

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL121719\
 Data File : VL034501.D
 Acq On : 17 Dec 2019 20:33
 Operator : SY/AP
 Sample : K6319-03
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 LIHA-IA2

Quant Time: Dec 18 04:23:00 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL111919AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 19 14:15:35 2019
 QLast Update : Tue Nov 19 14:15:35 2019
 Response via : Initial Calibration

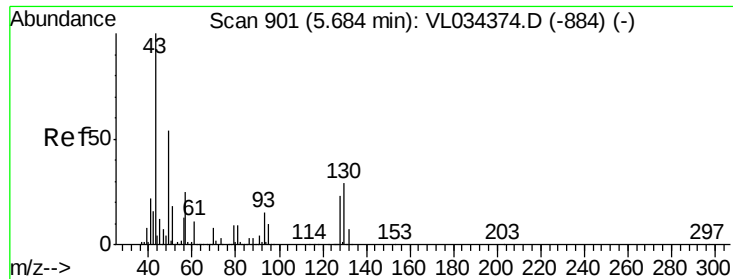
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	933610	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.20	114	1822046	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.13	117	1817738	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.47	95	1560736	10.21	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.10%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	90445	0.535	ppbv	92
3) Chlorodifluoromethane	2.96	51	61973	0.532	ppbv #	85
4) Chloromethane	3.11	50	29840	0.434	ppbv #	87
9) Propene	3.18	41	125008	2.417	ppbv	98
10) Heptane	8.15	43	67461	0.505	ppbv	98
11) Trichlorofluoromethane	3.93	101	40307	0.240	ppbv #	82
12) 1,1,2-Trichlorotrifluoroet	4.47	101	3382	0.030	ppbv #	14
13) Ethanol	3.59	45	3667151	254.558	ppbv	94
15) Acetone	3.83	43	1048300	7.841	ppbv	91
16) 1,3-Butadiene	3.28	39	4451	0.076	ppbv #	9
19) Isopropyl Alcohol	3.98	45	141591	1.652	ppbv #	96
20) Methylene Chloride	4.33	84	120134	2.534	ppbv	97
23) Vinyl Acetate	5.06	43	25417	0.146	ppbv #	66
25) Ethyl Acetate	5.69	43	108268	0.454	ppbv #	95
26) Hexane	5.69	57	87496	0.854	ppbv #	58
29) Chloroform	5.76	83	159252	0.959	ppbv	93
34) 2-Butanone	5.25	43	35914	0.239	ppbv	98
35) Carbon Tetrachloride	7.03	117	5193	0.033	ppbv	92
36) Benzene	6.91	78	20689	0.114	ppbv #	84
39) 1,2-Dichloropropane	7.20	63	538448	7.673	ppbv #	23
44) 2,2,4-Trimethylpentane	7.89	57	13756	0.041	ppbv #	17
52) Tetrachloroethene	11.26	164	3302	0.042	ppbv #	26
53) Toluene	9.84	91	98323	0.475	ppbv #	21
58) Ethyl Benzene	12.76	91	12445	0.044	ppbv #	69
60) o-Xylene	13.74	91	12328	0.051	ppbv	75
69) p-Isopropyltoluene	18.00	119	144242	0.434	ppbv #	1
74) 1,2,4-Trimethylbenzene	16.82	105	19891	0.069	ppbv #	60

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 897

Delta R.T. -0.01 min

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LIHA-IA2

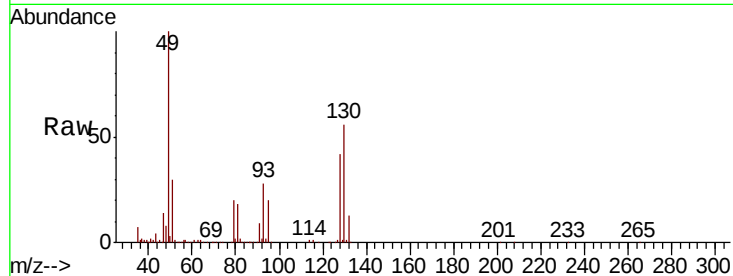
Tgt Ion: 49 Resp: 933610

Ion Ratio Lower Upper

49 100

128 43.0 21.8 65.3

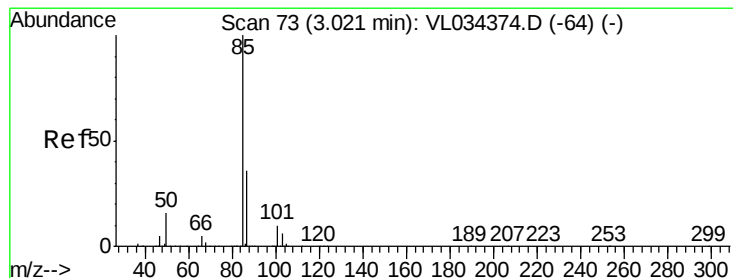
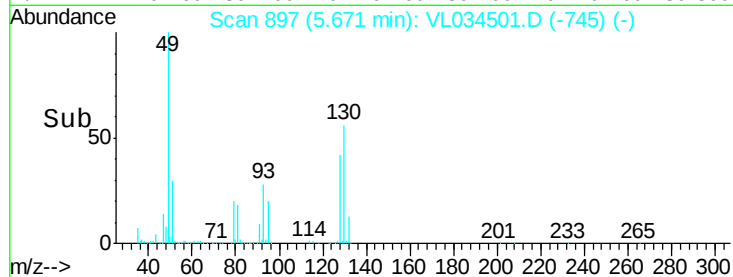
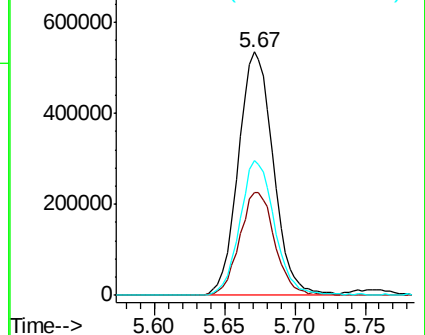
130 55.4 28.0 84.0



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: 0.535 ppbv

RT: 3.02 min Scan# 72

Delta R.T. -0.00 min

Lab File: VL034501.D

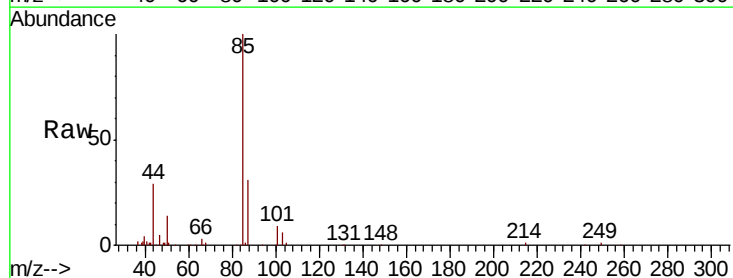
Acq: 17 Dec 2019 20:33

Tgt Ion: 85 Resp: 90445

Ion Ratio Lower Upper

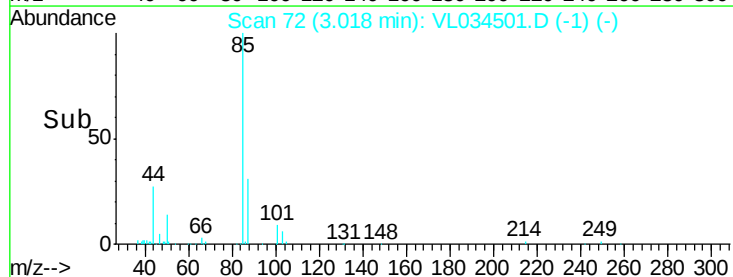
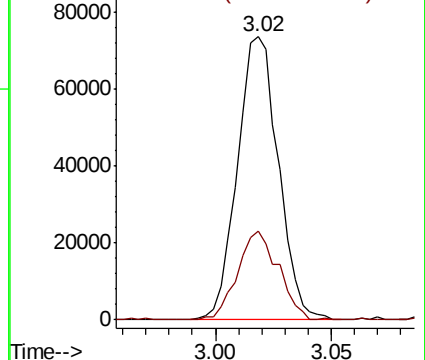
85 100

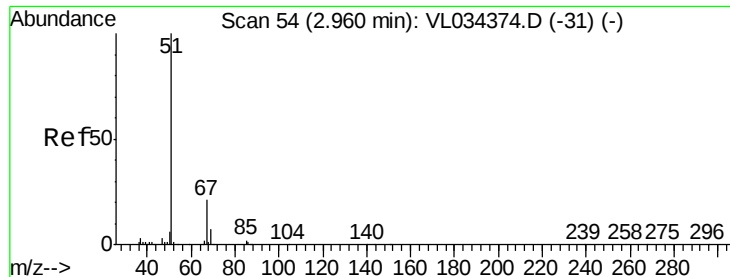
87 31.2 28.5 42.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

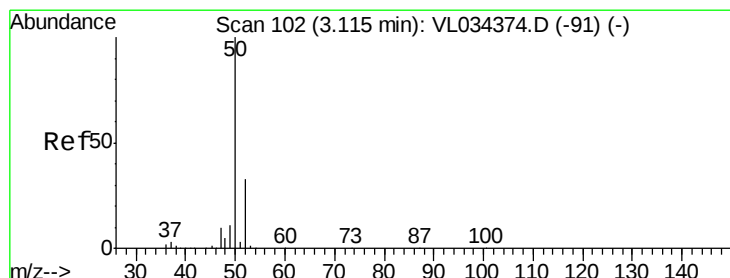
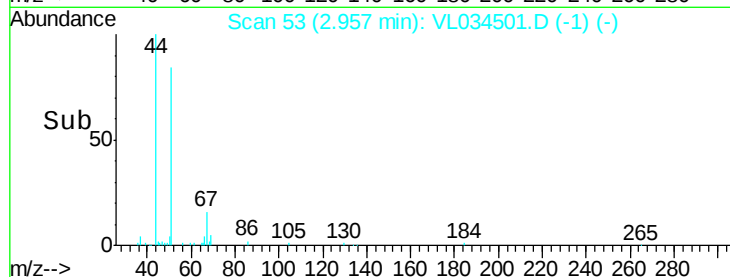
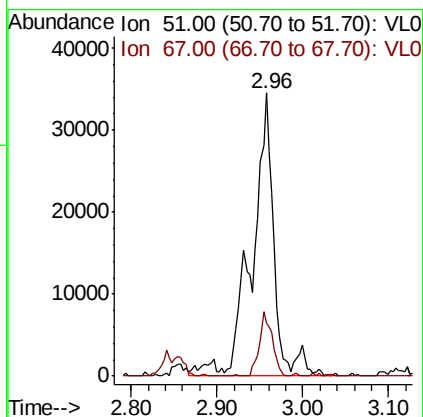
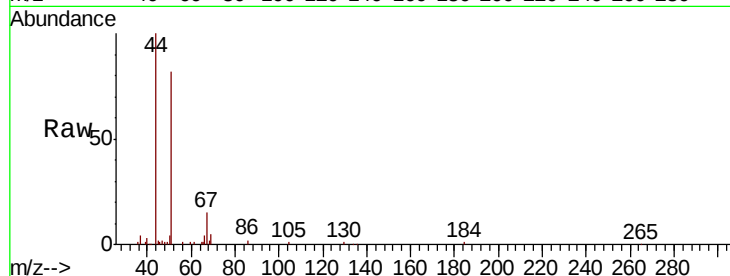




