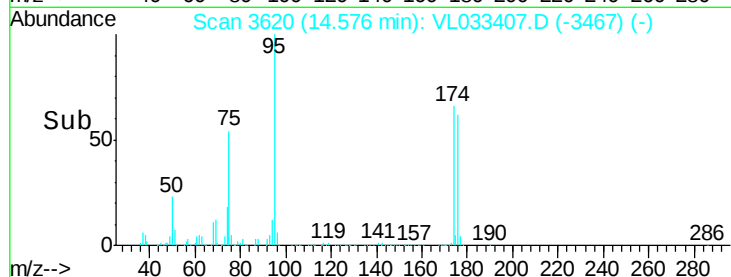
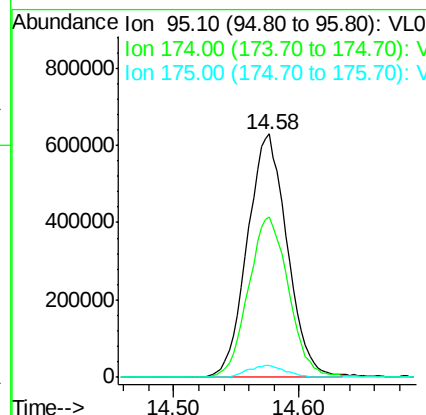
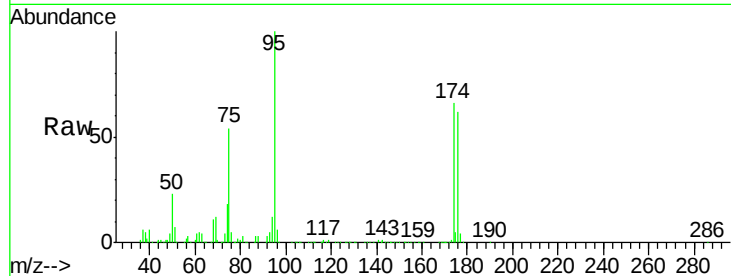




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.058 ppbv
 RT: 14.58 min Scan# 3620
 Delta R.T. -0.01 min
 Lab File: VL033407.D
 Acq: 21 Mar 2019 2:18

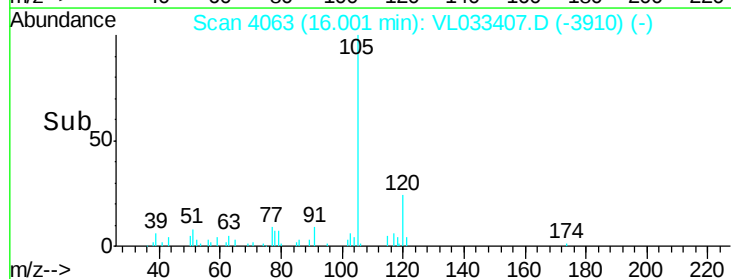
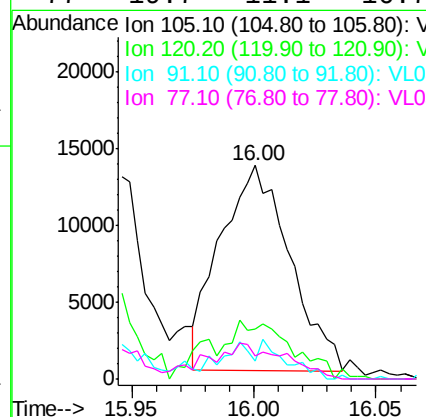
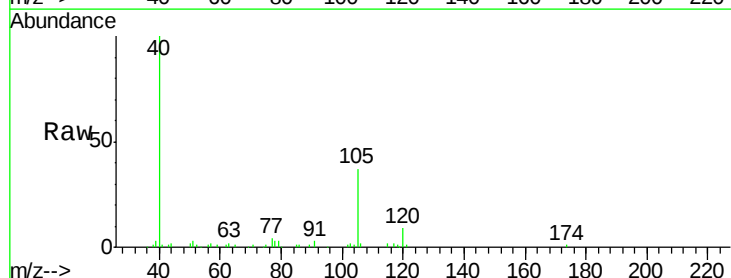
Instrument :
 MSVOA_L
 ClientSampleId :
 OA1DL

