

Data File : VL033546.D
Acq On : 4 Apr 2019 23:35
Operator : SY/AP
Sample : K2211-01
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

Quant Time: Apr 05 02:01:01 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL032519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 26 16:00:50 2019
QLast Update : Tue Mar 26 16:00:50 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	1005820	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2025662	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	2329674	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	1914324	10.48	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.80%

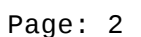
Target Compounds

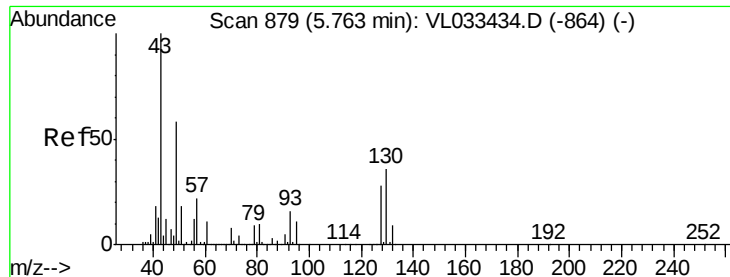
						Qvalue
2) Dichlorodifluoromethane	3.08	85	90641	0.618	ppbv	99
3) Chlorodifluoromethane	3.01	51	56391	0.487	ppbv #	84
4) Chloromethane	3.17	50	29384	0.480	ppbv	94
9) Propene	3.24	41	151198	3.109	ppbv	95
10) Heptane	8.24	43	9652	0.074	ppbv #	27
11) Trichlorofluoromethane	4.00	101	40064	0.222	ppbv	93
12) 1,1,2-Trichlorotrifluoroet	4.55	101	5838	0.048	ppbv #	68
13) Ethanol	3.70	45	18476110	1468.239	ppbv	68
15) Acetone	3.90	43	1141765	9.441	ppbv #	87
16) 1,3-Butadiene	3.34	39	11789	0.246	ppbv #	6
17) tert-Butyl alcohol	4.41	59	54429	2.448	ppbv #	66
19) Isopropyl Alcohol	4.06	45	248378	3.247	ppbv #	1
20) Methylene Chloride	4.41	84	452940	8.823	ppbv	98
21) Allyl Chloride	4.42	41	22693	0.297	ppbv #	34
23) Vinyl Acetate	5.14	43	29904	0.174	ppbv #	59
25) Ethyl Acetate	5.77	43	549358	2.448	ppbv #	96
26) Hexane	5.78	57	356863	3.577	ppbv #	71
30) Cyclohexane	7.25	84	9102	0.115	ppbv #	10
31) cis-1,2-Dichloroethene	5.76	61	36949	0.372	ppbv #	28
34) 2-Butanone	5.33	43	81213	0.667	ppbv	100
35) Carbon Tetrachloride	7.13	117	5699	0.040	ppbv	87
36) Benzene	7.00	78	33216	0.195	ppbv #	93
39) 1,2-Dichloropropane	7.29	63	538141	8.083	ppbv #	24
41) Tetrahydrofuran	6.16	42	3016	0.045	ppbv #	68
44) 2,2,4-Trimethylpentane	7.98	57	18692	0.063	ppbv #	33
52) Tetrachloroethene	11.37	164	37156	0.579	ppbv	89
53) Toluene	9.94	91	2448260	12.396	ppbv	100
59) m/p-Xylene	13.14	91	13809	0.050	ppbv #	100
74) 1,2,4-Trimethylbenzene	16.92	105	10287	0.033	ppbv #	58

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

ALS Vial : 1 Sample Multiplier: 1

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

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LIHA-IA2

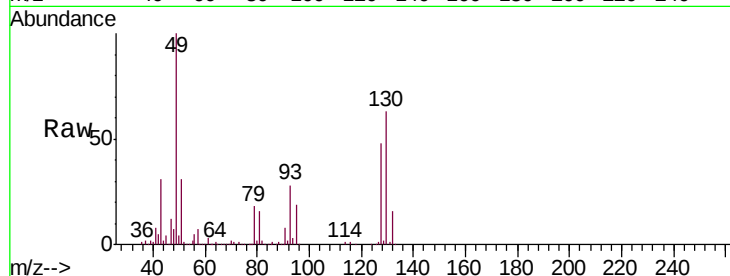
Tgt Ion: 49 Resp: 1005820

Ion Ratio Lower Upper

49 100

128 48.6 24.0 72.0

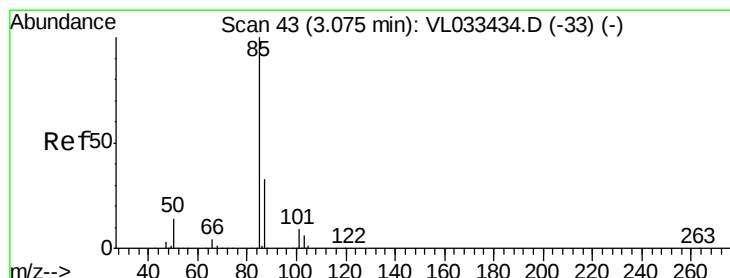
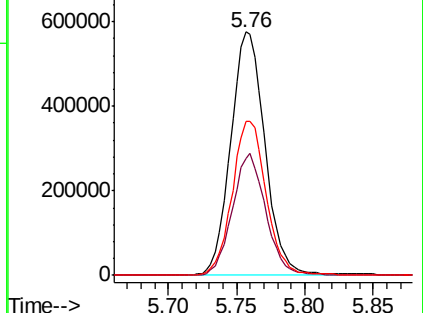
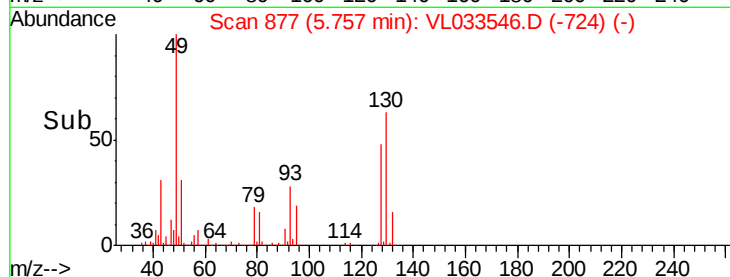
130 63.3 31.2 93.6



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: 0.618 ppbv

RT: 3.08 min Scan# 44

Delta R.T. 0.00 min

Lab File: VL033546.D

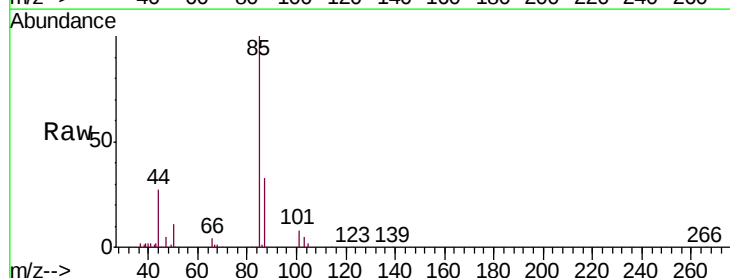
Acq: 4 Apr 2019 23:35

Tgt Ion: 85 Resp: 90641

Ion Ratio Lower Upper

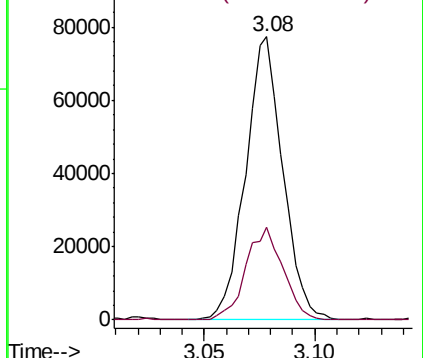
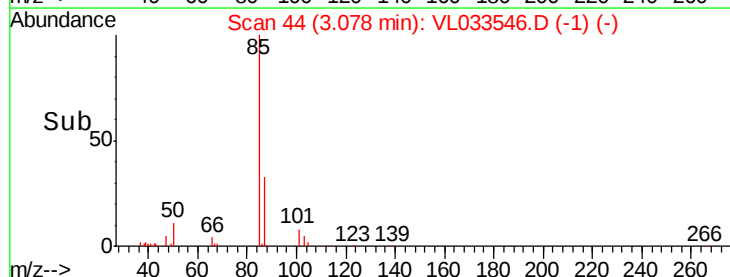
85 100

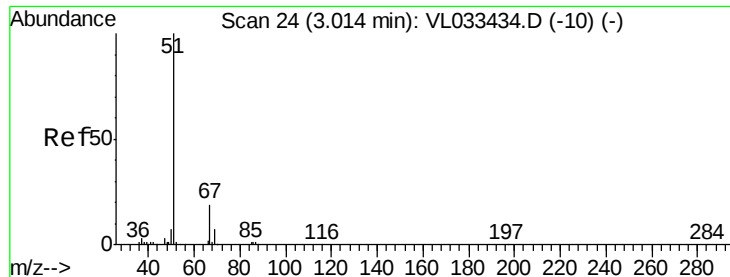
87 32.8 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

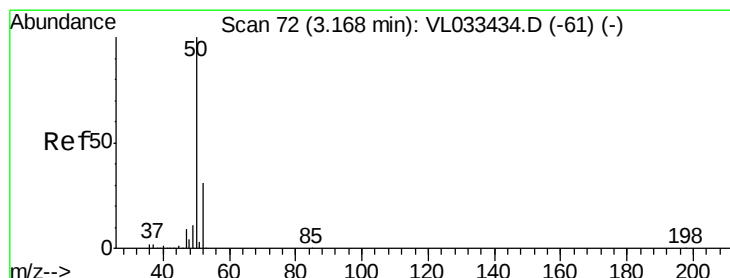
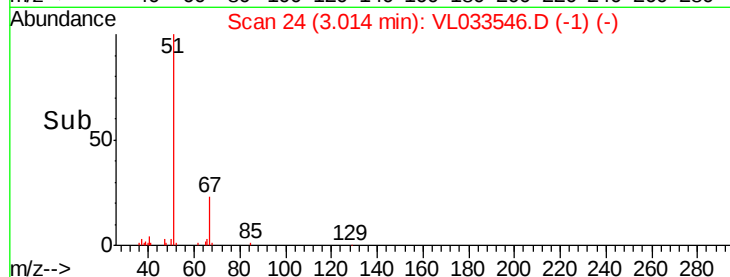
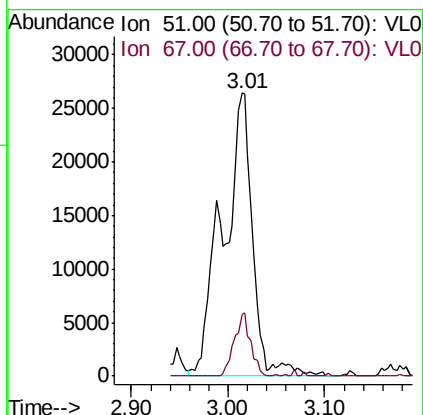
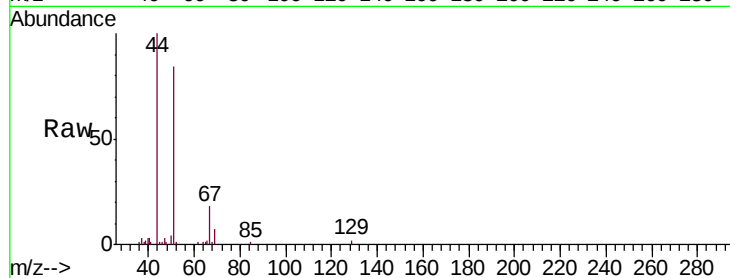




#3
Chlorodifluoromethane
Concen: 0.487 ppbv
RT: 3.01 min Scan# 24
Delta R.T. -0.00 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