#3
 Chlorodifluoromethane
 Concen: 0.532 ppbv
 RT: 2.96 min Scan# 53
 Delta R.T. -0.00 min
 Lab File: VL034501.D
 Acq: 17 Dec 2019 20:33

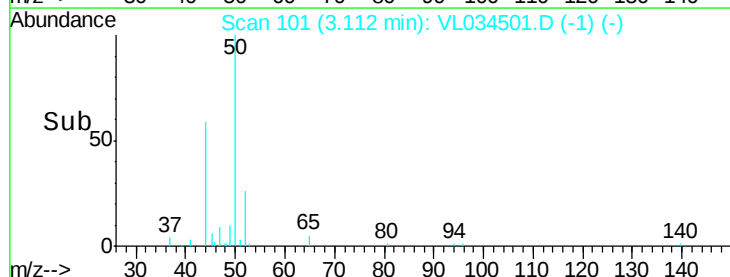
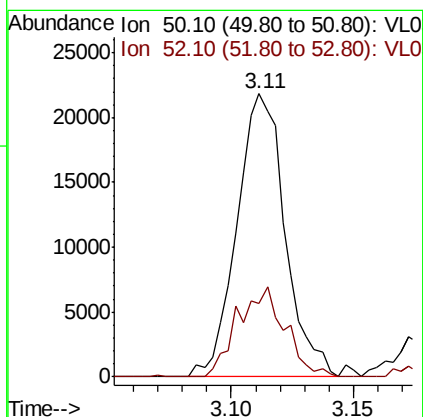
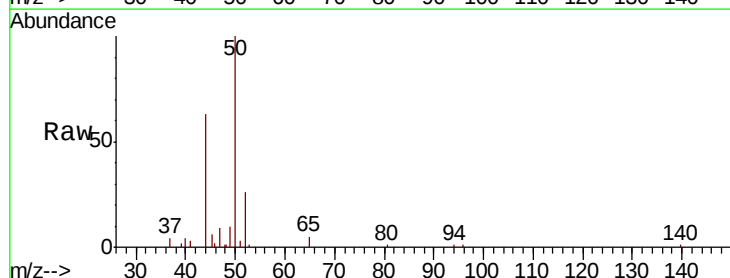
Instrument :
 MSVOA_L
 ClientSampleId :
 LIHA-IA2

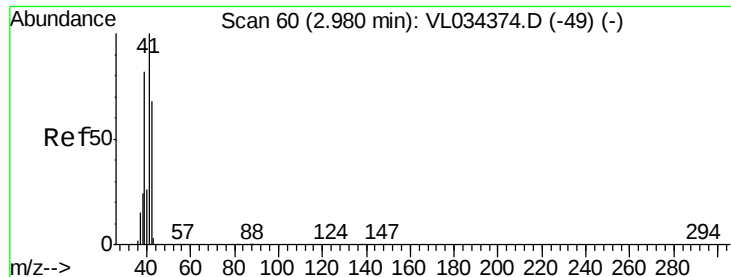
Tgt Ion: 51 Resp: 61973
 Ion Ratio Lower Upper
 51 100
 67 13.3 16.2 24.2#



#4
 Chloromethane
 Concen: 0.434 ppbv
 RT: 3.11 min Scan# 101
 Delta R.T. -0.00 min
 Lab File: VL034501.D
 Acq: 17 Dec 2019 20:33

Tgt Ion: 50 Resp: 29840
 Ion Ratio Lower Upper
 50 100
 52 26.0 26.8 40.2#





#9

Propene

Concen: 2.417 ppbv

RT: 3.18 min Scan# 121

Delta R.T. 0.20 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

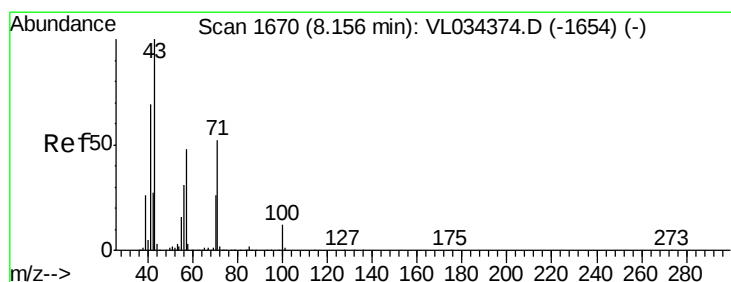
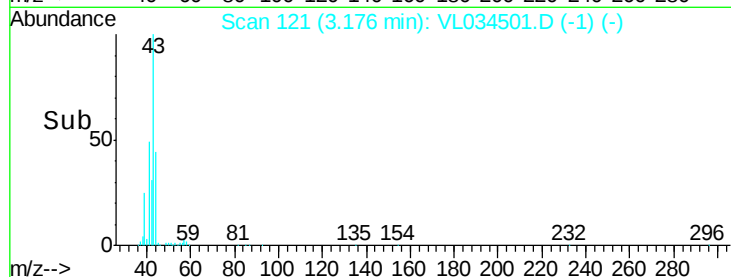
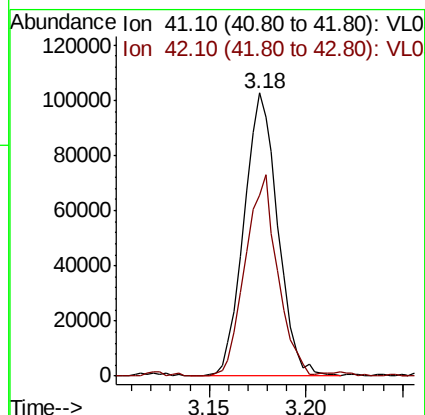
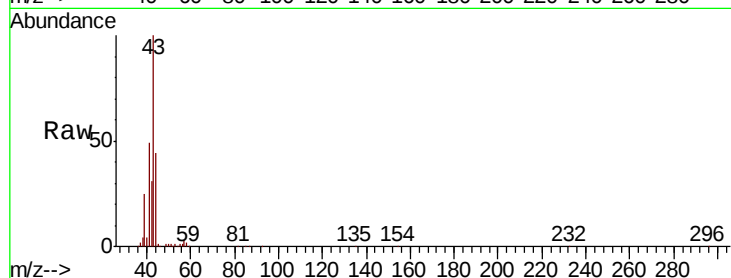
LIHA-IA2

Tgt Ion: 41 Resp: 125008

Ion Ratio Lower Upper

41 100

42 69.9 54.6 82.0



#10

Heptane

Concen: 0.505 ppbv

RT: 8.15 min Scan# 1669

Delta R.T. -0.00 min

Lab File: VL034501.D

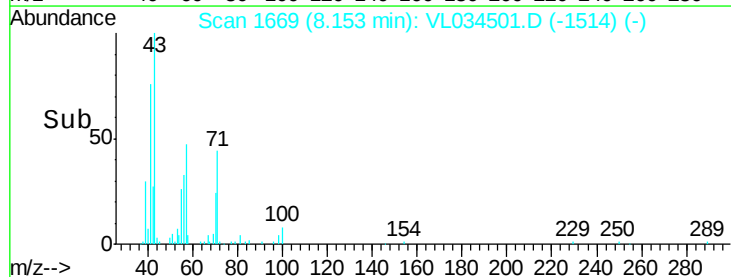
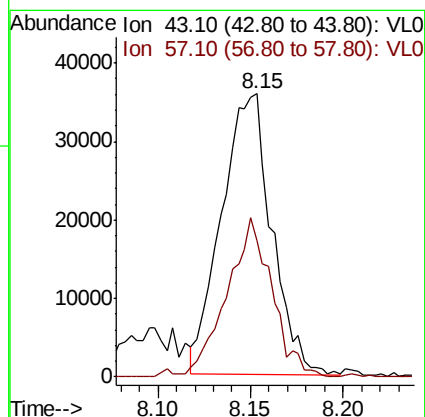
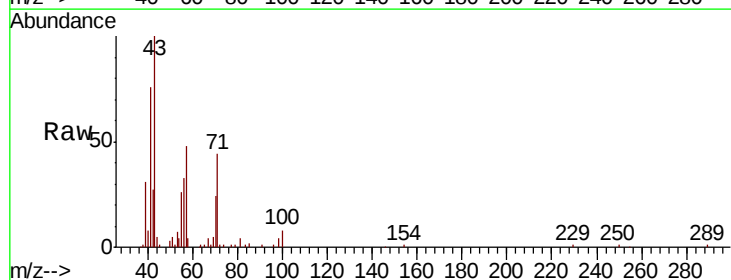
Acq: 17 Dec 2019 20:33

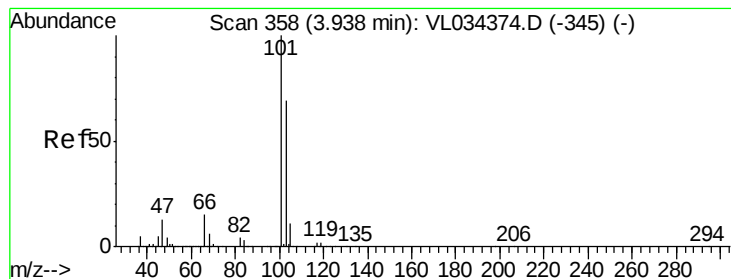
Tgt Ion: 43 Resp: 67461

Ion Ratio Lower Upper

43 100

57 51.6 40.2 60.2





#11

Trichlorofluoromethane

Concen: 0.240 ppbv

RT: 3.93 min Scan# 356

Delta R.T. -0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

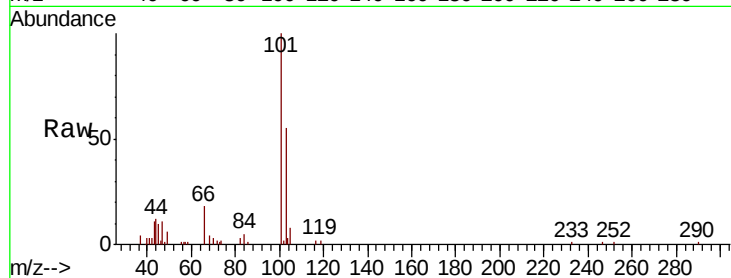
LIHA-IA2

Tgt Ion:101 Resp: 40307

Ion Ratio Lower Upper

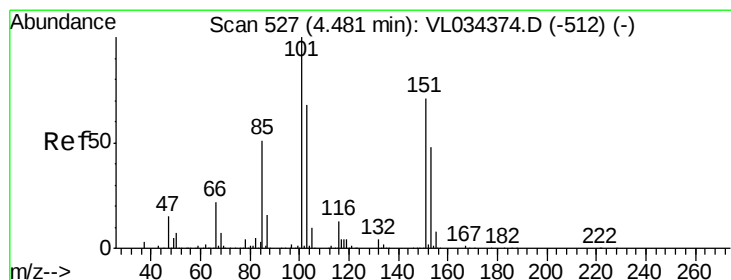
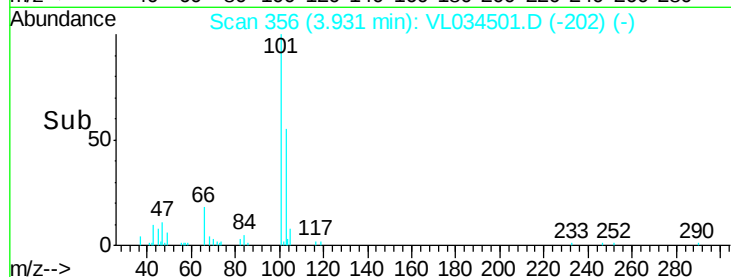
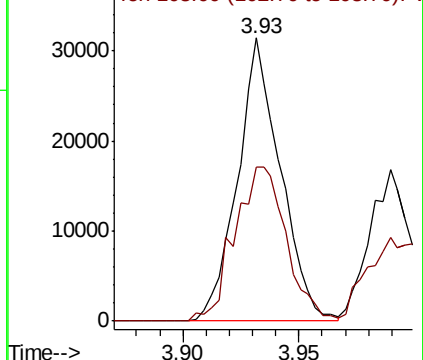
101 100