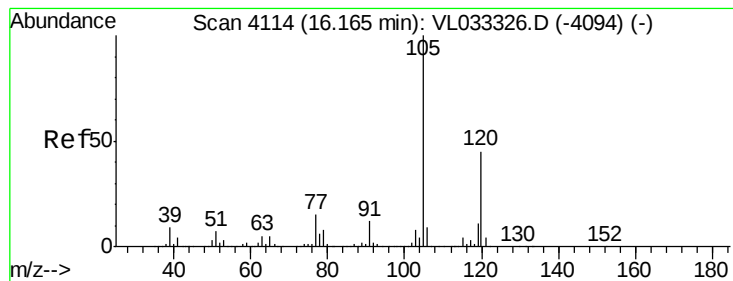
Tgt Ion: 95 Resp: 1389349
 Ion Ratio Lower Upper
 95 100
 174 66.5 51.5 77.3
 175 4.8 3.8 5.6



#72
 4-Ethyltoluene
 Concen: 0.105 ppbv
 RT: 16.00 min Scan# 4063
 Delta R.T. -0.01 min
 Lab File: VL033407.D
 Acq: 21 Mar 2019 2:18

Tgt Ion: 105 Resp: 26426
 Ion Ratio Lower Upper
 105 100
 120 32.1 22.9 34.3
 91 15.5 10.2 15.2#
 77 19.7 11.1 16.7#





#73

1,3,5-Trimethylbenzene

Concen: 0.049 ppbv

RT: 16.15 min Scan# 4110

Delta R.T. -0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Instrument :

MSVOA_L

ClientSampleID :

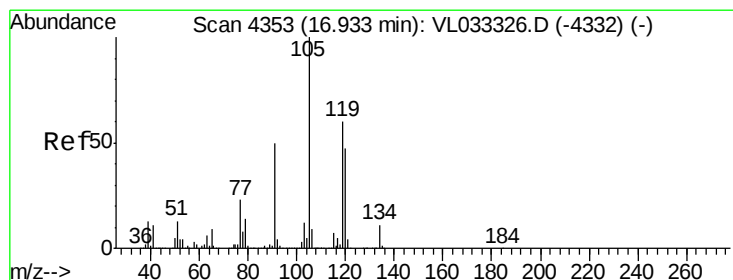
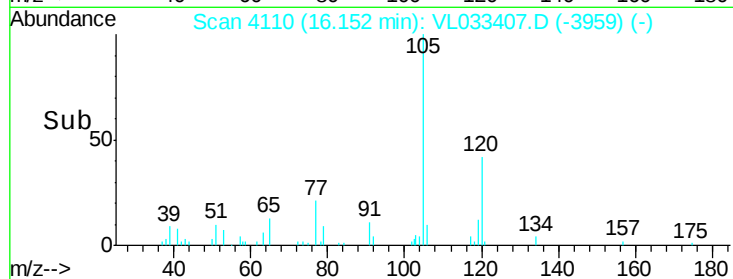
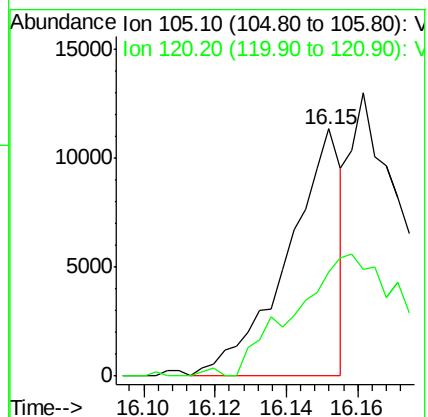
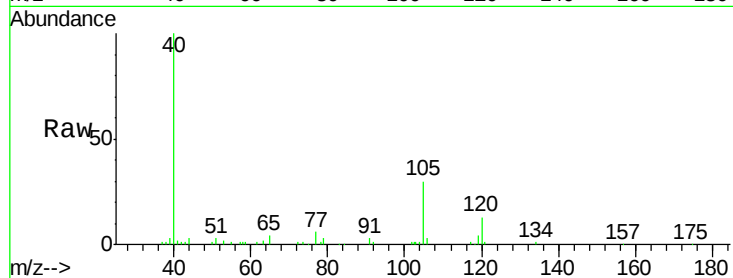
QA1DL

Tgt Ion:105 Resp: 11863

Ion Ratio Lower Upper

105 100

120 43.9 36.2 54.4



#74

1,2,4-Trimethylbenzene

Concen: 0.353 ppbv

RT: 16.93 min Scan# 4351

Delta R.T. -0.01 min

Lab File: VL033407.D

Acq: 21 Mar 2019 2:18

Tgt Ion:105 Resp: 91550

Ion Ratio Lower Upper

105 100

120 39.6 37.4 56.2

91 15.4 41.0 61.4#

77 16.1 18.5 27.7#