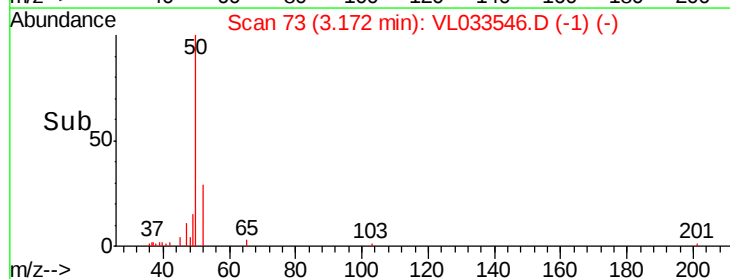
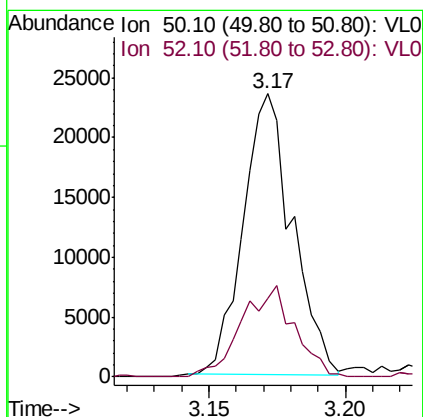
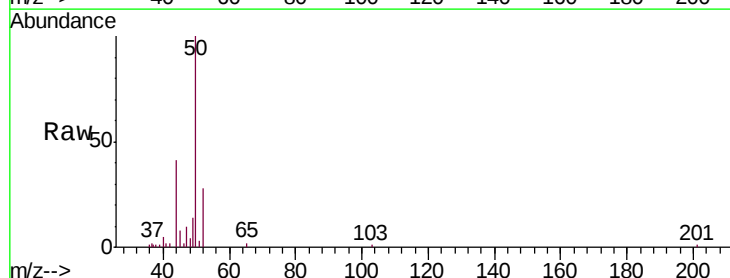
Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

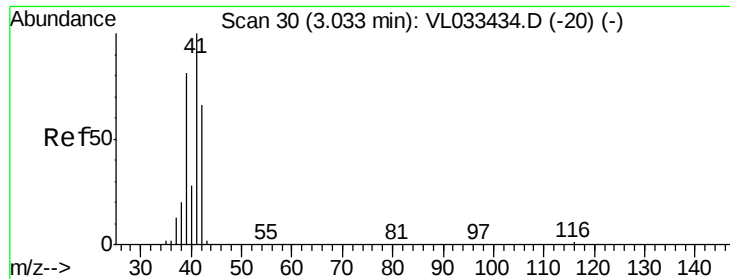
Tgt Ion: 51 Resp: 56391
Ion Ratio Lower Upper
51 100
67 12.2 15.7 23.5#



#4
Chloromethane
Concen: 0.480 ppbv
RT: 3.17 min Scan# 73
Delta R.T. 0.00 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

Tgt Ion: 50 Resp: 29384
Ion Ratio Lower Upper
50 100
52 28.1 25.0 37.6





#9

Propene

Concen: 3.109 ppbv

RT: 3.24 min Scan# 93

Delta R.T. 0.20 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Instrument :

MSVOA_L

ClientSampleId :

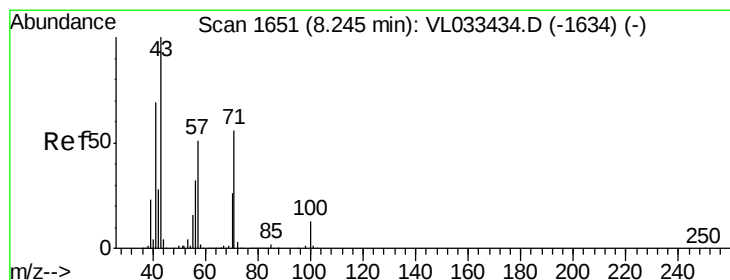
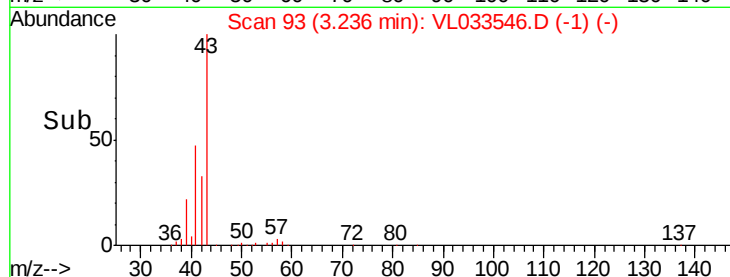
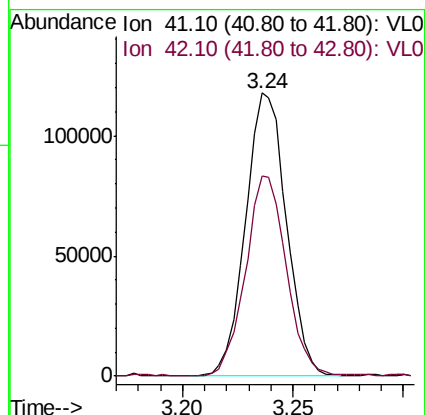
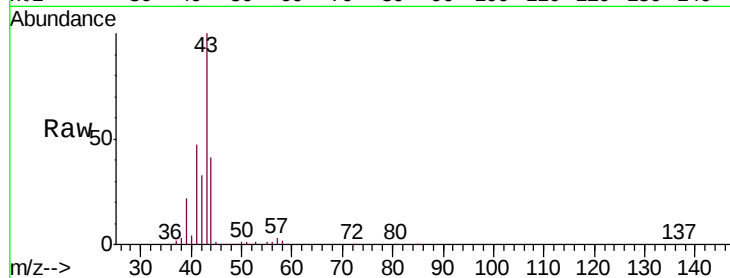
LIHA-IA2

Tgt Ion: 41 Resp: 151198

Ion Ratio Lower Upper

41 100

42 71.4 53.9 80.9



#10

Heptane

Concen: 0.074 ppbv

RT: 8.24 min Scan# 1648

Delta R.T. -0.01 min

Lab File: VL033546.D

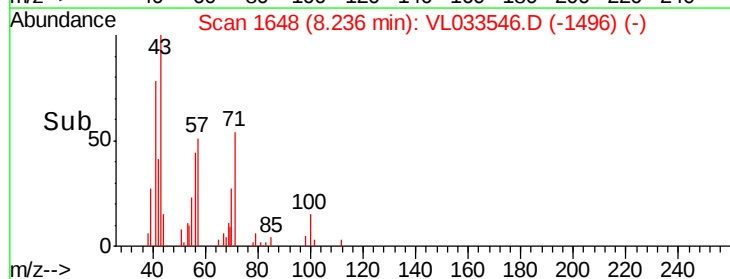
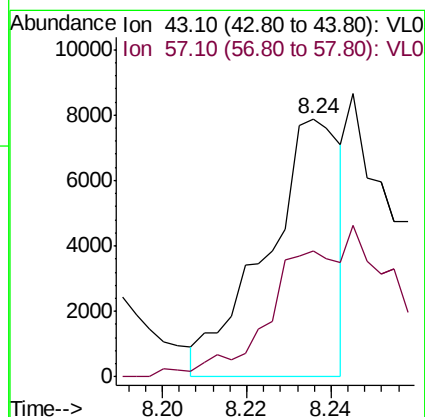
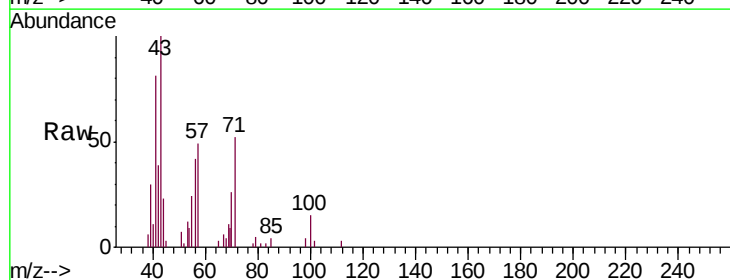
Acq: 4 Apr 2019 23:35

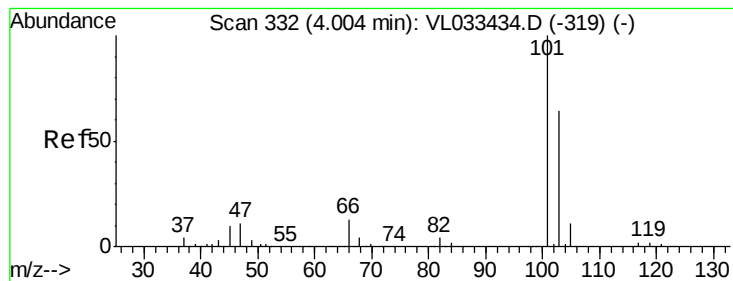
Tgt Ion: 43 Resp: 9652

Ion Ratio Lower Upper

43 100

57 0.0 40.6 60.8#





#11

Trichlorofluoromethane

Concen: 0.222 ppbv

RT: 4.00 min Scan# 332

Delta R.T. -0.00 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Instrument :

MSVOA_L

ClientSampleId :

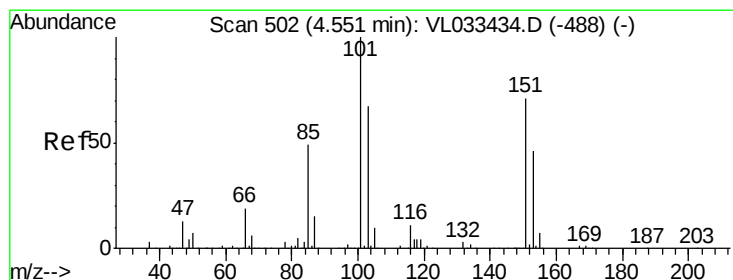
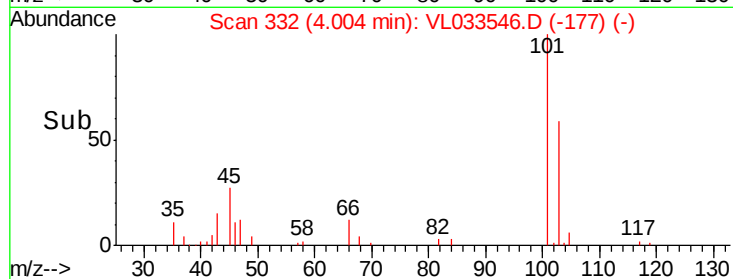
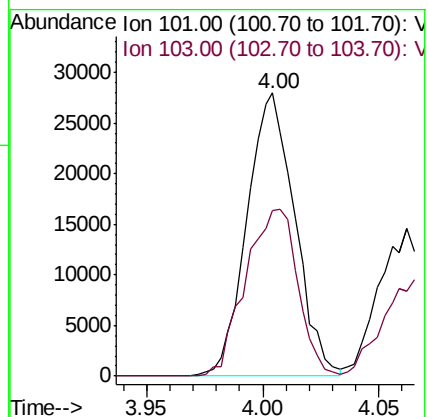
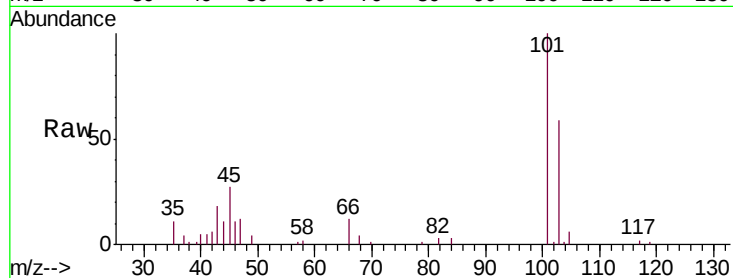
LIHA-IA2