103 54.6 55.4 83.0#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.030 ppbv

RT: 4.47 min Scan# 525

Delta R.T. -0.01 min

Lab File: VL034501.D

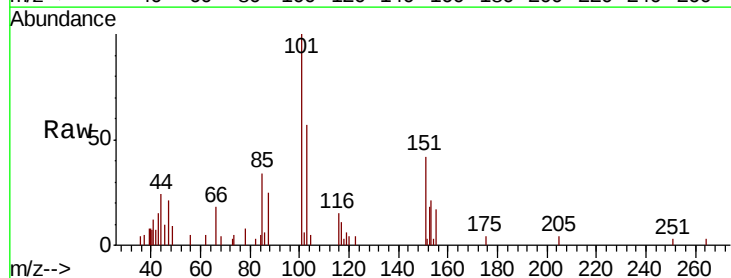
Acq: 17 Dec 2019 20:33

Tgt Ion:101 Resp: 3382

Ion Ratio Lower Upper

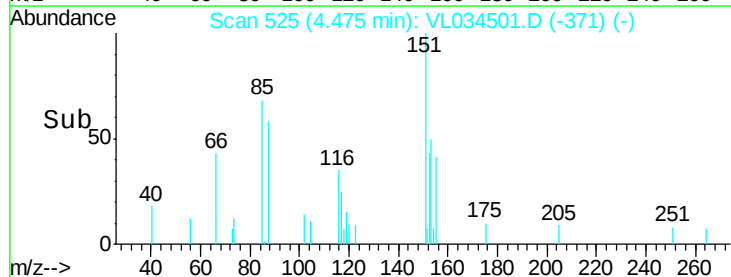
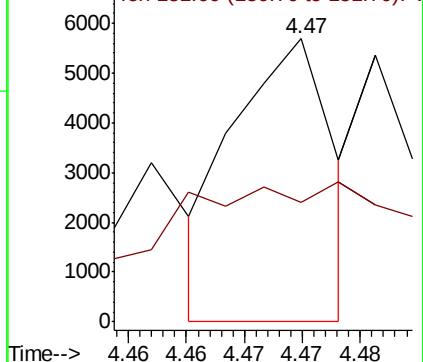
101 100

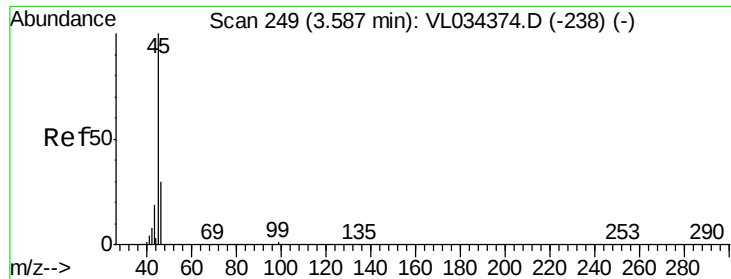
151 0.0 57.4 86.2#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 254.558 ppbv

RT: 3.59 min Scan# 251

Delta R.T. 0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

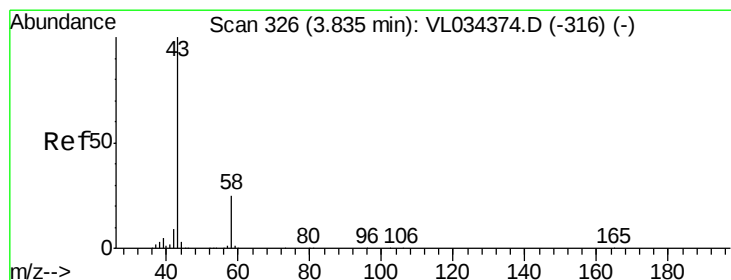
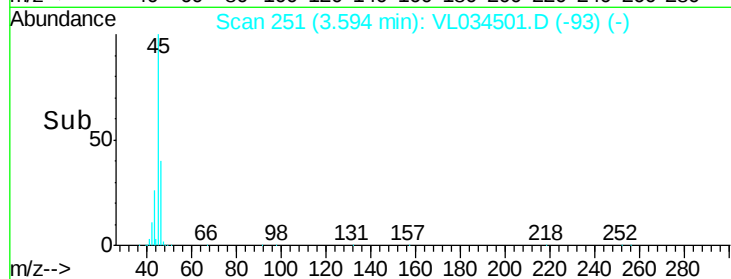
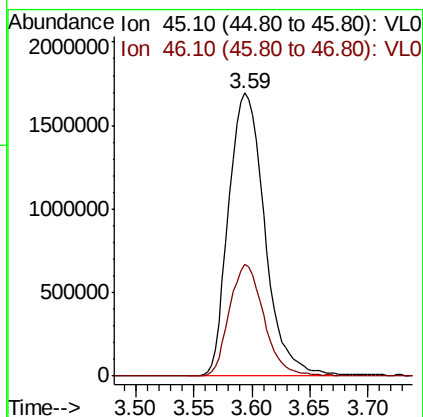
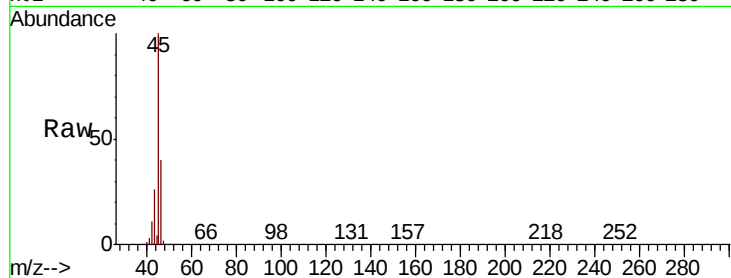
LIHA-IA2

Tgt Ion: 45 Resp: 3667151

Ion Ratio Lower Upper

45 100

46 38.1 13.8 55.4



#15

Acetone

Concen: 7.841 ppbv

RT: 3.83 min Scan# 325

Delta R.T. -0.00 min

Lab File: VL034501.D

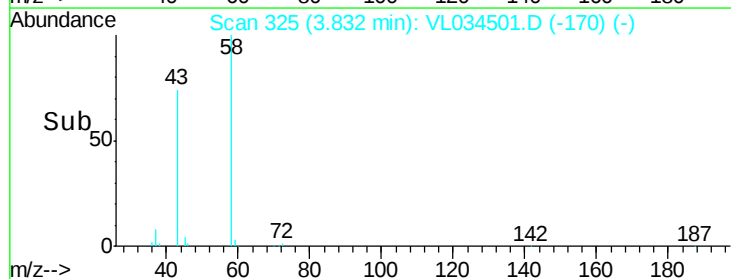
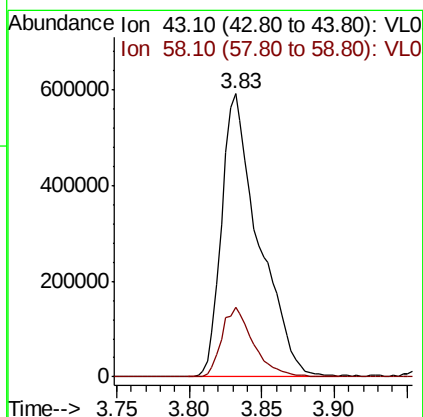
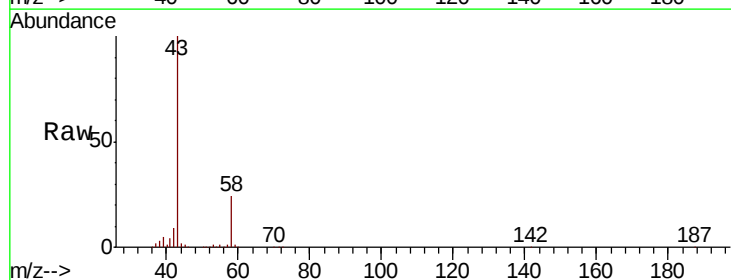
Acq: 17 Dec 2019 20:33

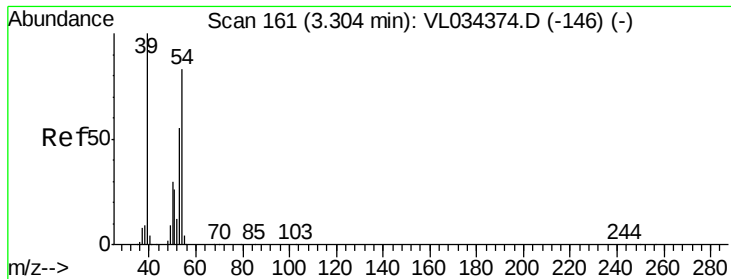
Tgt Ion: 43 Resp: 1048300

Ion Ratio Lower Upper

43 100

58 21.0 20.2 30.4

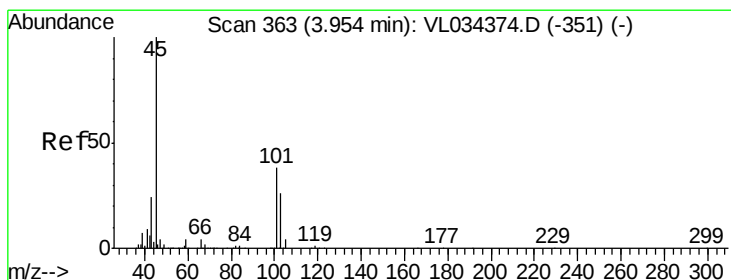
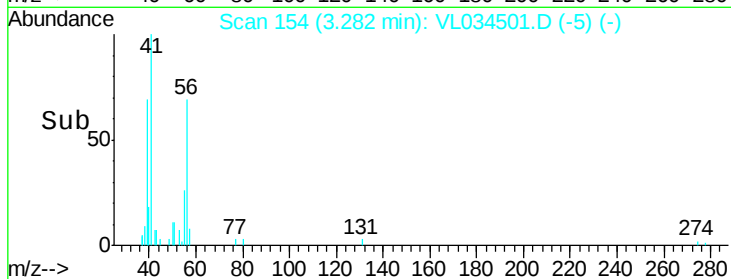
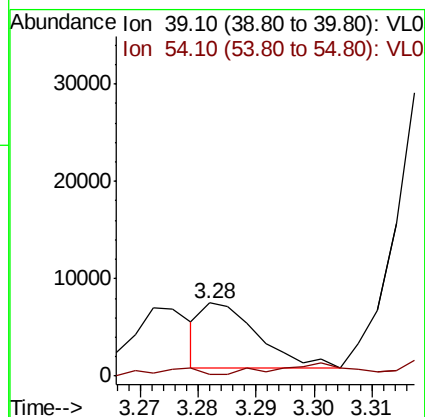
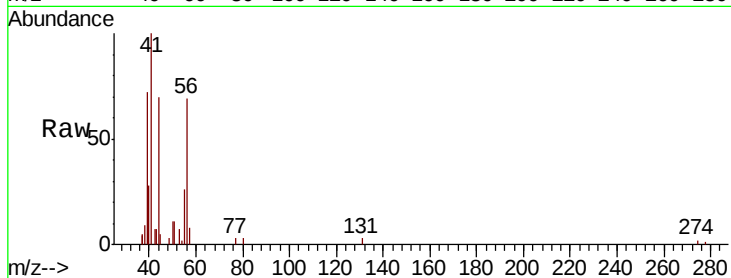




