

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL120219\
 Data File : VL034444.D
 Acq On : 3 Dec 2019 2:36
 Operator : SY/AP
 Sample : K6097-03
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2A

Quant Time: Dec 03 06:04:10 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	5.69	49	754109	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.21	114	1490978	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.15	117	1410513	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.48	95	1256258	10.59	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.90%

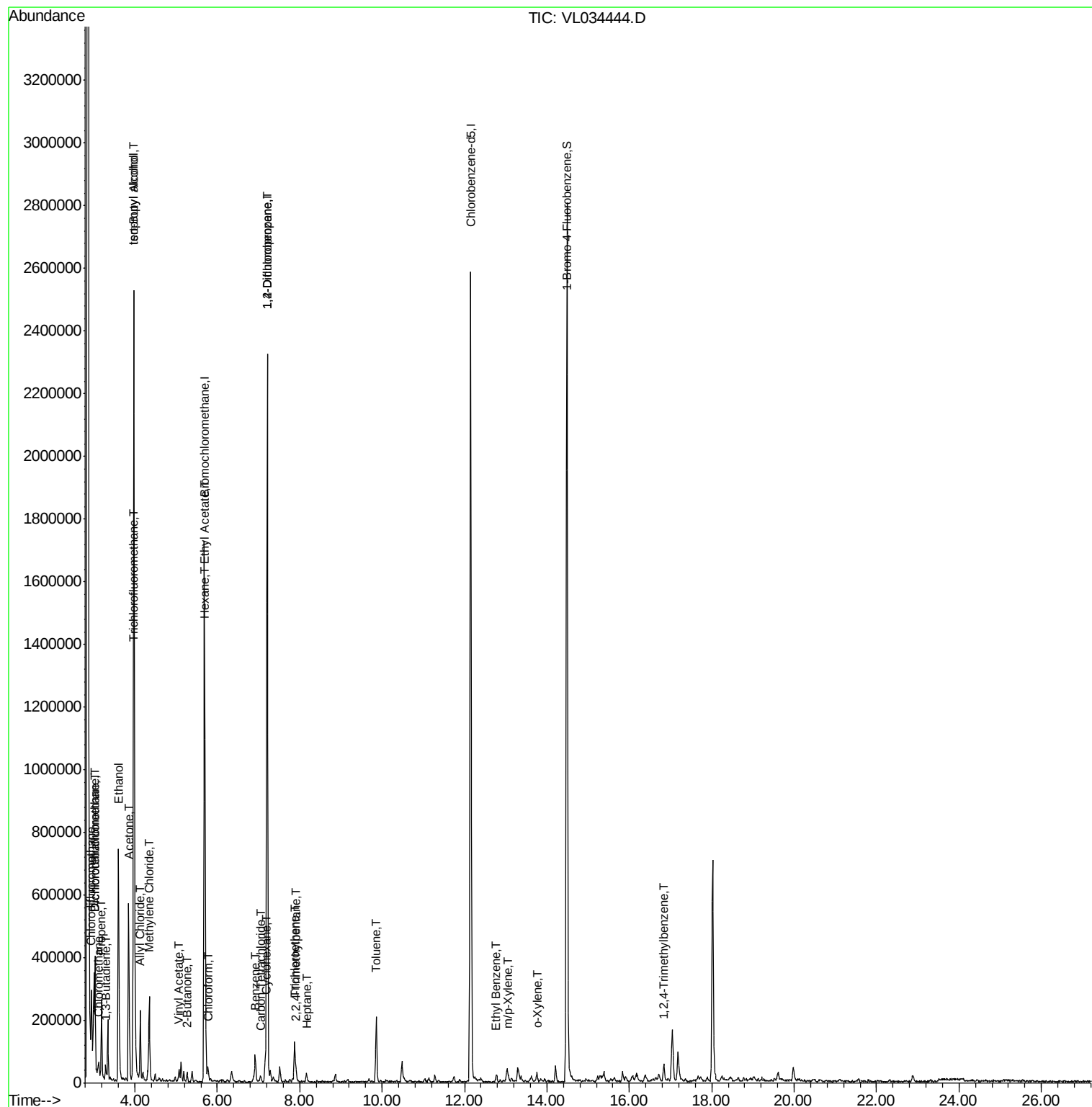
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.03	85	242764	1.779	ppbv	94
3) Chlorodifluoromethane	2.94	51	159689	1.697	ppbv #	69
4) Chloromethane	3.12	50	28265	0.509	ppbv	94
8) Dichlorotetrafluoroethane	3.03	85	242764	1.982	ppbv #	18
9) Propene	3.19	41	53241	1.275	ppbv	92
10) Heptane	8.17	43	3265	0.030	ppbv #	1
11) Trichlorofluoromethane	3.95	101	45898	0.338	ppbv	87
13) Ethanol	3.60	45	731846	62.894	ppbv	96