Tgt Ion:101 Resp: 40064

Ion Ratio Lower Upper

101 100

103 58.7 51.3 76.9



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.048 ppbv

RT: 4.55 min Scan# 503

Delta R.T. 0.00 min

Lab File: VL033546.D

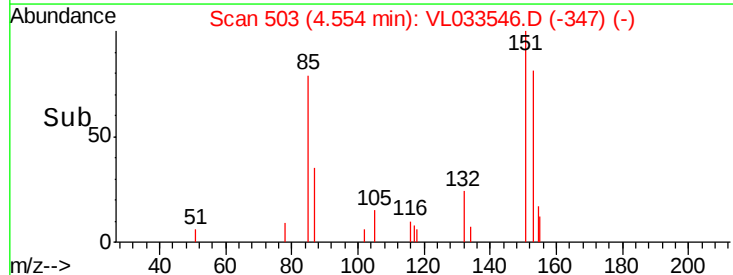
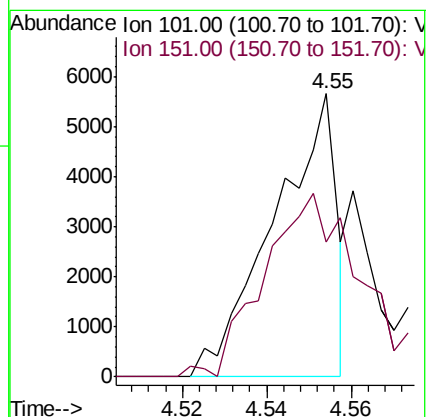
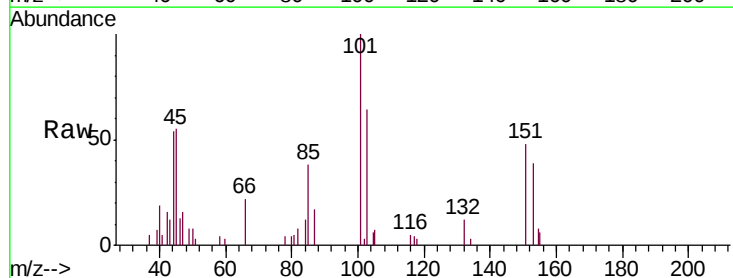
Acq: 4 Apr 2019 23:35

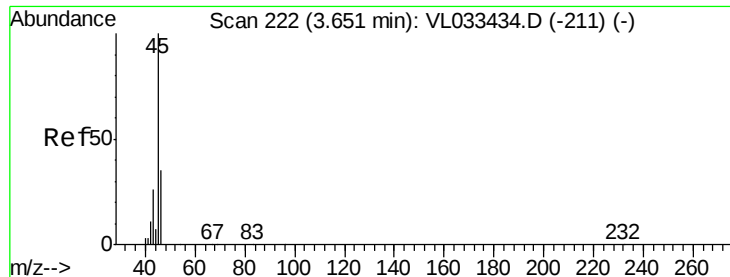
Tgt Ion:101 Resp: 5838

Ion Ratio Lower Upper

101 100

151 99.0 57.7 86.5#

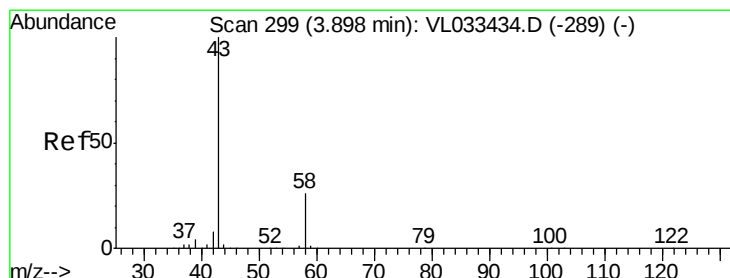
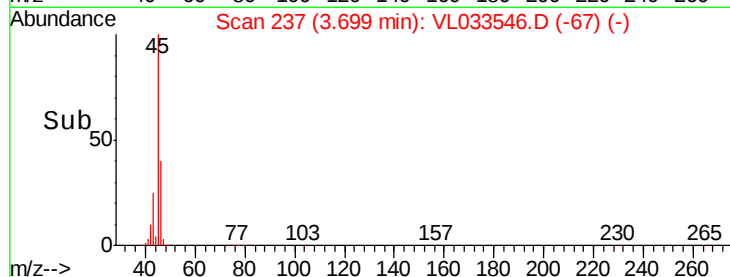
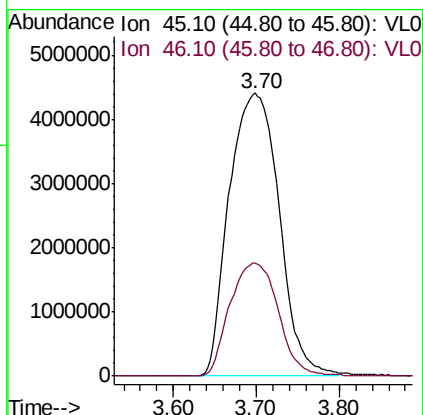
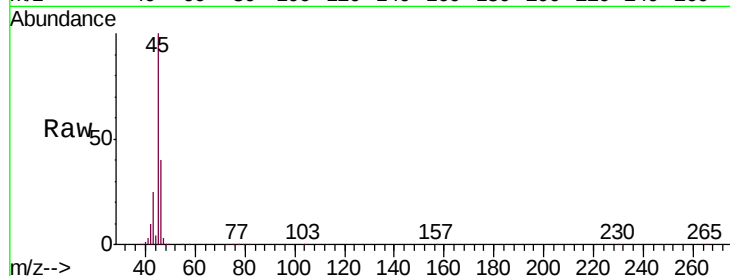




#13
Ethanol
Concen: 1468.239 ppbv
RT: 3.70 min Scan# 237
Delta R.T. 0.05 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

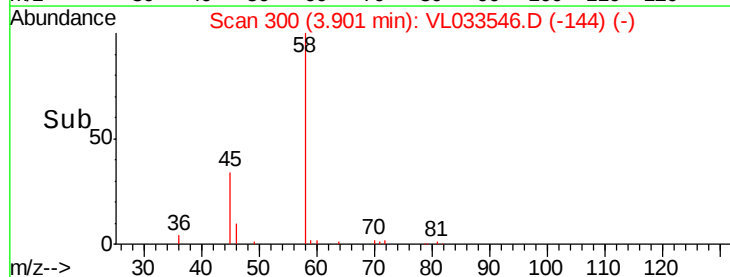
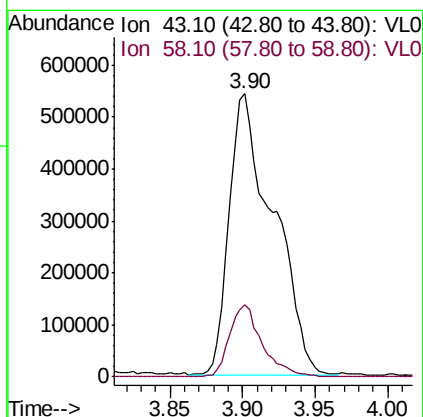
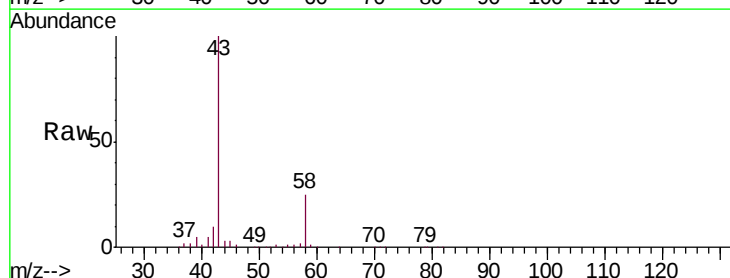
Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

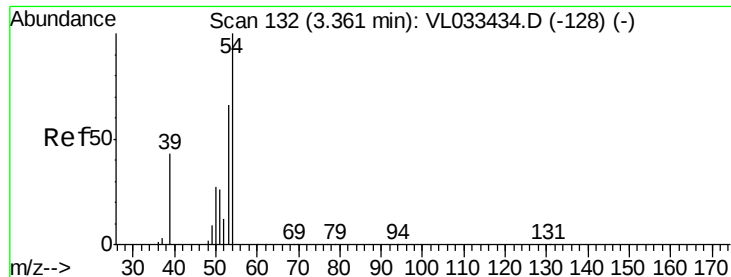
Tgt Ion: 45 Resp:18476110
Ion Ratio Lower Upper
45 100
46 38.8 25.4 101.8



#15
Acetone
Concen: 9.441 ppbv
RT: 3.90 min Scan# 300
Delta R.T. 0.00 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

Tgt Ion: 43 Resp: 1141765
Ion Ratio Lower Upper
43 100
58 19.2 20.5 30.7#

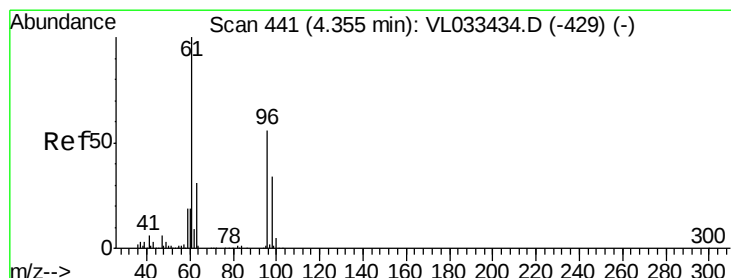
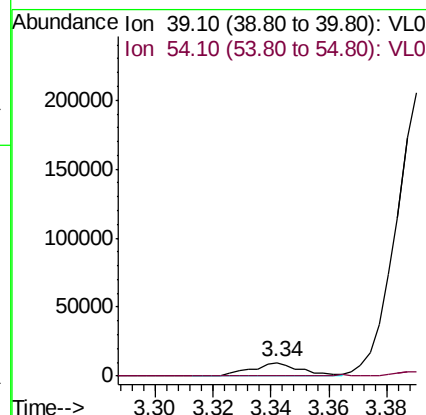
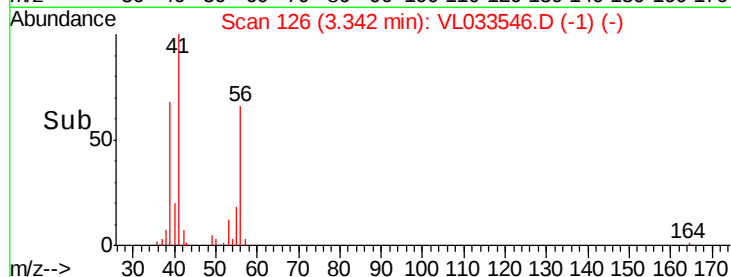
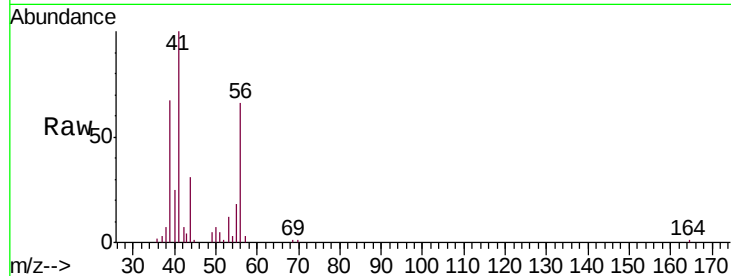




#16
 1,3-Butadiene
 Concen: 0.246 ppbv
 RT: 3.34 min Scan# 126
 Delta R.T. -0.02 min
 Lab File: VL033546.D
 Acq: 4 Apr 2019 23:35

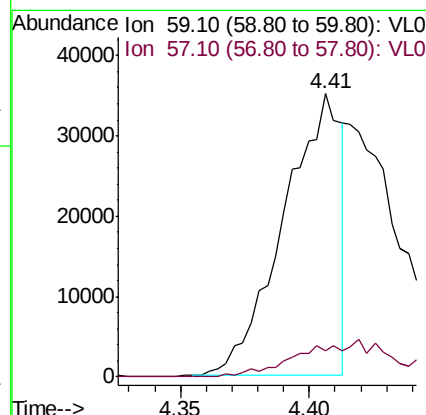
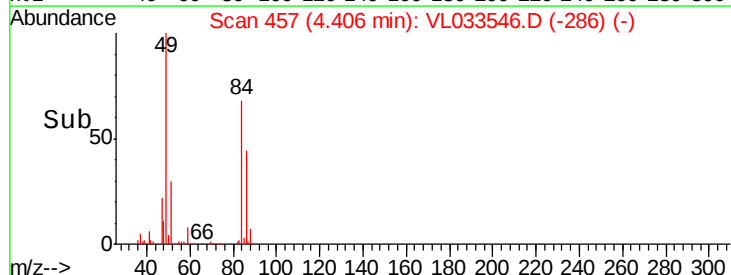
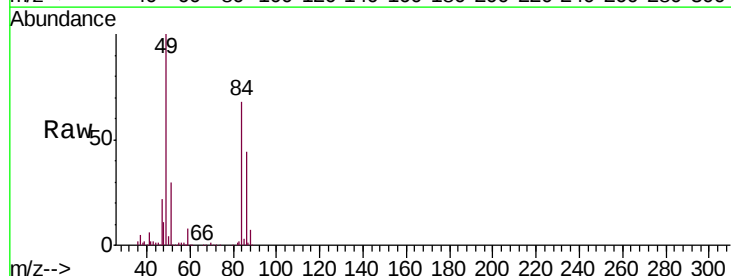
Instrument :
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 LIHA-IA2