#16
 1,3-Butadiene
 Concen: 0.076 ppbv
 RT: 3.28 min Scan# 154
 Delta R.T. -0.02 min
 Lab File: VL034501.D
 Acq: 17 Dec 2019 20:33

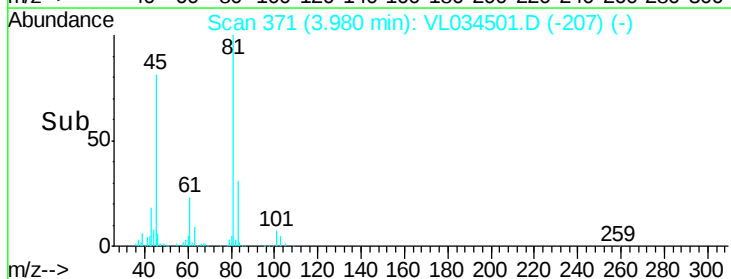
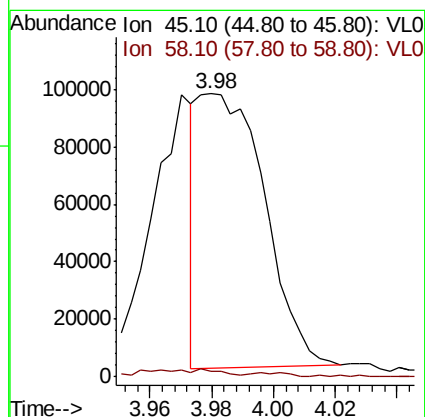
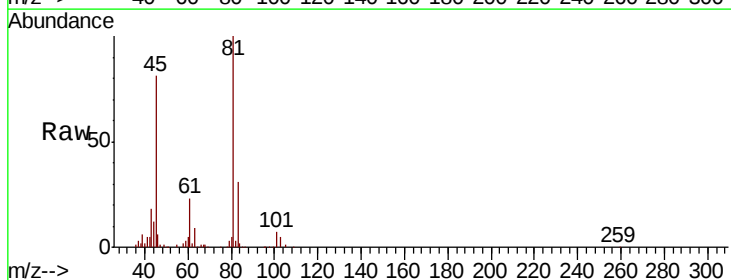
Instrument :
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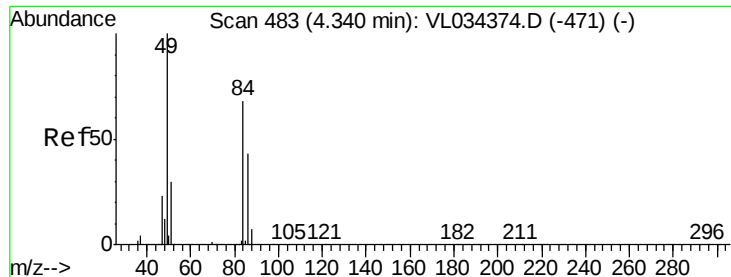
Tgt Ion: 39 Resp: 4451
 Ion Ratio Lower Upper
 39 100
 54 0.0 64.7 97.1#



#19
 Isopropyl Alcohol
 Concen: 1.652 ppbv
 RT: 3.98 min Scan# 371
 Delta R.T. 0.03 min
 Lab File: VL034501.D
 Acq: 17 Dec 2019 20:33

Tgt Ion: 45 Resp: 141591
 Ion Ratio Lower Upper
 45 100
 58 0.0 1.3 1.9#

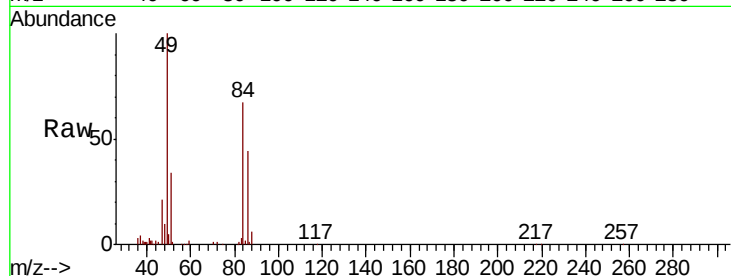




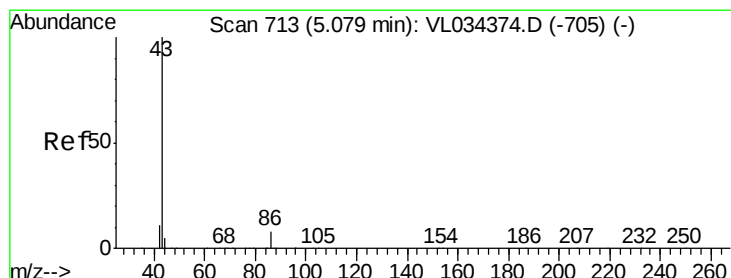
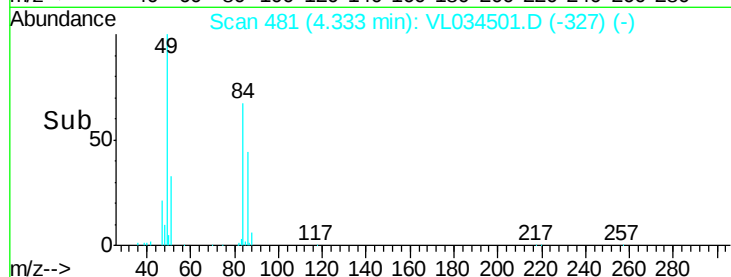
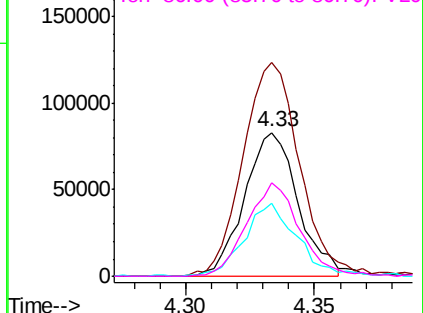
#20
Methylene Chloride
Concen: 2.534 ppbv
RT: 4.33 min Scan# 481
Delta R.T. -0.01 min
Lab File: VL034501.D
Acq: 17 Dec 2019 20:33

Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

Tgt Ion:	84	Resp:	120134
Ion	Ratio	Lower	Upper
84	100		
49	148.2	116.8	175.2
51	50.4	35.6	53.4
86	65.0	50.7	76.1

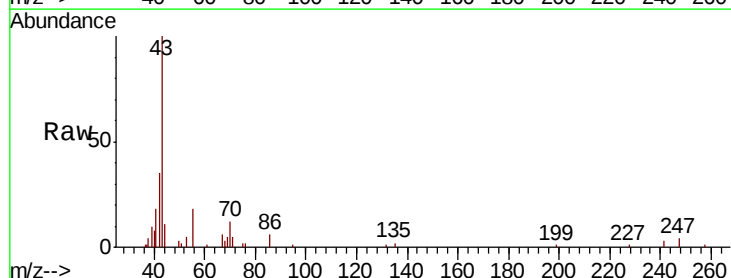


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

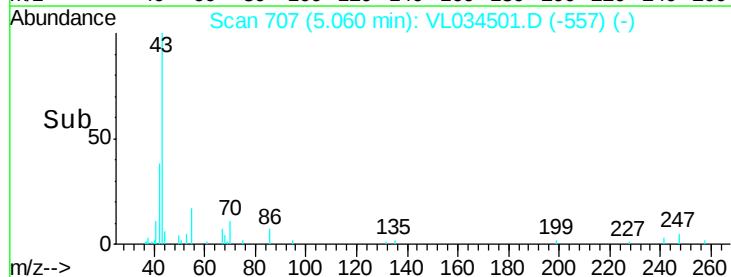
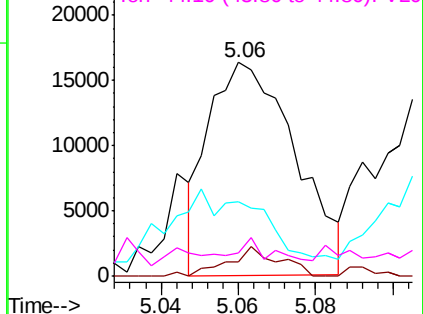


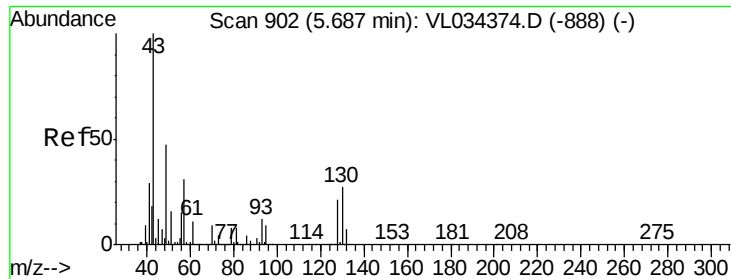
#23
Vinyl Acetate
Concen: 0.146 ppbv
RT: 5.06 min Scan# 707
Delta R.T. -0.02 min
Lab File: VL034501.D
Acq: 17 Dec 2019 20:33

Tgt Ion:	43	Resp:	25417
Ion	Ratio	Lower	Upper
43	100		
86	8.6	5.8	8.6
42	35.6	8.9	13.3#
44	1.8	4.0	6.0#