15) Acetone	3.84	43	560261	5.188	ppbv	99
16) 1,3-Butadiene	3.29	39	11004	0.234	ppbv #	61
17) tert-Butyl alcohol	3.97	59	100641	1.109	ppbv	97
19) Isopropyl Alcohol	3.97	45	2823637	40.795	ppbv #	99
20) Methylene Chloride	4.34	84	86297	2.254	ppbv	90
21) Allyl Chloride	4.13	41	60361	0.933	ppbv #	55
23) Vinyl Acetate	5.08	43	9148	0.065	ppbv #	55
25) Ethyl Acetate	5.70	43	103106	0.535	ppbv #	87
26) Hexane	5.71	57	102134	1.233	ppbv #	50
29) Chloroform	5.77	83	22598	0.169	ppbv	98
30) Cyclohexane	7.17	84	15705	0.251	ppbv #	17
34) 2-Butanone	5.27	43	25715	0.210	ppbv #	85
35) Carbon Tetrachloride	7.05	117	5240	0.041	ppbv	95
36) Benzene	6.92	78	25774	0.173	ppbv	93
38) Trichloroethene	7.88	130	32245	0.527	ppbv	95
39) 1,2-Dichloropropane	7.21	63	440025	7.663	ppbv #	25
44) 2,2,4-Trimethylpentane	7.91	57	15015	0.055	ppbv #	41
53) Toluene	9.86	91	85038	0.502	ppbv #	53
58) Ethyl Benzene	12.77	91	7076	0.032	ppbv	89
59) m/p-Xylene	13.06	91	12882	0.068	ppbv #	83
60) o-Xylene	13.76	91	16745	0.090	ppbv	93
74) 1,2,4-Trimethylbenzene	16.83	105	25513	0.114	ppbv #	58