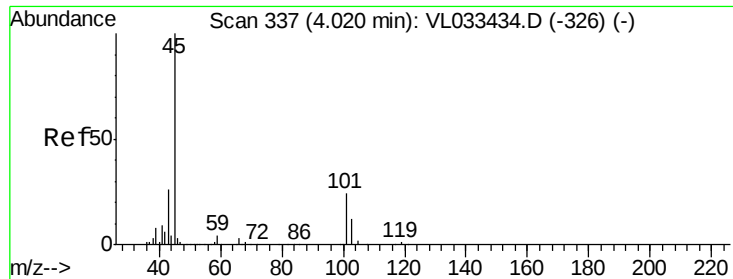
Tgt Ion: 39 Resp: 11789
 Ion Ratio Lower Upper
 39 100
 54 0.0 69.4 104.2#



#17
 tert-Butyl alcohol
 Concen: 2.448 ppbv
 RT: 4.41 min Scan# 457
 Delta R.T. 0.05 min
 Lab File: VL033546.D
 Acq: 4 Apr 2019 23:35

Tgt Ion: 59 Resp: 54429
 Ion Ratio Lower Upper
 59 100
 57 22.4 7.8 11.8#

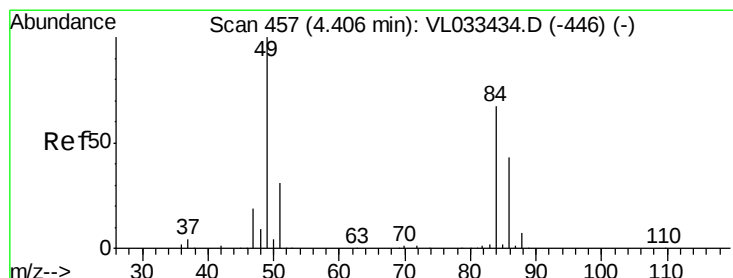
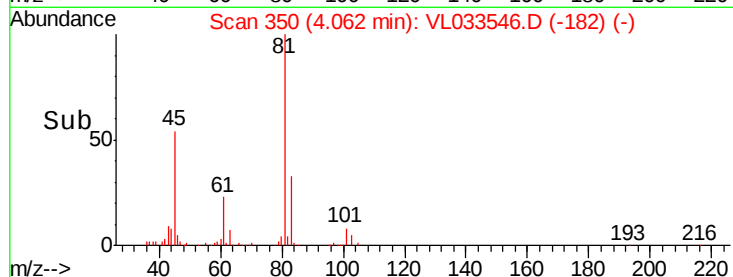
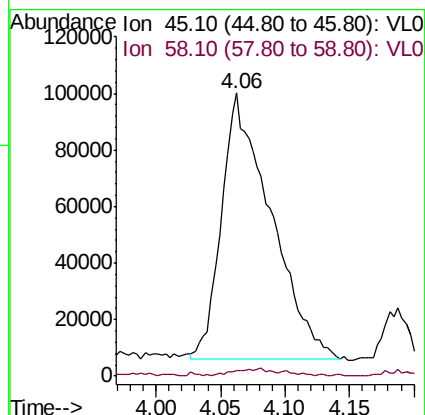
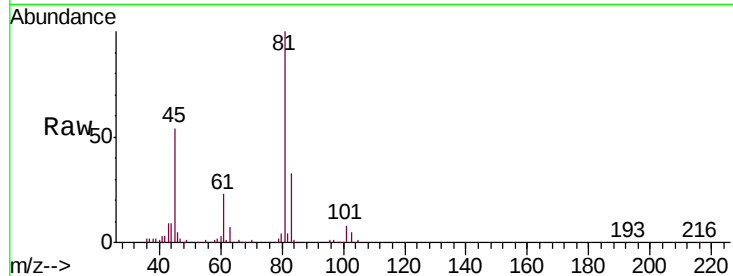




#19
Isopropyl Alcohol
Concen: 3.247 ppbv
RT: 4.06 min Scan# 350
Delta R.T. 0.04 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

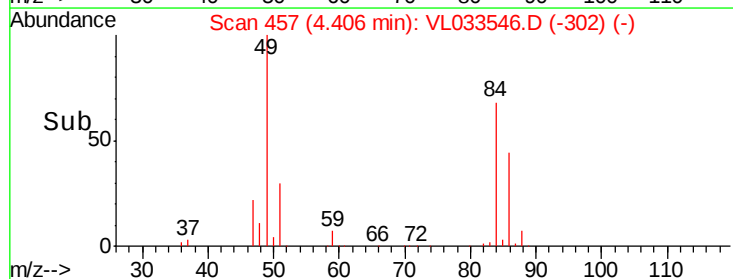
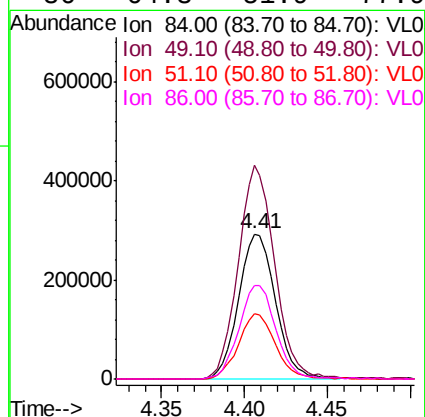
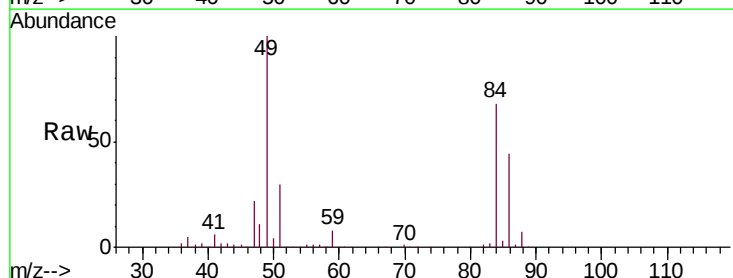
Instrument :
MSVOA_L
ClientSampleId :
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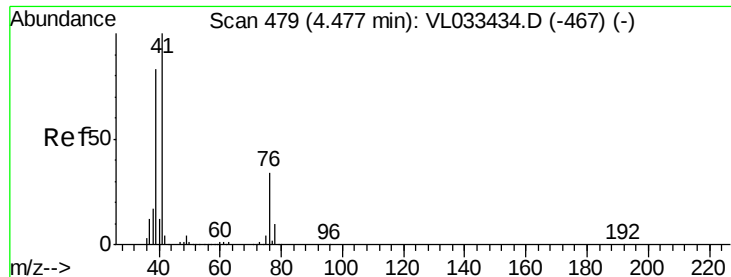
Tgt Ion: 45 Resp: 248378
Ion Ratio Lower Upper
45 100
58 87.9 1.4 2.2#



#20
Methylene Chloride
Concen: 8.823 ppbv
RT: 4.41 min Scan# 457
Delta R.T. -0.00 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

Tgt Ion: 84 Resp: 452940
Ion Ratio Lower Upper
84 100
49 147.0 120.0 180.0
51 44.7 36.7 55.1
86 64.3 51.9 77.9





#21

Allyl Chloride

Concen: 0.297 ppbv

RT: 4.42 min Scan# 460

Delta R.T. -0.06 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Instrument :

MSVOA_L

ClientSampleId :

LIHA-IA2

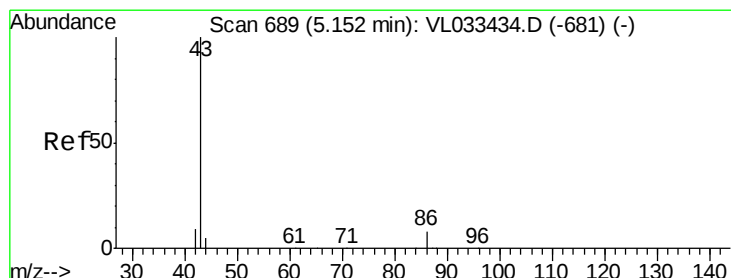
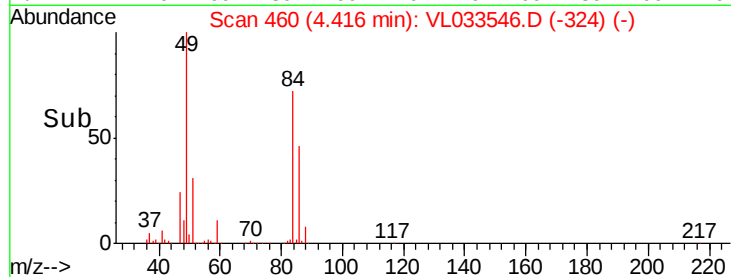
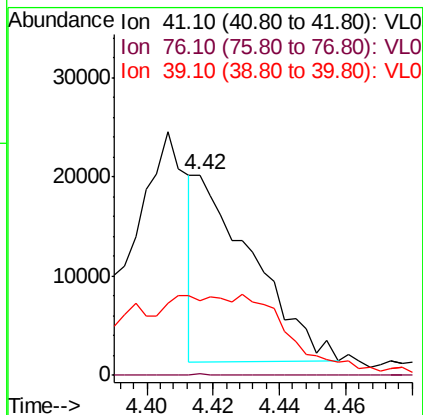
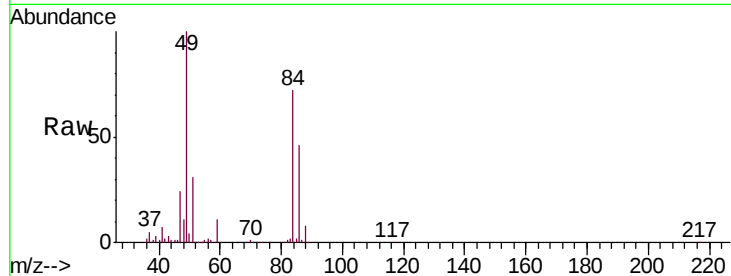
Tgt Ion: 41 Resp: 22693

Ion Ratio Lower Upper

41 100

76 0.0 25.4 38.2#

39 144.0 65.3 97.9#



#23

Vinyl Acetate

Concen: 0.174 ppbv

RT: 5.14 min Scan# 686

Delta R.T. -0.01 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Tgt Ion: 43 Resp: 29904