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

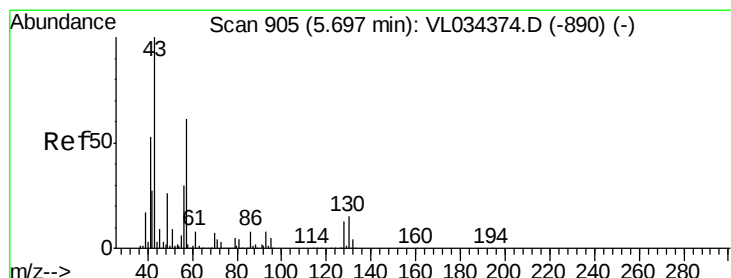
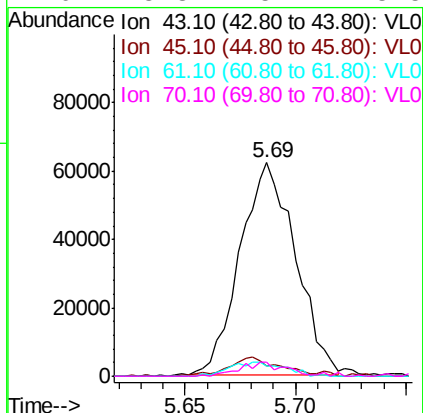
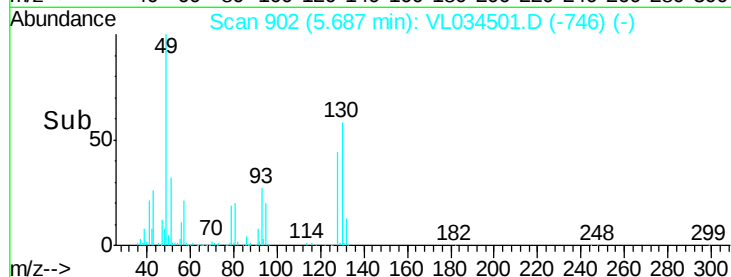
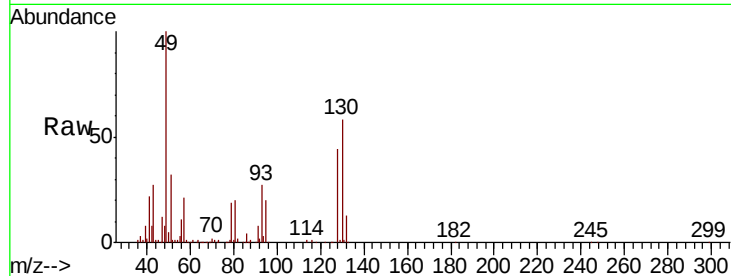




#25
Ethyl Acetate
Concen: 0.454 ppbv
RT: 5.69 min Scan# 902
Delta R.T. 0.00 min
Lab File: VL034501.D
Acq: 17 Dec 2019 20:33

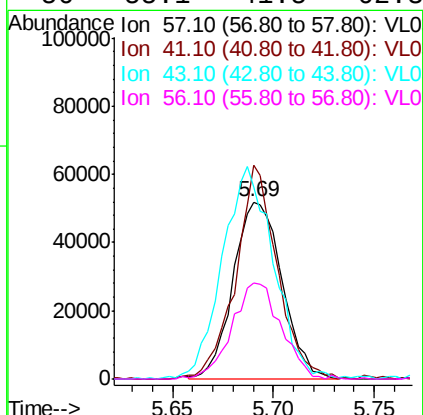
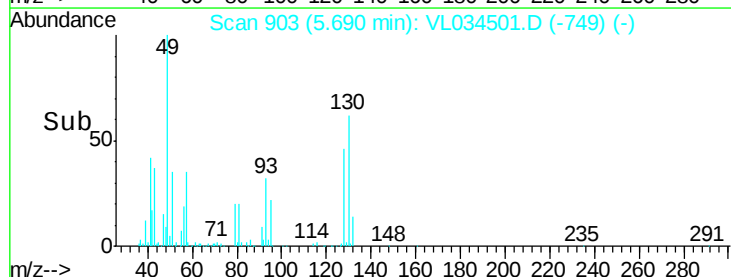
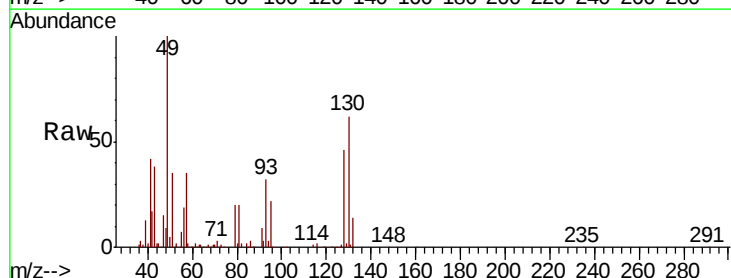
Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

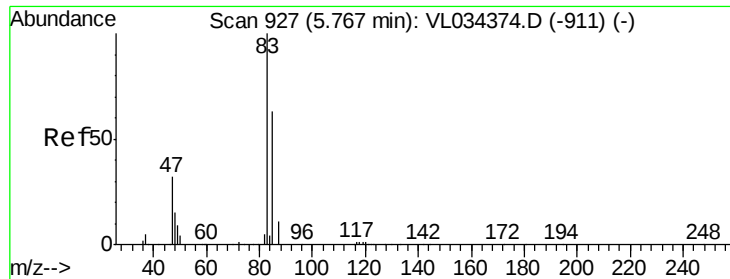
Tgt Ion:	43	Resp:	108268
Ion	Ratio	Lower	Upper
43	100		
45	9.1	8.2	12.4
61	6.5	7.5	11.3#
70	5.8	5.7	8.5



#26
Hexane
Concen: 0.854 ppbv
RT: 5.69 min Scan# 903
Delta R.T. -0.01 min
Lab File: VL034501.D
Acq: 17 Dec 2019 20:33

Tgt Ion:	57	Resp:	87496
Ion	Ratio	Lower	Upper
57	100		
41	103.9	75.0	112.4
43	127.8	186.6	279.8#
56	55.1	41.5	62.3





#29

Chloroform

Concen: 0.959 ppbv

RT: 5.76 min Scan# 925

Delta R.T. -0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

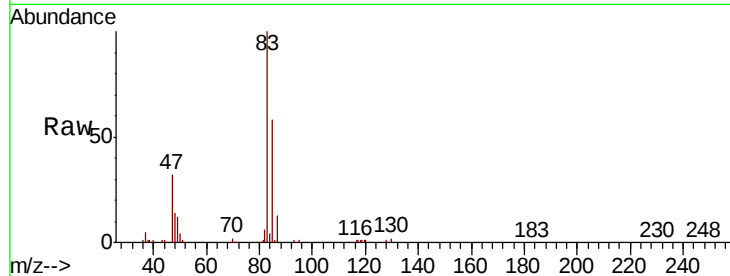
LIHA-IA2

Tgt Ion: 83 Resp: 159252

Ion Ratio Lower Upper

83 100

85 57.8 50.4 75.6



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

5.76

100000

80000

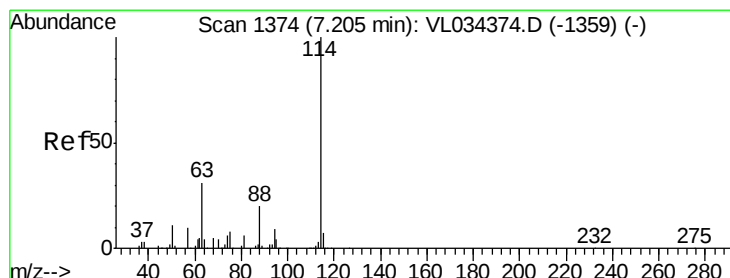
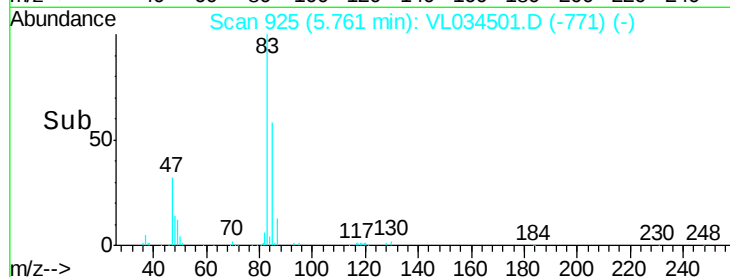
60000

40000

20000

0

Time-->



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.20 min Scan# 1371

Delta R.T. -0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

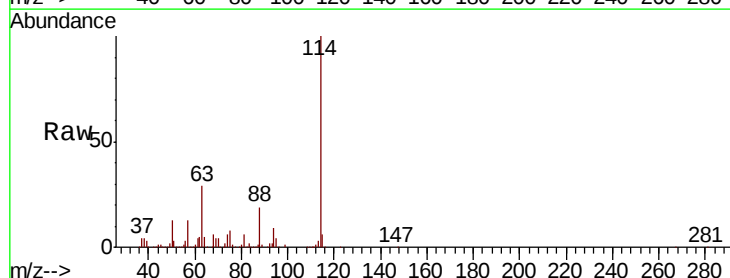
Tgt Ion: 114 Resp: 1822046

Ion Ratio Lower Upper

114 100

63 29.6 24.2 36.4

88 19.4 15.9 23.9



Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

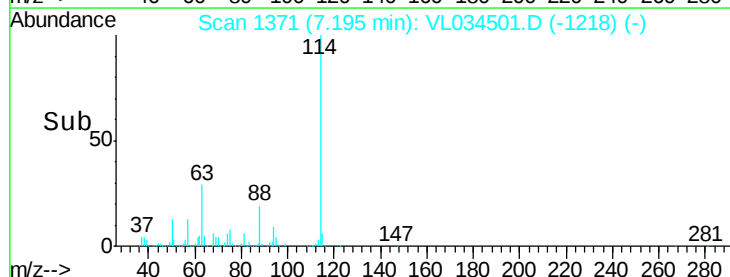
7.20

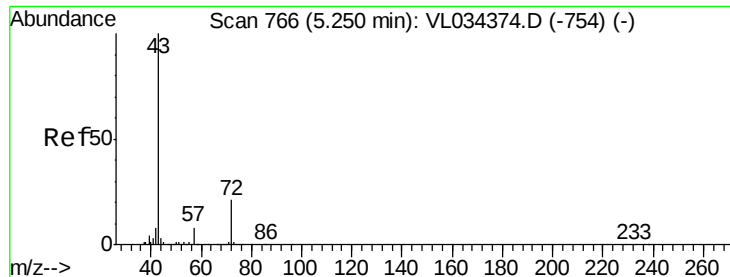
1000000

500000

0

Time-->





#34

2-Butanone

Concen: 0.239 ppbv

RT: 5.25 min Scan# 766

Delta R.T. 0.00 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

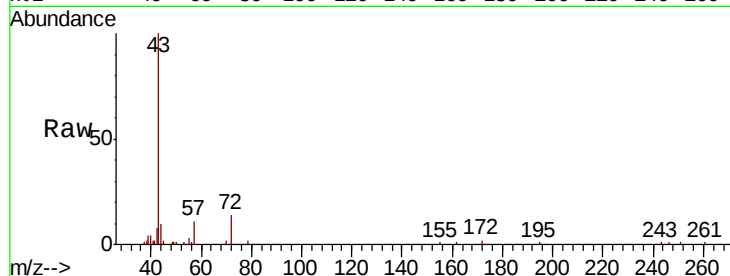
LIHA-IA2

Tgt Ion: 43 Resp: 35914

Ion Ratio Lower Upper

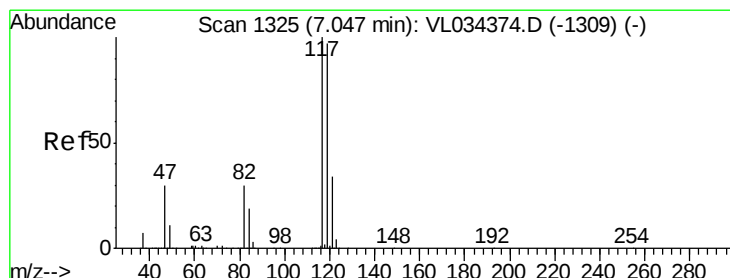
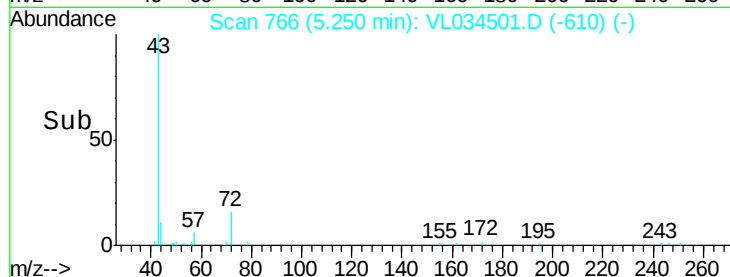
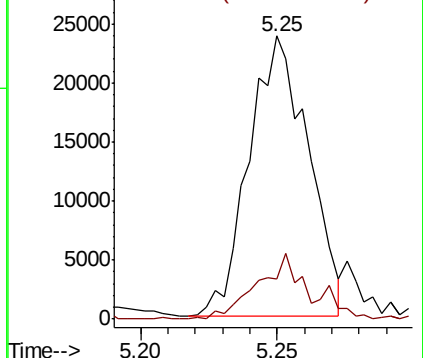
43 100