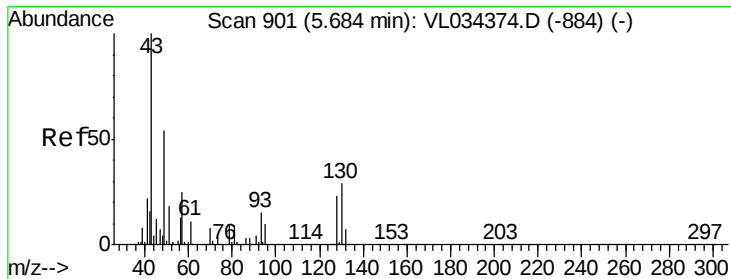
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA_L\METHODS\VL111919AIR.M
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QLast Update : Tue Nov 19 14:15:35 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.00 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

Instrument :

MSVOA_L

ClientSampleId :

IA-2A

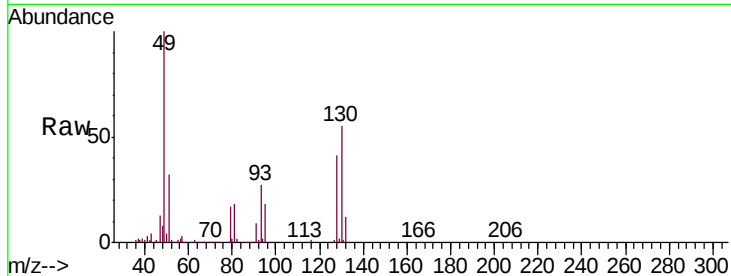
Tgt Ion: 49 Resp: 754109

Ion Ratio Lower Upper

49 100

128 42.1 21.8 65.3

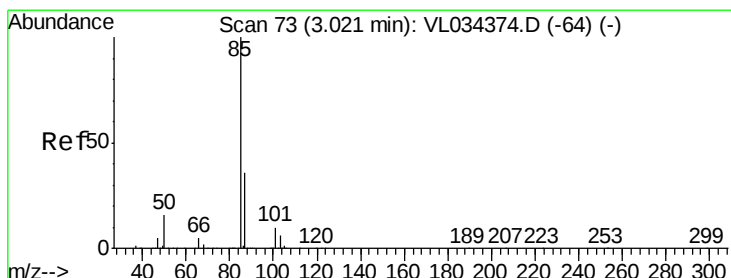
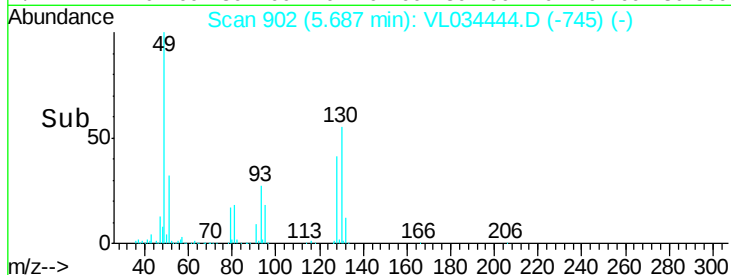
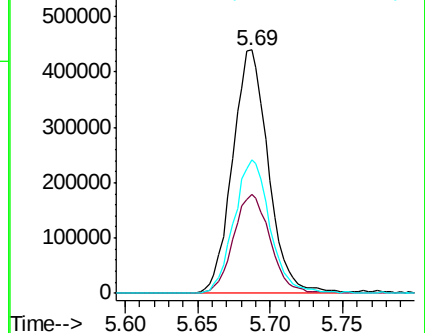
130 55.6 28.0 84.0



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: 1.779 ppbv

RT: 3.03 min Scan# 75

Delta R.T. 0.01 min

Lab File: VL034444.D

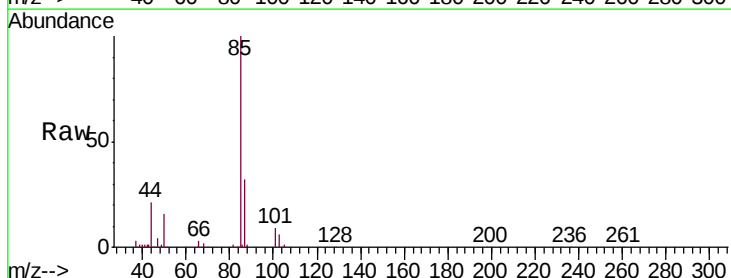
Acq: 3 Dec 2019 2:36

Tgt Ion: 85 Resp: 242764

Ion Ratio Lower Upper

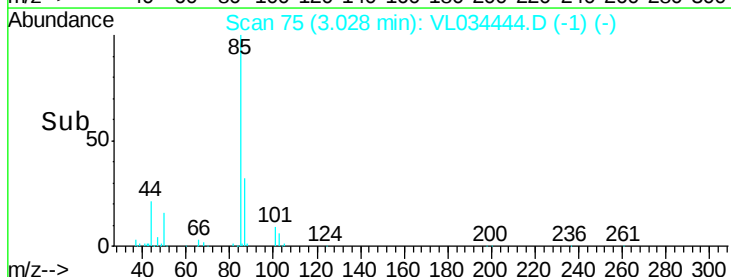
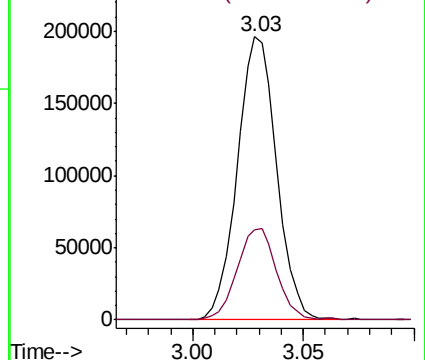
85 100

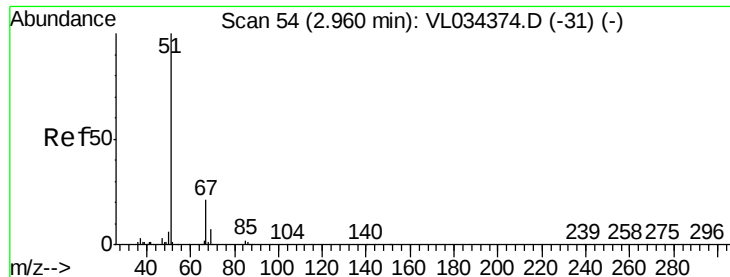
87 31.9 28.5 42.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.697 ppbv

RT: 2.94 min Scan# 48

Delta R.T. -0.02 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

Instrument :

MSVOA_L

ClientSampleId :