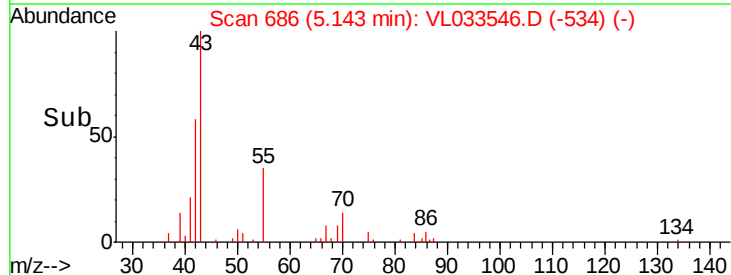
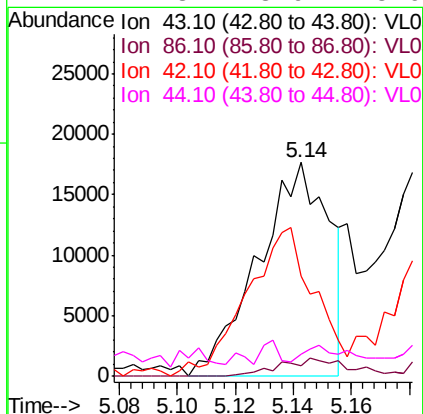
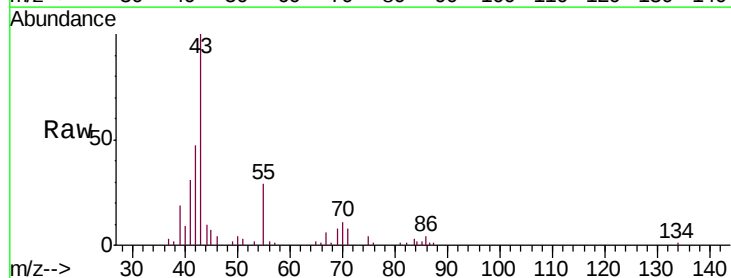
Ion Ratio Lower Upper

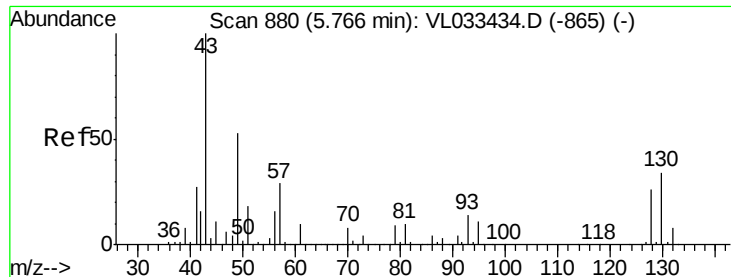
43 100

86 4.8 5.6 8.4#

42 40.0 8.0 12.0#

44 2.3 3.9 5.9#





#25

Ethyl Acetate

Concen: 2.448 ppbv

RT: 5.77 min Scan# 881

Delta R.T. 0.00 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Instrument :

MSVOA_L

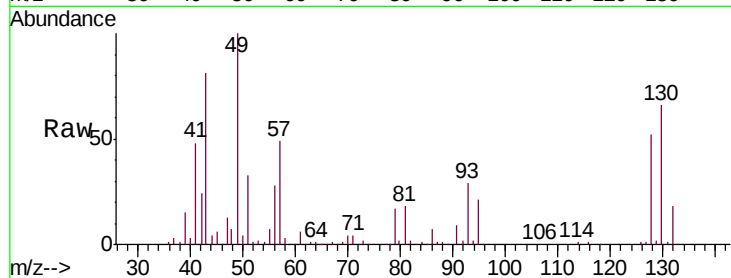
ClientSampleId :

LIHA-IA2

Tgt Ion: 43 Resp: 549358

Ion Ratio Lower Upper

43	100		
45	8.4	7.8	11.6
61	6.8	7.3	10.9
70	5.9	5.6	8.4



Abundance

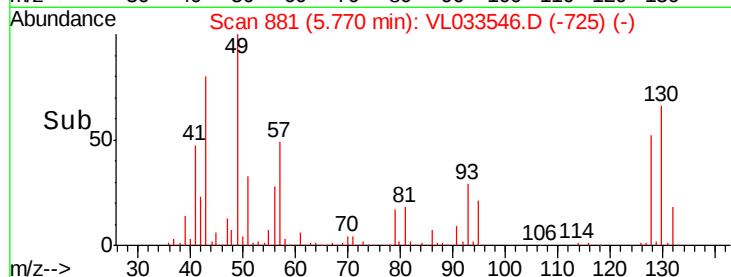
Ion 43.10 (42.80 to 43.80): VL0

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

Time-->



Time-->

5.77

400000

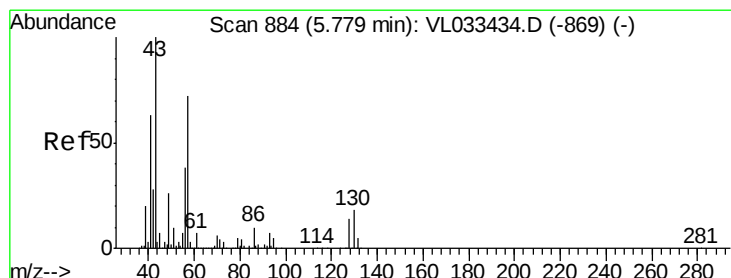
300000

200000

100000

0

5.70 5.75 5.80 5.85



#26

Hexane

Concen: 3.577 ppbv

RT: 5.78 min Scan# 883

Delta R.T. -0.00 min

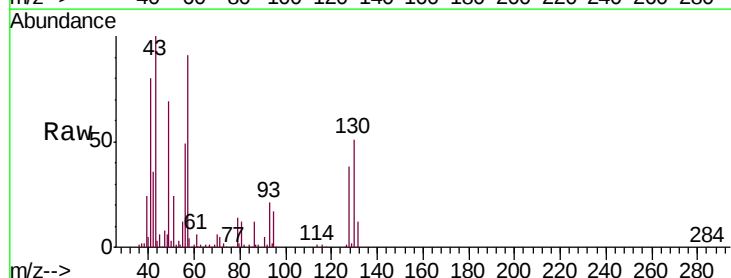
Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Tgt Ion: 57 Resp: 356863

Ion Ratio Lower Upper

57	100		
41	92.1	70.7	106.1
43	154.8	182.6	274.0
56	54.4	42.0	63.0



Abundance

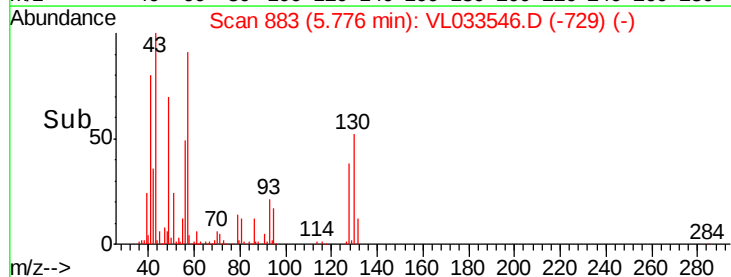
Ion 57.10 (56.80 to 57.80): VL0

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

Time-->



Time-->

5.78

400000

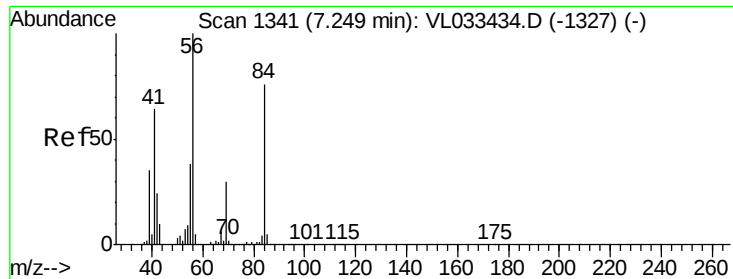
300000

200000

100000

0

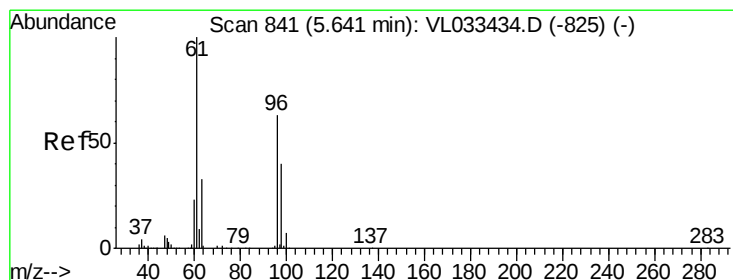
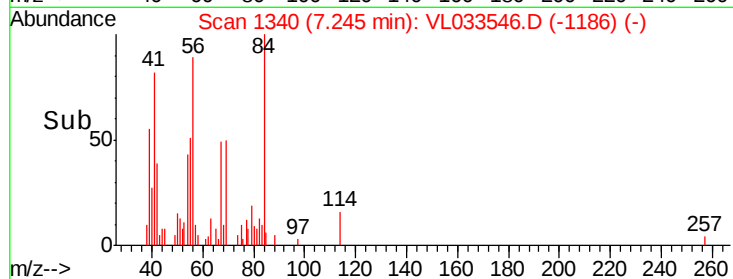
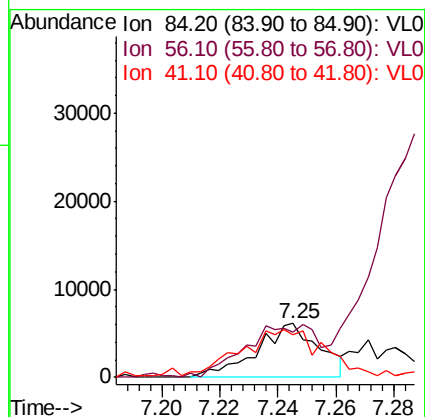
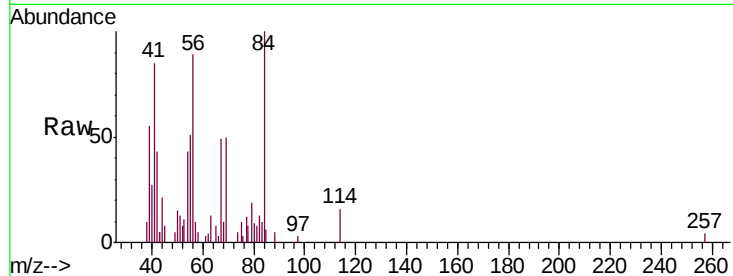
5.70 5.75 5.80



#30
Cyclohexane
Concen: 0.115 ppbv
RT: 7.25 min Scan# 1340
Delta R.T. -0.00 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

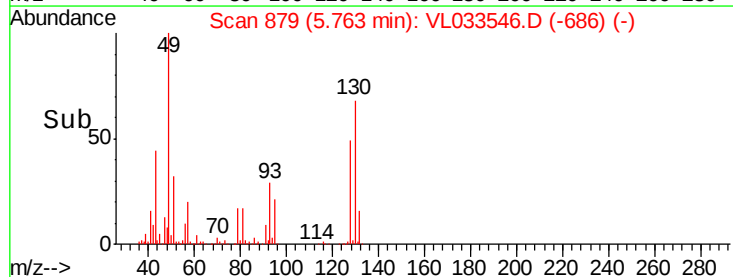
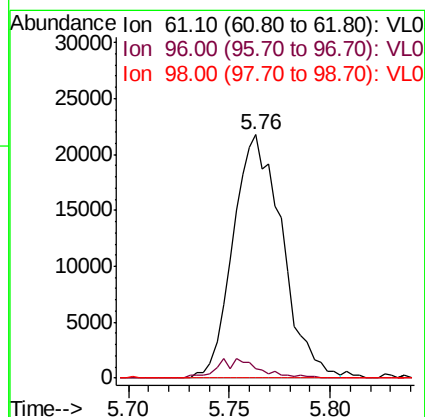
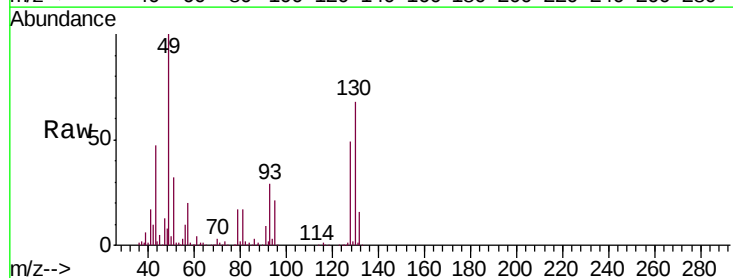
Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