72 20.6 17.0 25.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#35

Carbon Tetrachloride

Concen: 0.033 ppbv

RT: 7.03 min Scan# 1320

Delta R.T. -0.02 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

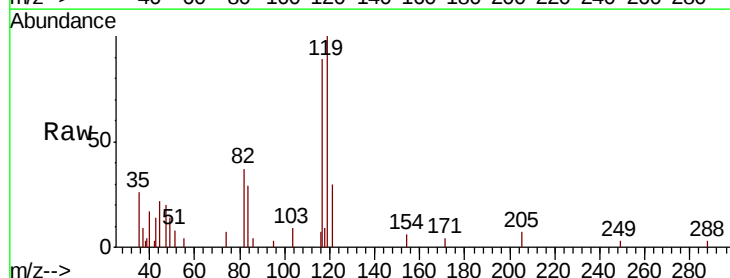
Tgt Ion: 117 Resp: 5193

Ion Ratio Lower Upper

117 100

119 103.4 77.3 115.9

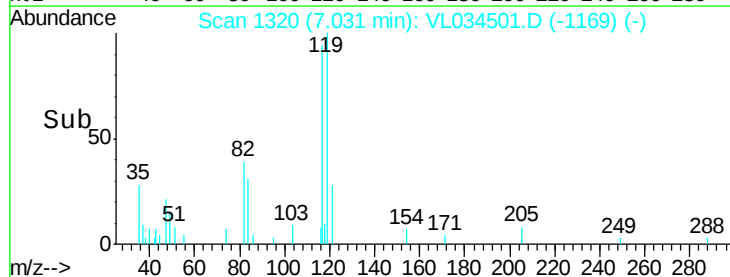
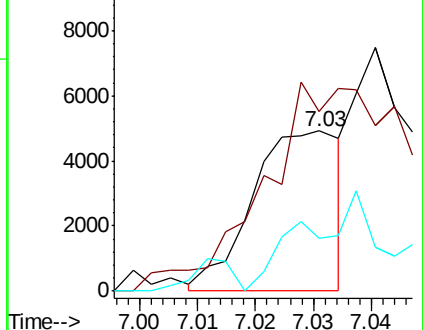
121 28.0 27.4 41.2

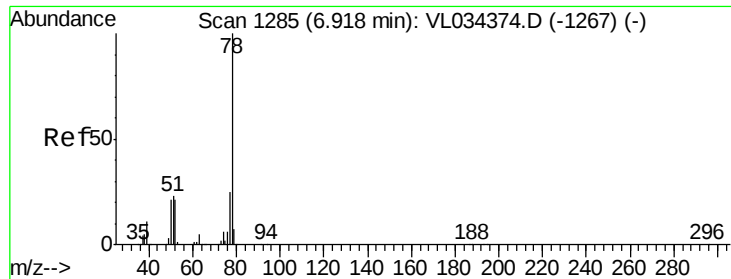


Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V





#36

Benzene

Concen: 0.114 ppbv

RT: 6.91 min Scan# 1282

Delta R.T. -0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

LIHA-IA2

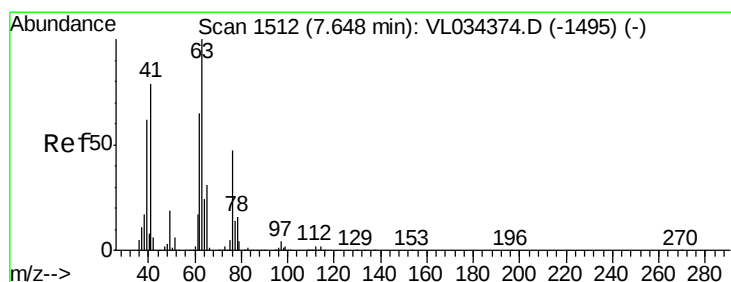
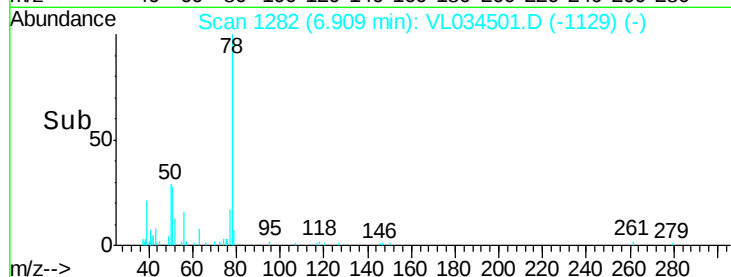
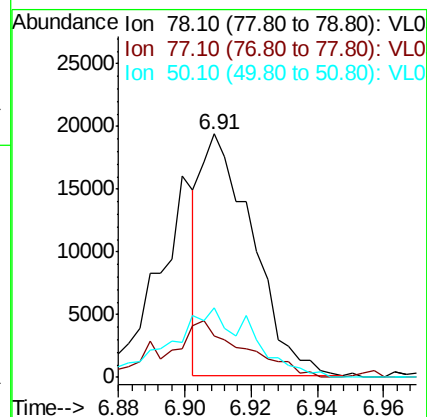
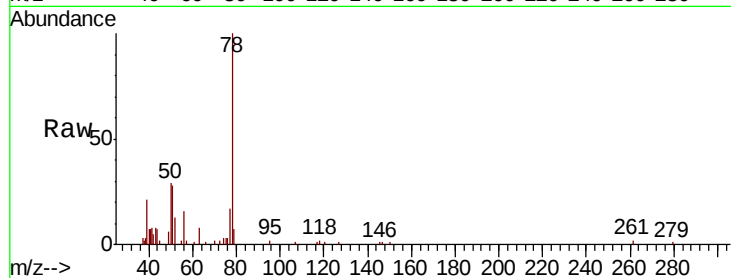
Tgt Ion: 78 Resp: 20689

Ion Ratio Lower Upper

78 100

77 17.1 20.2 30.4#

50 28.9 17.1 25.7#



#39

1,2-Dichloropropane

Concen: 7.673 ppbv

RT: 7.20 min Scan# 1371

Delta R.T. -0.45 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

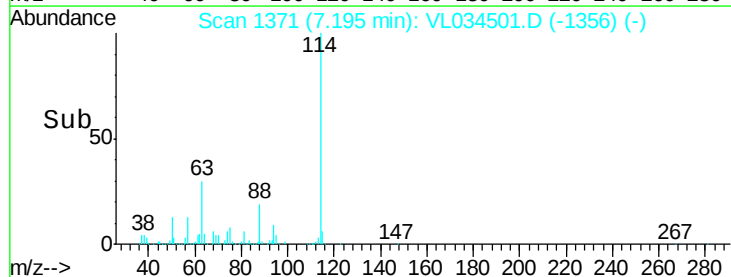
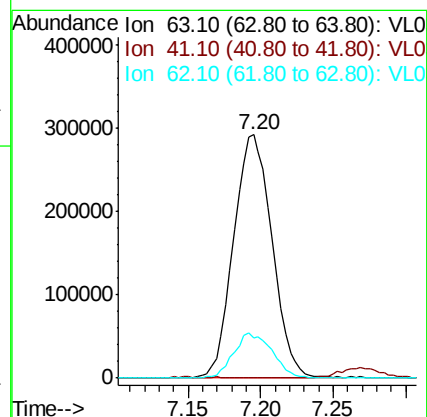
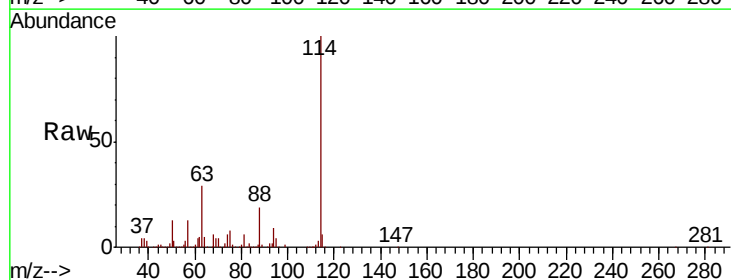
Tgt Ion: 63 Resp: 538448

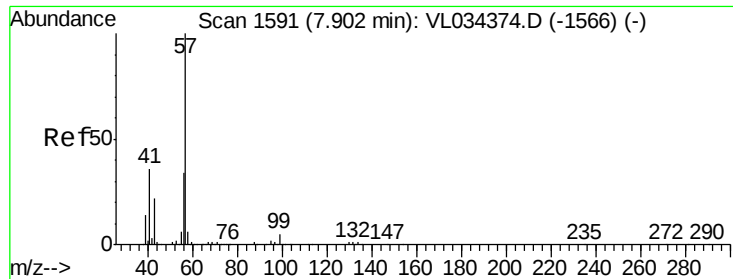
Ion Ratio Lower Upper

63 100

41 0.0 63.1 94.7#

62 16.4 52.3 78.5#

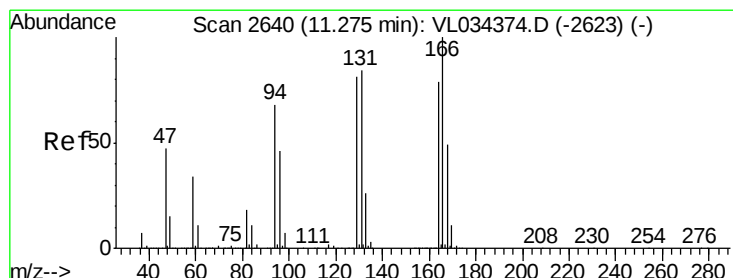
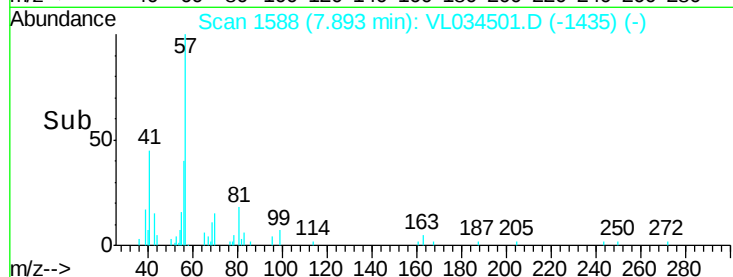
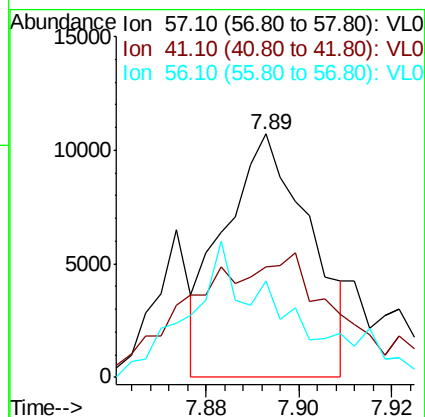
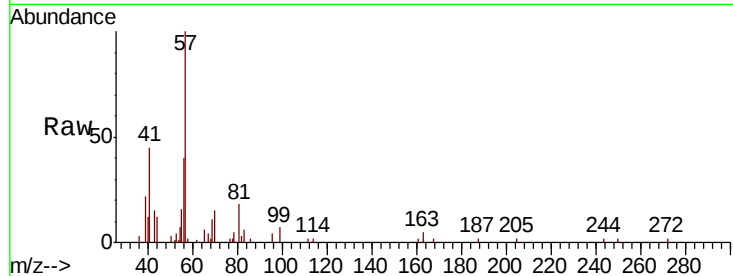