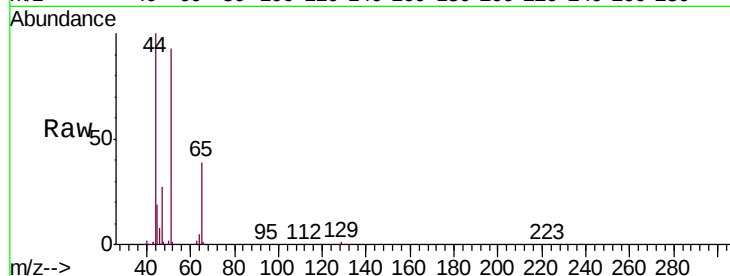
IA-2A

Tgt Ion: 51 Resp: 159689

Ion Ratio Lower Upper

51 100

67 5.8 16.2 24.2#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

2.94

100000

80000

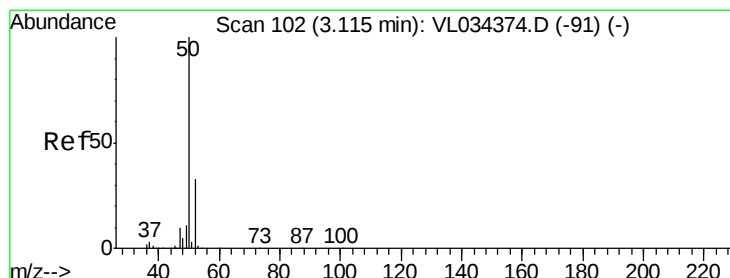
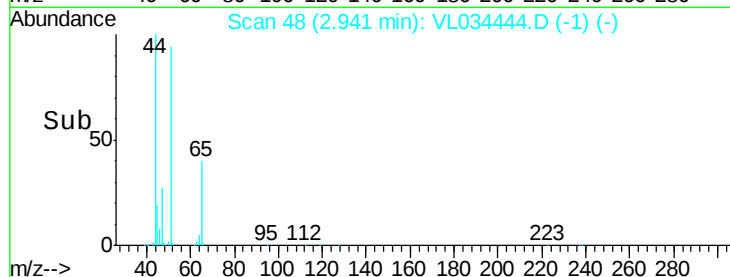
60000

40000

20000

0

Time-->



#4

Chloromethane

Concen: 0.509 ppbv

RT: 3.12 min Scan# 104

Delta R.T. 0.01 min

Lab File: VL034444.D

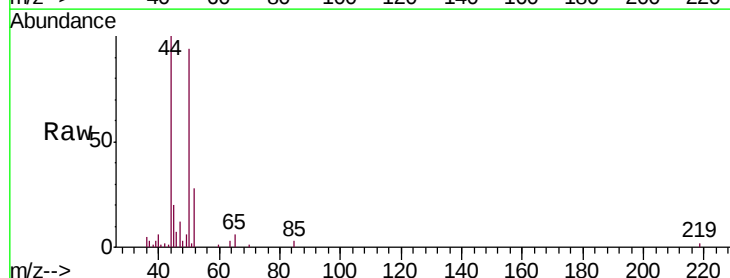
Acq: 3 Dec 2019 2:36

Tgt Ion: 50 Resp: 28265

Ion Ratio Lower Upper

50 100

52 29.9 26.8 40.2



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

3.12

20000

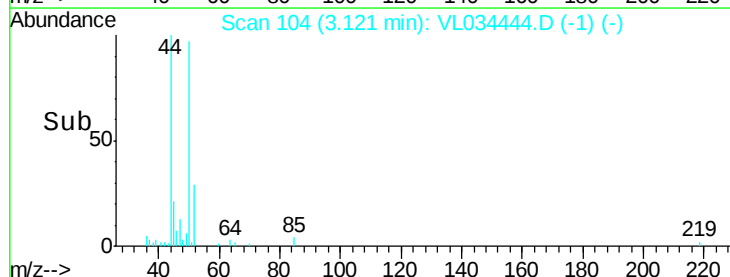
15000

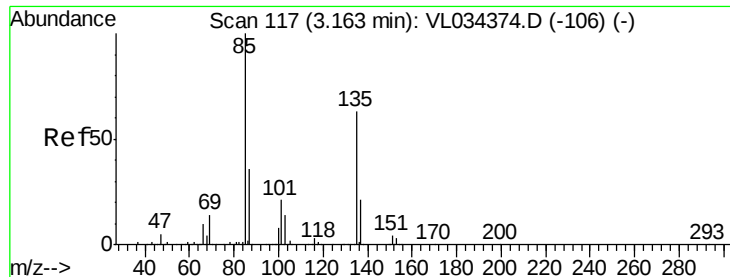
10000

5000

0

Time-->





#8

Dichlorotetrafluoroethane

Concen: 1.982 ppbv

RT: 3.03 min Scan# 75

Delta R.T. -0.13 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

Instrument :