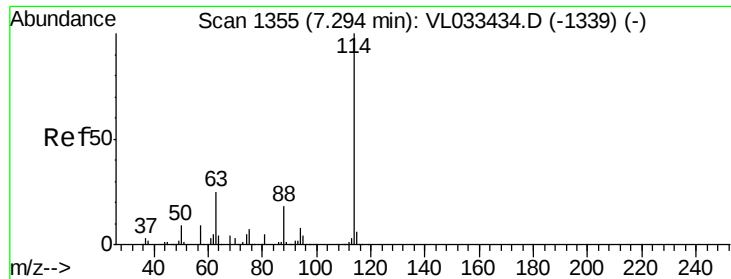
Tgt Ion: 84 Resp: 9102
Ion Ratio Lower Upper
84 100
56 0.0 109.7 164.5#
41 132.6 68.2 102.2#



#31
cis-1,2-Dichloroethene
Concen: 0.372 ppbv
RT: 5.76 min Scan# 879
Delta R.T. 0.12 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

Tgt Ion: 61 Resp: 36949
Ion Ratio Lower Upper
61 100
96 3.9 50.6 76.0#
98 0.0 32.2 48.2#

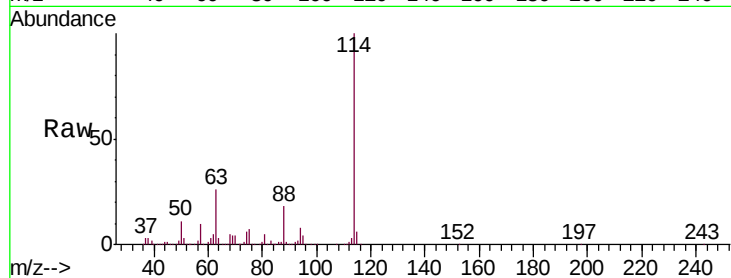




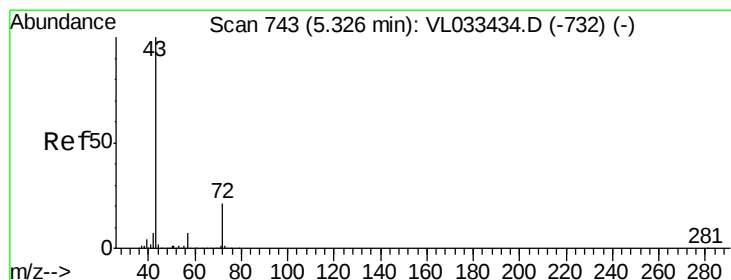
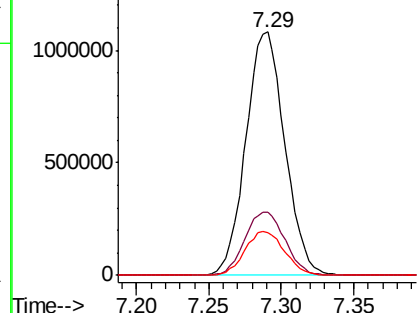
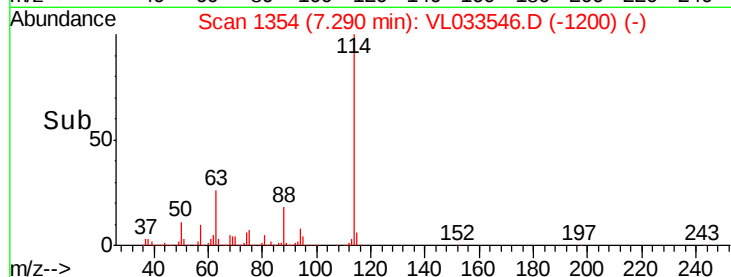
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.29 min Scan# 1354
 Delta R.T. -0.00 min
 Lab File: VL033546.D
 Acq: 4 Apr 2019 23:35

Instrument :
 MSVOA_L
 ClientSampleId :
 LIHA-IA2

Tgt Ion:114 Resp: 2025662
 Ion Ratio Lower Upper
 114 100
 63 26.9 21.5 32.3
 88 18.3 14.5 21.7

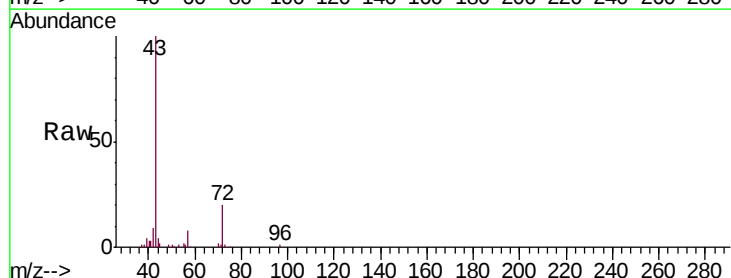


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

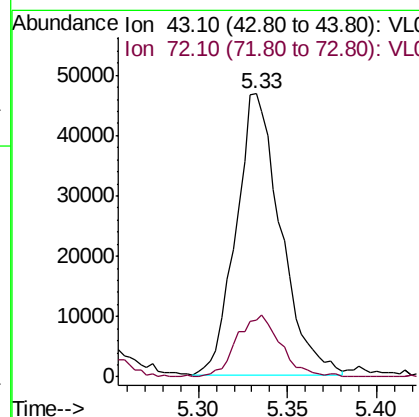
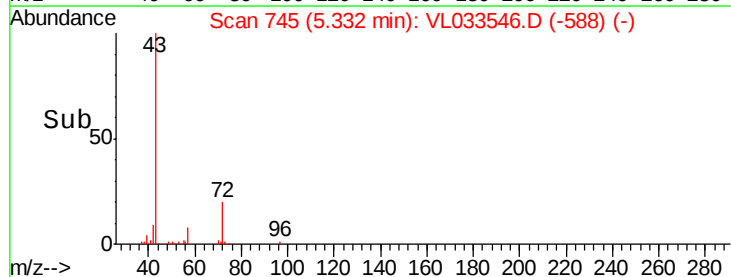


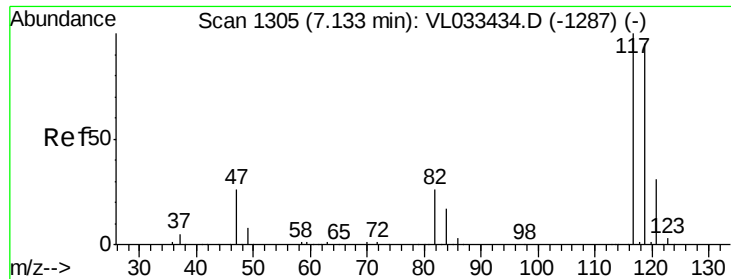
#34
 2-Butanone
 Concen: 0.667 ppbv
 RT: 5.33 min Scan# 745
 Delta R.T. 0.01 min
 Lab File: VL033546.D
 Acq: 4 Apr 2019 23:35

Tgt Ion: 43 Resp: 81213
 Ion Ratio Lower Upper
 43 100
 72 21.8 17.4 26.2



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





#35

Carbon Tetrachloride

Concen: 0.040 ppbv

RT: 7.13 min Scan# 1303

Delta R.T. -0.01 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Instrument :

MSVOA_L

ClientSampleId :

LIHA-IA2

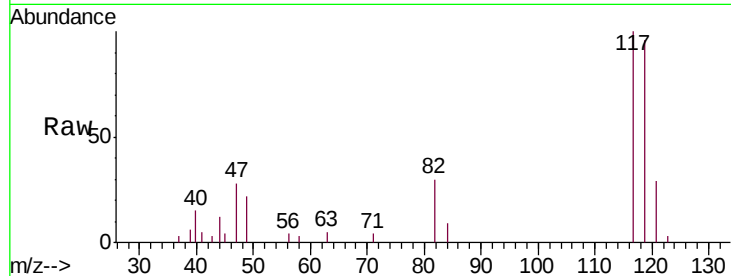
Tgt Ion:117 Resp: 5699

Ion Ratio Lower Upper

117 100

119 79.6 75.8 113.8

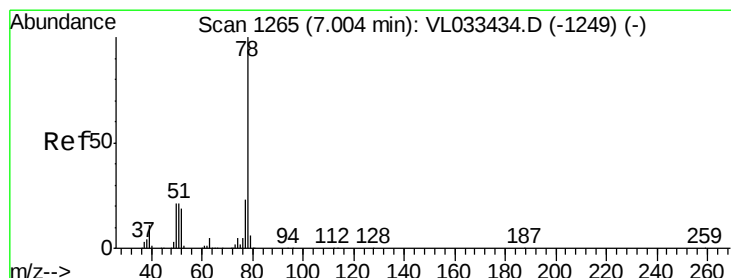
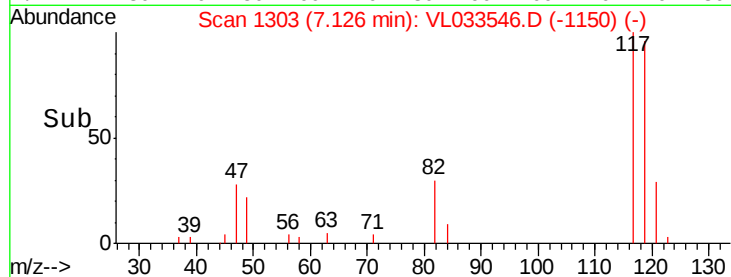
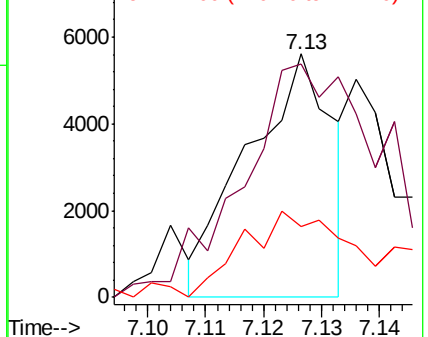
121 34.5 24.7 37.1



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.195 ppbv

RT: 7.00 min Scan# 1264

Delta R.T. -0.00 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

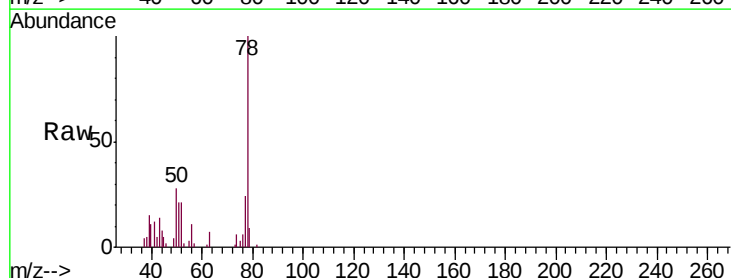
Tgt Ion: 78 Resp: 33216

Ion Ratio Lower Upper

78 100

77 23.2 18.1 27.1

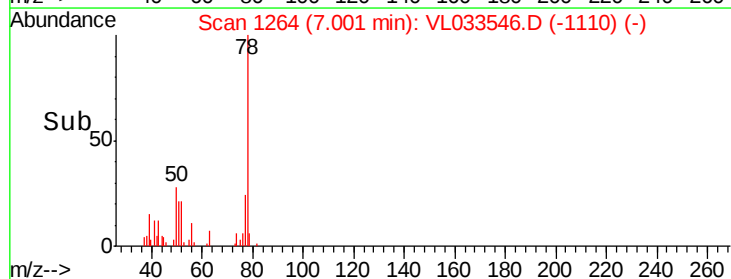
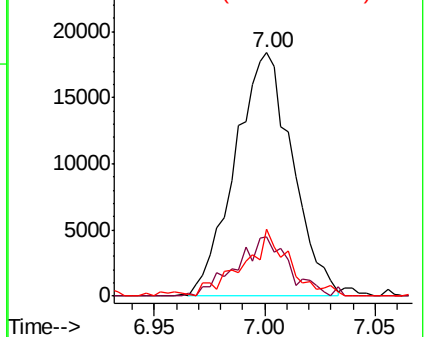
50 26.9 16.7 25.1#