#44
2,2,4-Trimethylpentane
Concen: 0.041 ppbv
RT: 7.89 min Scan# 1588
Delta R.T. -0.01 min
Lab File: VL034501.D
Acq: 17 Dec 2019 20:33

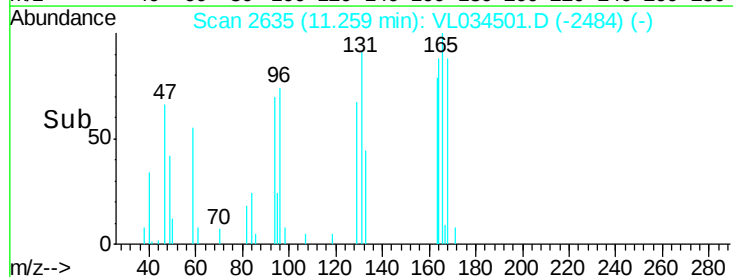
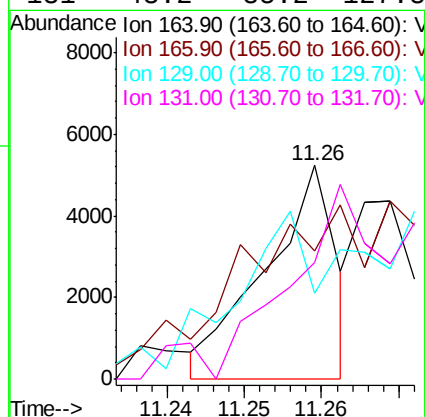
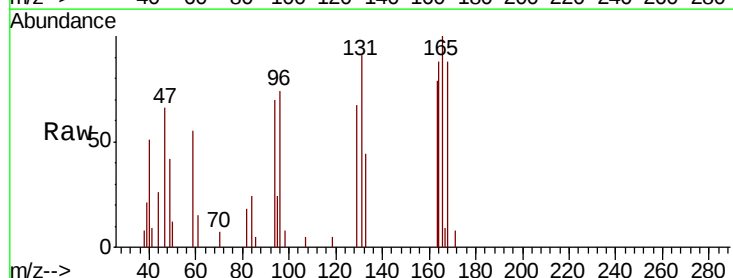
Instrument :
MSVOA_L
ClientSampleId :
LIHA-IA2

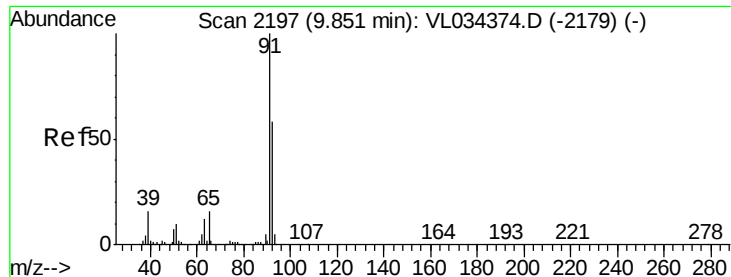
Tgt Ion: 57 Resp: 13756
Ion Ratio Lower Upper
57 100
41 97.4 28.6 42.8#
56 0.0 25.3 37.9#



#52
Tetrachloroethene
Concen: 0.042 ppbv
RT: 11.26 min Scan# 2635
Delta R.T. -0.02 min
Lab File: VL034501.D
Acq: 17 Dec 2019 20:33

Tgt Ion: 164 Resp: 3302
Ion Ratio Lower Upper
164 100
166 47.3 101.7 152.5#
129 8.4 82.6 123.8#
131 43.2 85.2 127.8#





#53

Toluene

Concen: 0.475 ppbv

RT: 9.84 min Scan# 2193

Delta R.T. -0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

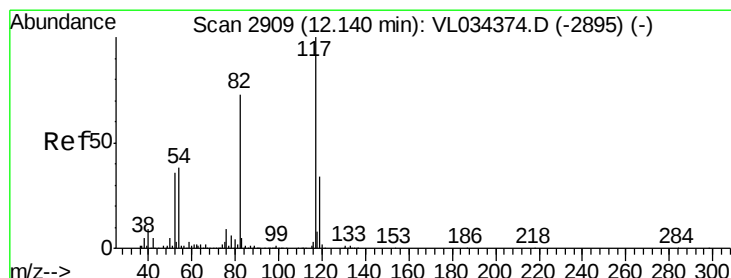
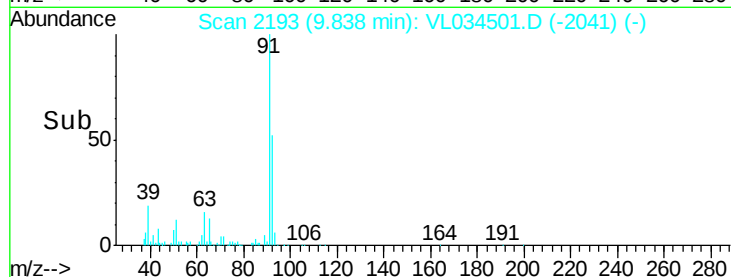
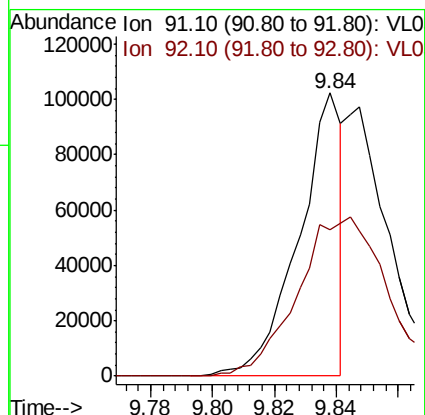
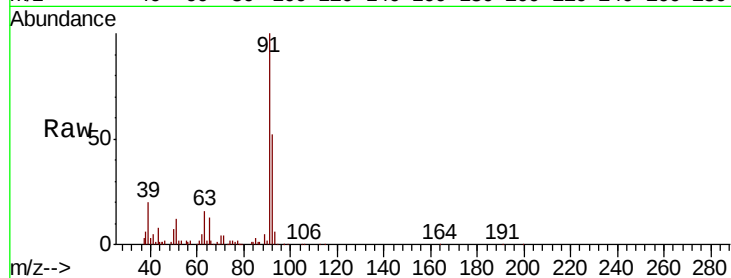
LIHA-IA2

Tgt Ion: 91 Resp: 98323

Ion Ratio Lower Upper

91 100

92 0.0 47.9 71.9#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.13 min Scan# 2907

Delta R.T. -0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

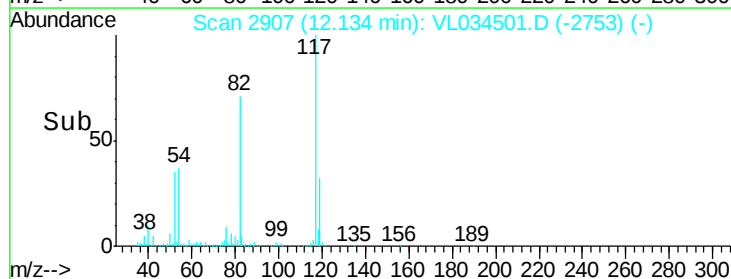
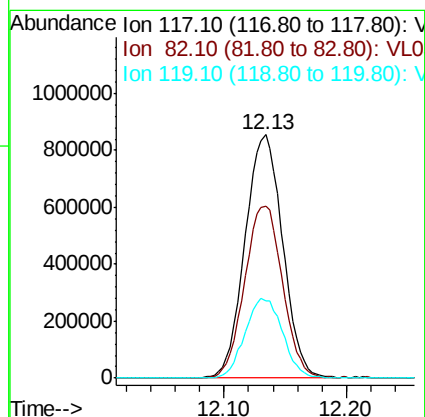
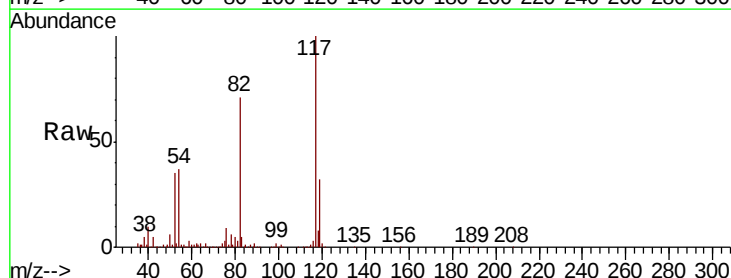
Tgt Ion: 117 Resp: 1817738

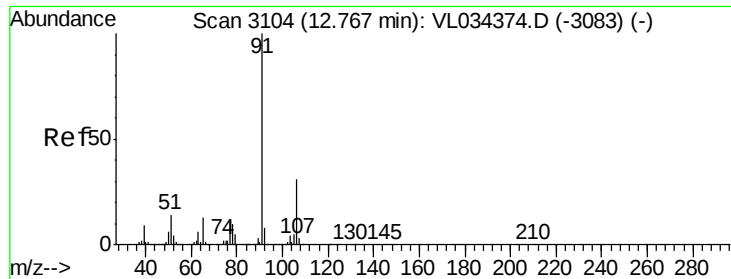
Ion Ratio Lower Upper

117 100

82 71.9 57.5 86.3

119 32.9 25.4 38.2





#58

Ethyl Benzene

Concen: 0.044 ppbv

RT: 12.76 min Scan# 3101

Delta R.T. -0.01 min

Lab File: VL034501.D

Acq: 17 Dec 2019 20:33

Instrument :

MSVOA_L

ClientSampleId :