MSVOA_L

ClientSampleId :

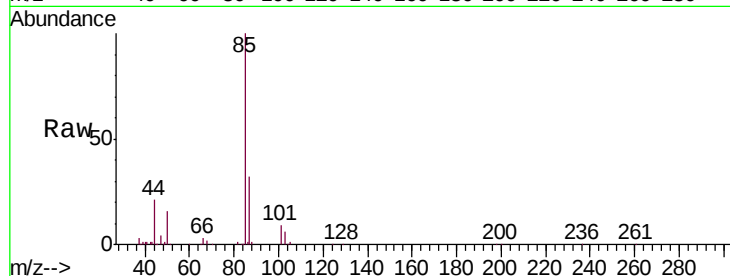
IA-2A

Tgt Ion: 85 Resp: 242764

Ion Ratio Lower Upper

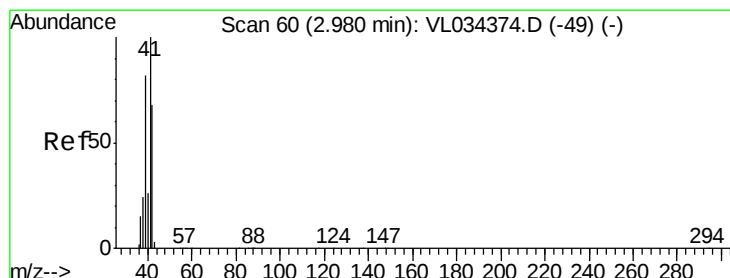
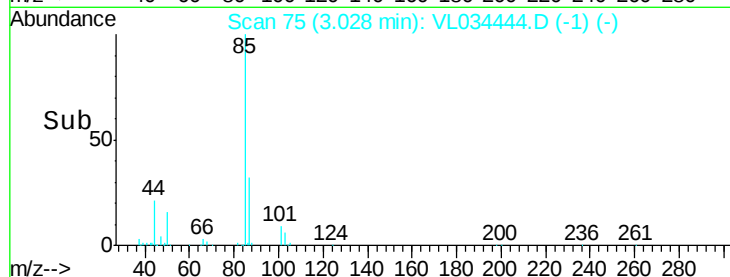
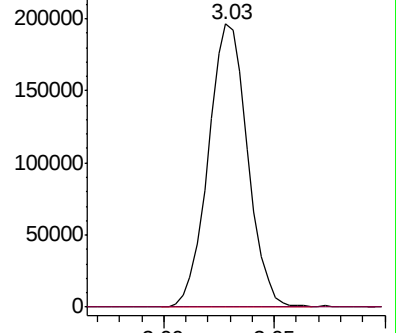
85 100