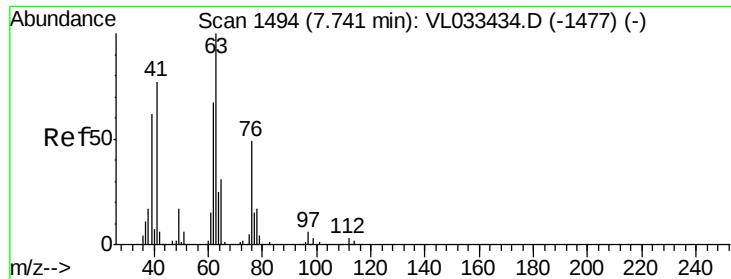


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

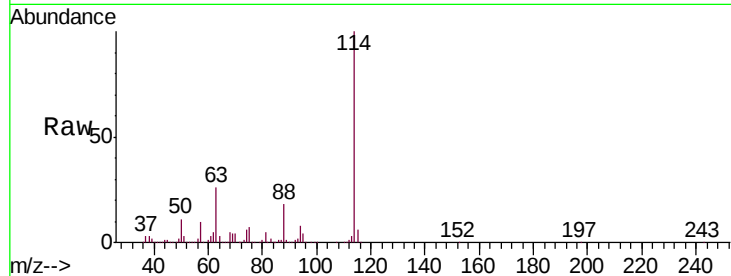




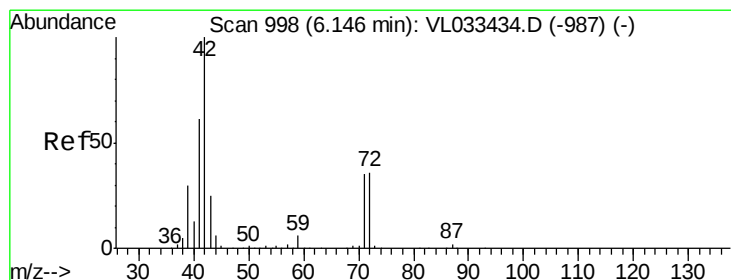
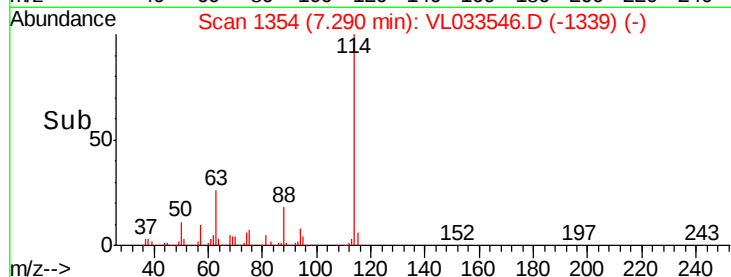
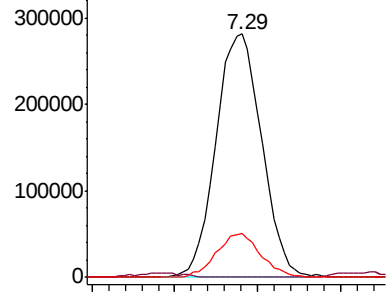
#39
 1,2-Dichloropropane
 Concen: 8.083 ppbv
 RT: 7.29 min Scan# 1354
 Delta R.T. -0.45 min
 Lab File: VL033546.D
 Acq: 4 Apr 2019 23:35

Instrument :
 MSVOA_L
 ClientSampleId :
 LIHA-IA2

Tgt Ion: 63 Resp: 538141
 Ion Ratio Lower Upper
 63 100
 41 0.0 61.2 91.8#
 62 18.1 54.0 81.0#

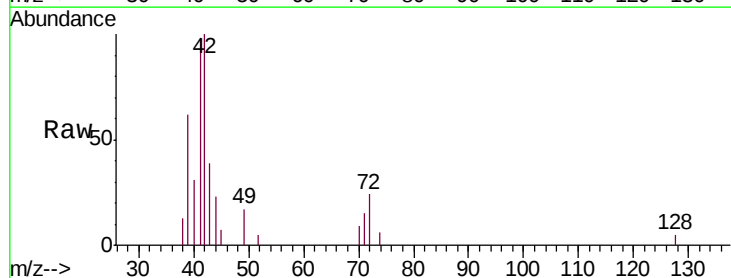


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

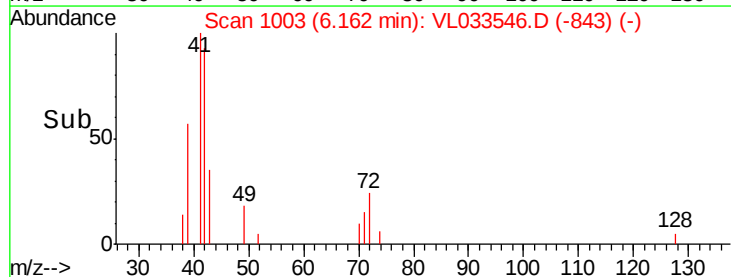
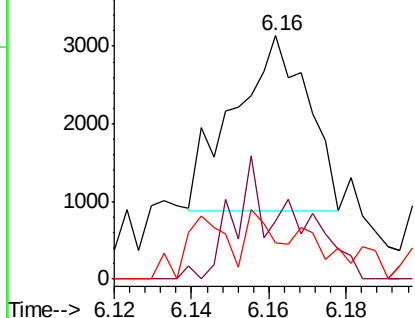


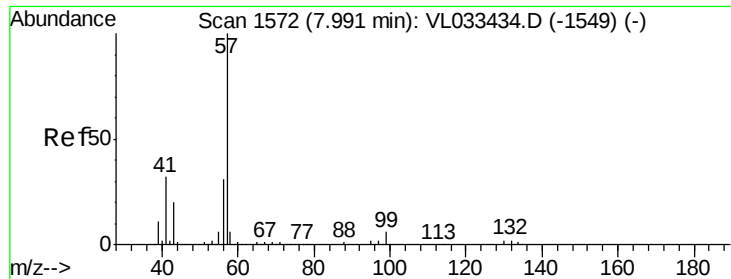
#41
 Tetrahydrofuran
 Concen: 0.045 ppbv
 RT: 6.16 min Scan# 1003
 Delta R.T. 0.02 min
 Lab File: VL033546.D
 Acq: 4 Apr 2019 23:35

Tgt Ion: 42 Resp: 3016
 Ion Ratio Lower Upper
 42 100
 72 54.2 30.2 45.2#
 71 58.6 29.4 44.2#



Abundance Ion 42.10 (41.80 to 42.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0
 Ion 71.10 (70.80 to 71.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 0.063 ppbv

RT: 7.98 min Scan# 1570

Delta R.T. -0.01 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Instrument :

MSVOA_L

ClientSampleId :

LIHA-IA2

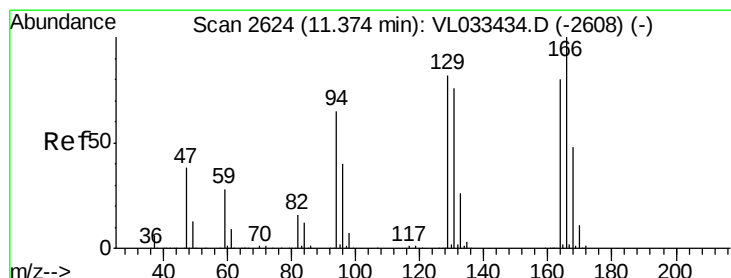
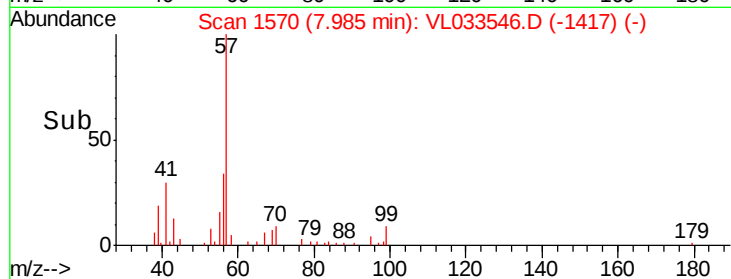
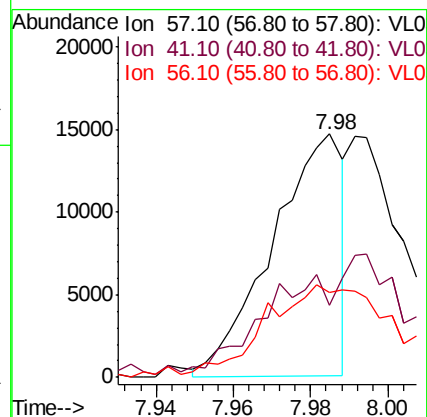
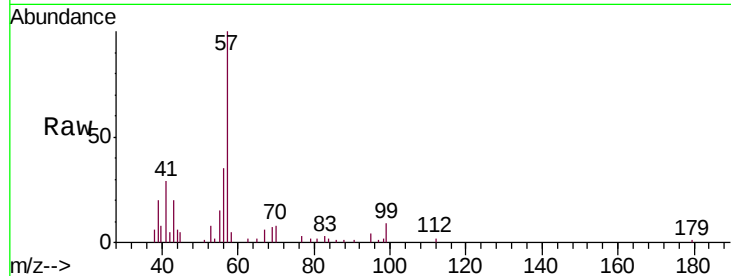
Tgt Ion: 57 Resp: 18692

Ion Ratio Lower Upper

57 100

41 0.0 26.0 39.0#

56 73.3 24.6 37.0#



#52

Tetrachloroethene

Concen: 0.579 ppbv

RT: 11.37 min Scan# 2622

Delta R.T. -0.01 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Tgt Ion: 164 Resp: 37156

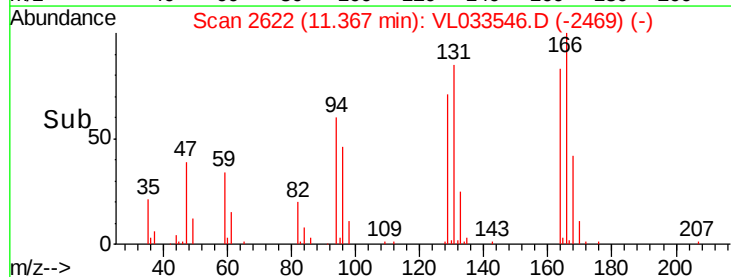
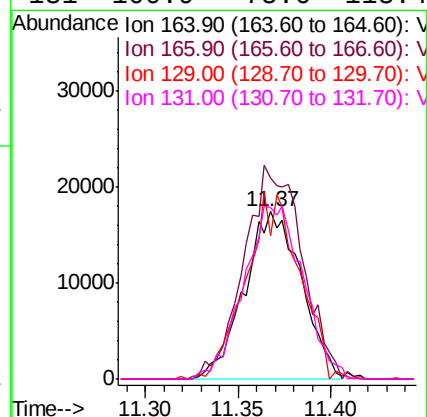
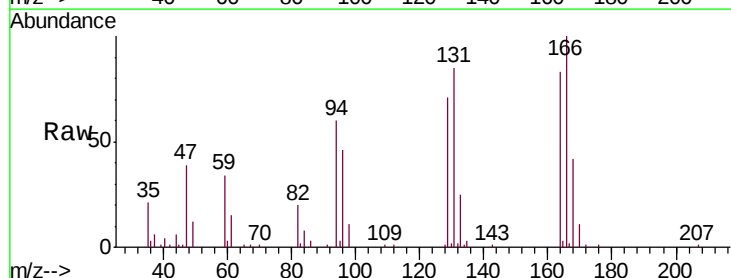
Ion Ratio Lower Upper

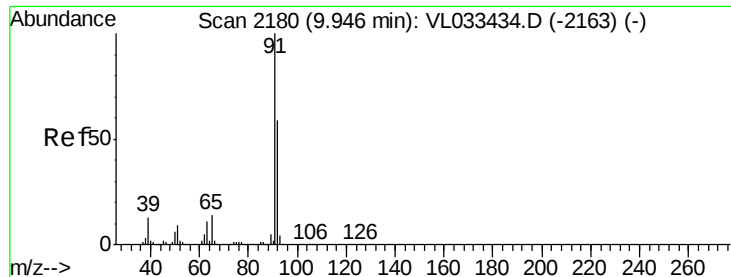
164 100

166 115.8 99.5 149.3

129 82.6 81.4 122.2

131 100.9 75.6 113.4





#53

Toluene

Concen: 12.396 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.00 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