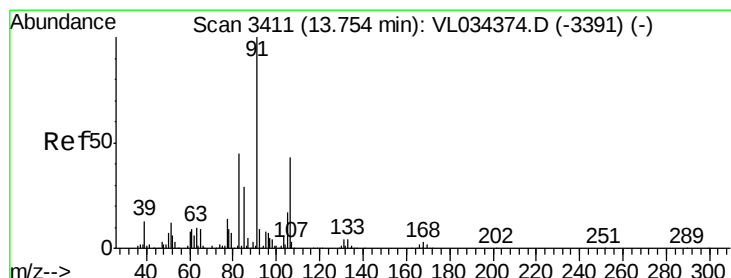
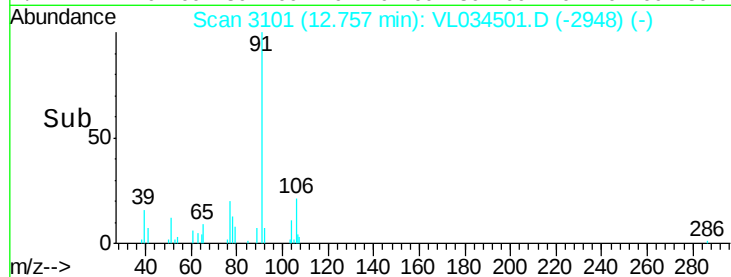
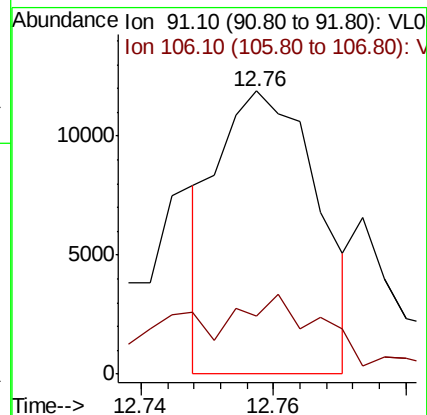
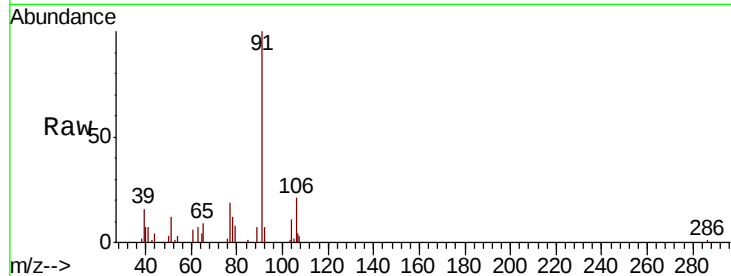
LIHA-IA2

Tgt Ion: 91 Resp: 12445

Ion Ratio Lower Upper

91 100

106 14.2 24.8 37.2#



#60

o-Xylene

Concen: 0.051 ppbv

RT: 13.74 min Scan# 3408

Delta R.T. -0.01 min

Lab File: VL034501.D

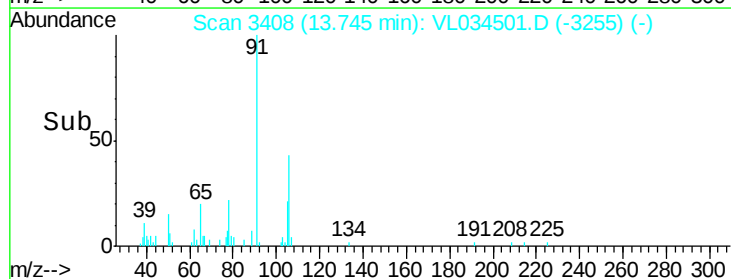
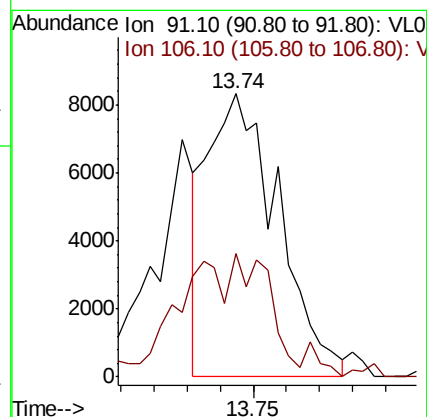
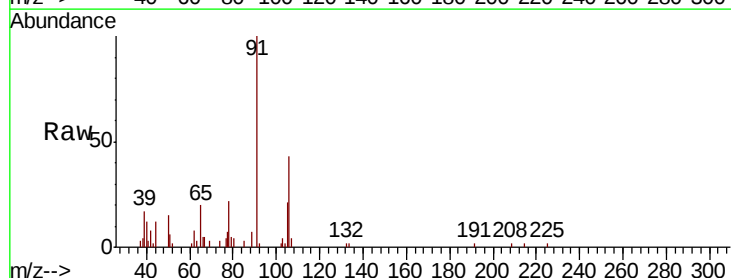
Acq: 17 Dec 2019 20:33

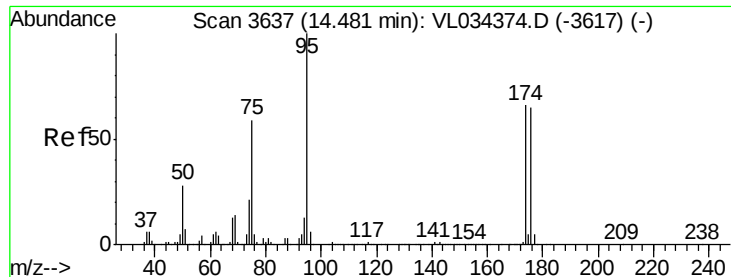
Tgt Ion: 91 Resp: 12328

Ion Ratio Lower Upper

91 100

106 58.3 21.3 64.0

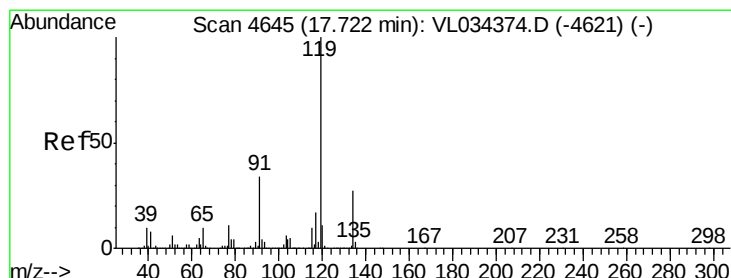
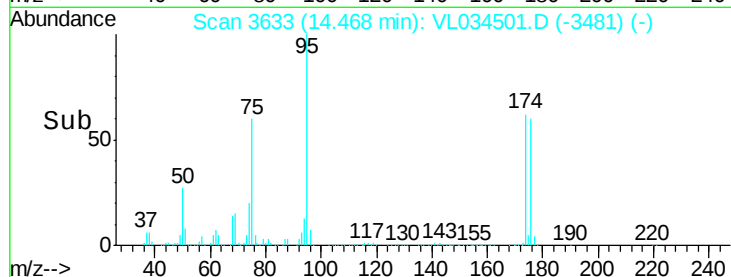
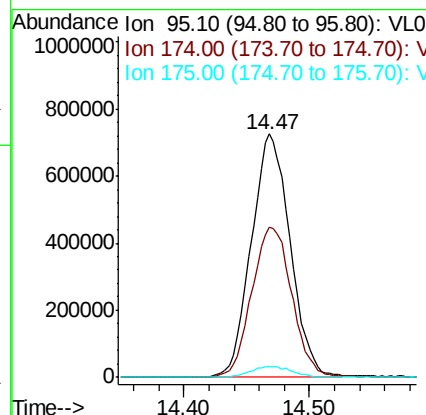
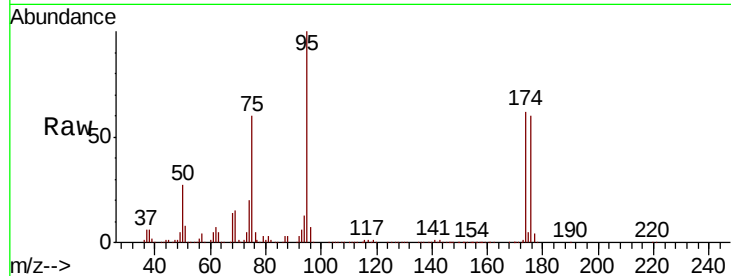




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.206 ppbv
 RT: 14.47 min Scan# 3633
 Delta R.T. -0.01 min
 Lab File: VL034501.D
 Acq: 17 Dec 2019 20:33

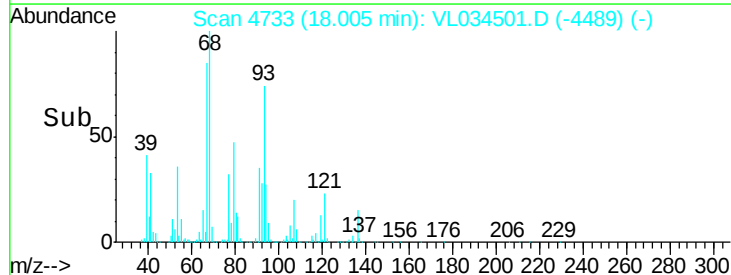
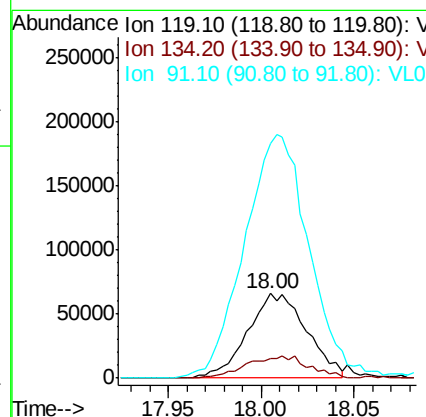
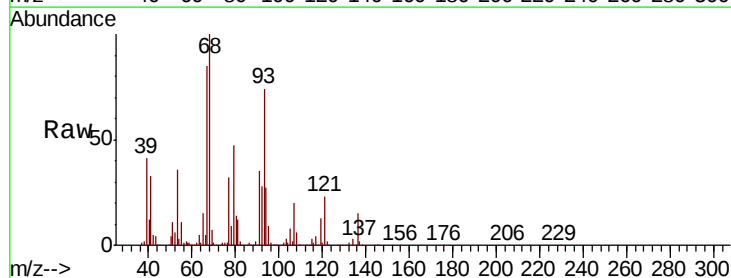
Instrument :
 MSVOA_L
 ClientSampleId :
 LIHA-IA2

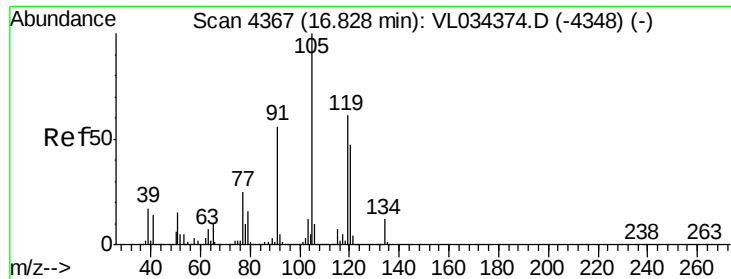
Tgt Ion: 95 Resp: 1560736
 Ion Ratio Lower Upper
 95 100
 174 64.3 52.2 78.2
 175 4.8 3.8 5.8



#69
 p-Isopropyltoluene
 Concen: 0.434 ppbv
 RT: 18.00 min Scan# 4733
 Delta R.T. 0.28 min
 Lab File: VL034501.D
 Acq: 17 Dec 2019 20:33

Tgt Ion: 119 Resp: 144242
 Ion Ratio Lower Upper
 119 100
 134 29.1 20.6 31.0
 91 323.4 26.3 39.5#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.069 ppbv
 RT: 16.82 min Scan# 4366
 Delta R.T. -0.00 min
 Lab File: VL034501.D
 Acq: 17 Dec 2019 20:33

Instrument :
 MSVOA_L
 ClientSampleId :
 LIHA-IA2

Tgt Ion:	105	Resp:	19891
Ion	Ratio	Lower	Upper
105	100		
120	33.9	37.4	56.0#
91	13.1	46.3	69.5#
77	9.7	20.6	30.8#