Instrument :

MSVOA_L

ClientSampleId :

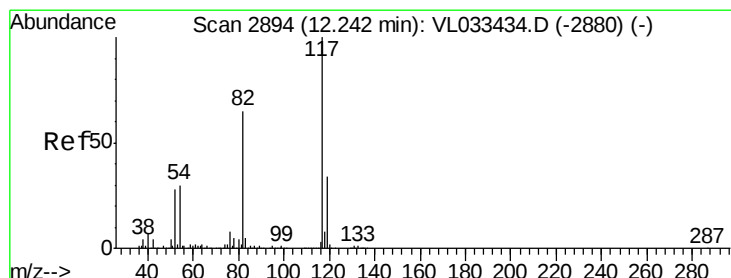
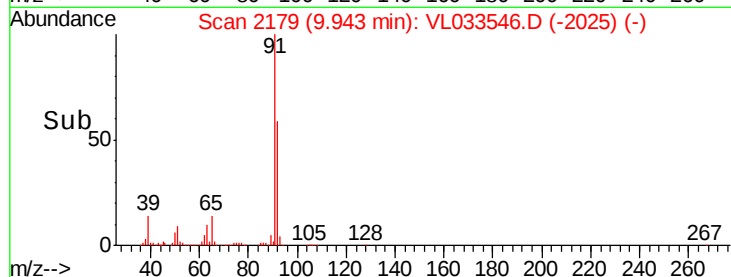
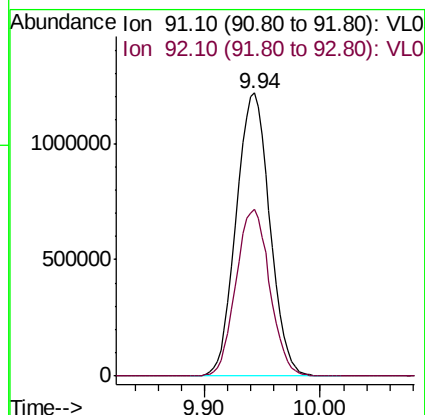
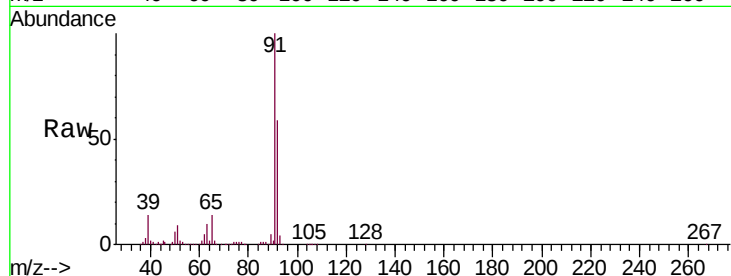
LIHA-IA2

Tgt Ion: 91 Resp: 2448260

Ion Ratio Lower Upper

91 100

92 59.2 47.4 71.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL033546.D

Acq: 4 Apr 2019 23:35

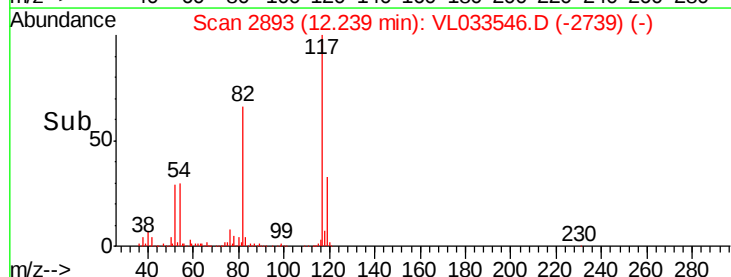
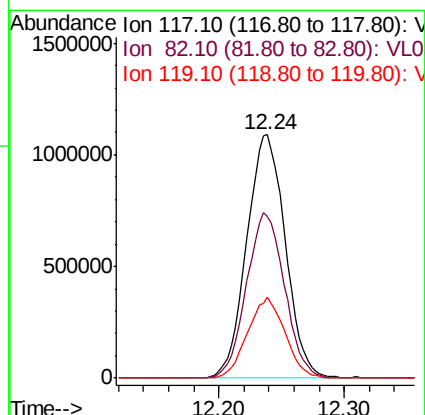
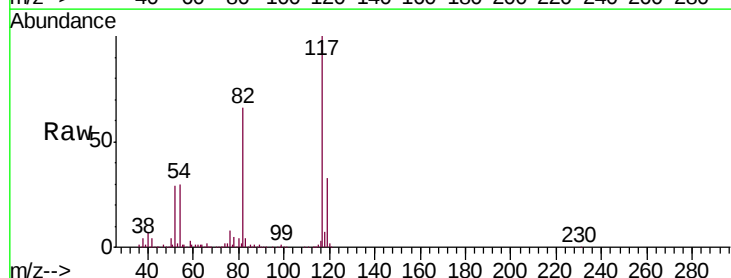
Tgt Ion: 117 Resp: 2329674

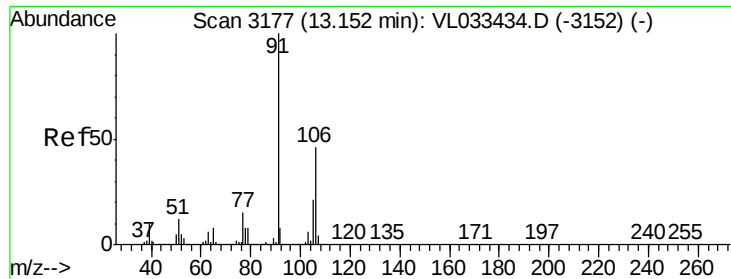
Ion Ratio Lower Upper

117 100

82 67.6 51.5 77.3

119 32.3 25.5 38.3

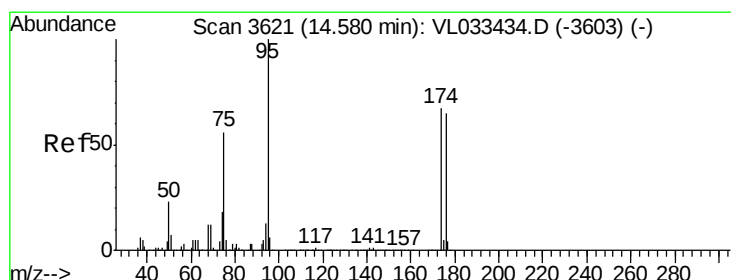
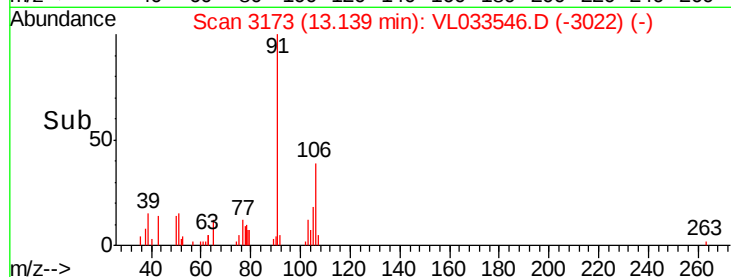
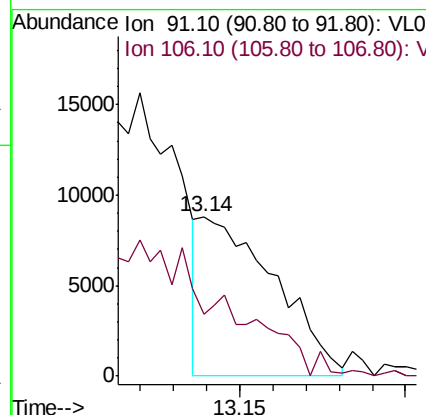
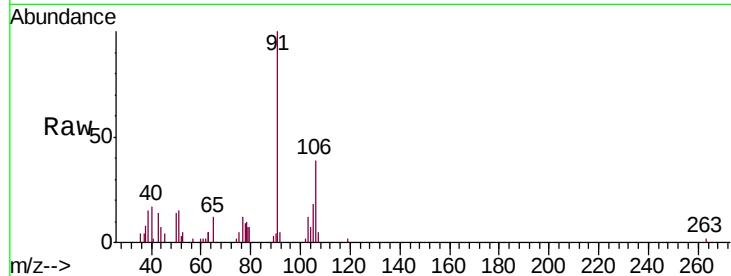




#59
m/p-Xylene
Concen: 0.050 ppbv
RT: 13.14 min Scan# 3173
Delta R.T. -0.01 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

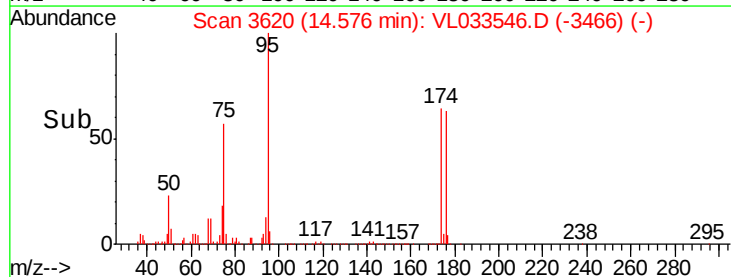
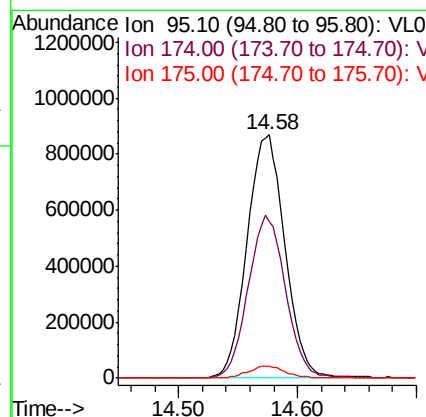
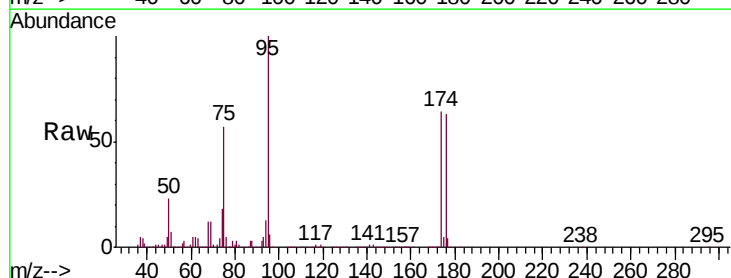
Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

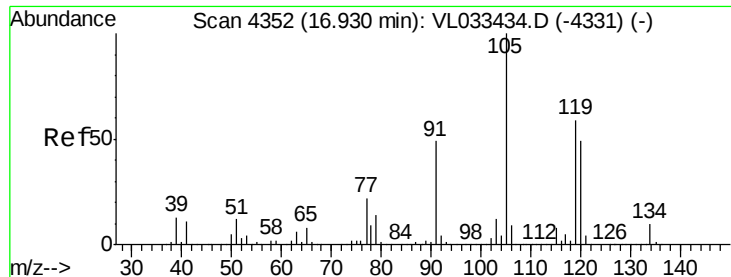
Tgt Ion: 91 Resp: 13809
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0



#68
1-Bromo-4-Fluorobenzene
Concen: 10.481 ppbv
RT: 14.58 min Scan# 3620
Delta R.T. -0.00 min
Lab File: VL033546.D
Acq: 4 Apr 2019 23:35

Tgt Ion: 95 Resp: 1914324
Ion Ratio Lower Upper
95 100
174 66.5 52.9 79.3
175 4.8 3.8 5.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.033 ppbv
 RT: 16.92 min Scan# 4350
 Delta R.T. -0.01 min
 Lab File: VL033546.D
 Acq: 4 Apr 2019 23:35

Instrument :
 MSVOA_L
 ClientSampleId :
 LIHA-IA2

Tgt Ion:	105	Resp:	10287
Ion	Ratio	Lower	Upper
105	100		
120	34.3	39.0	58.6#
91	2.3	40.0	60.0#
77	35.3	17.5	26.3#