135 0.1 51.1 76.7#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V



#9

Propene

Concen: 1.275 ppbv

RT: 3.19 min Scan# 124

Delta R.T. 0.21 min

Lab File: VL034444.D

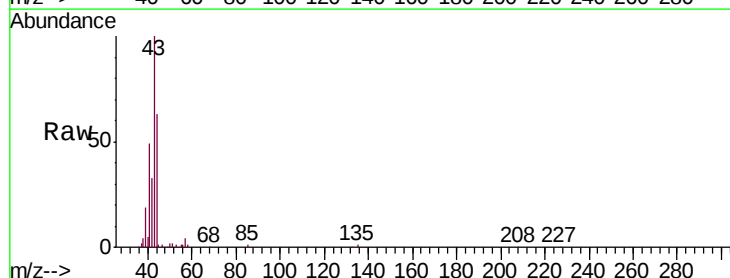
Acq: 3 Dec 2019 2:36

Tgt Ion: 41 Resp: 53241

Ion Ratio Lower Upper

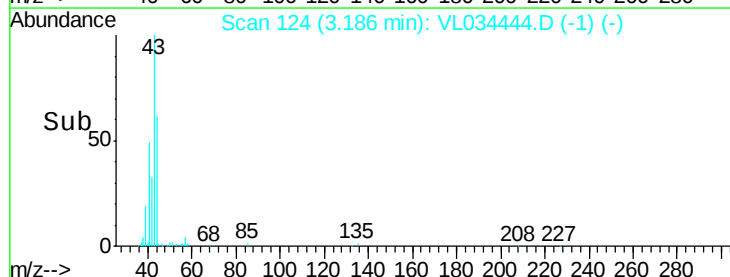
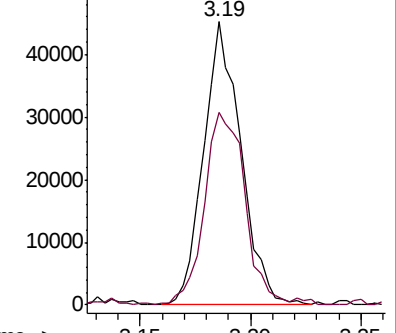
41 100

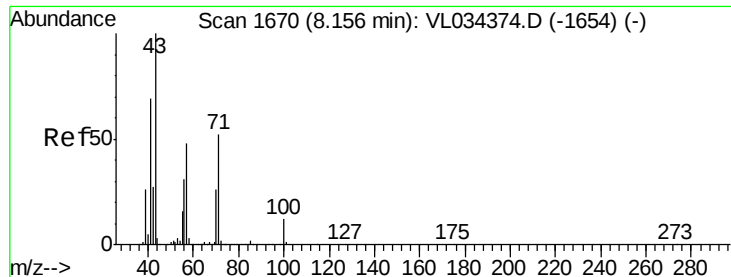
42 74.8 54.6 82.0



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

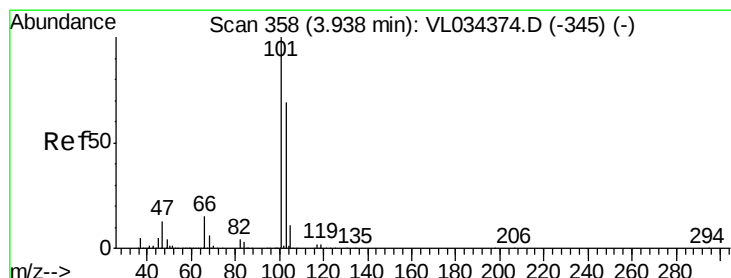
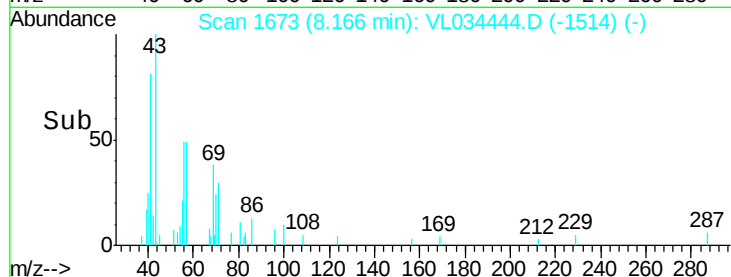
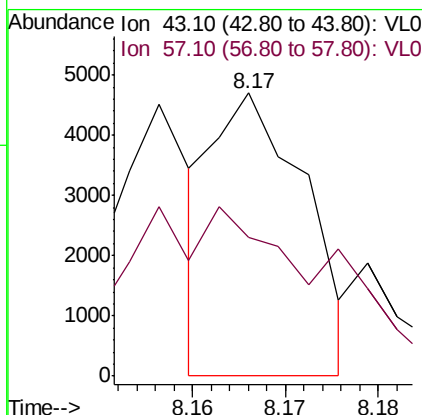
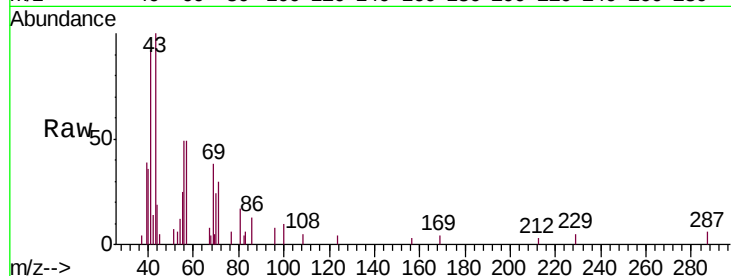




#10
 Heptane
 Concen: 0.030 ppbv
 RT: 8.17 min Scan# 1673
 Delta R.T. 0.01 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

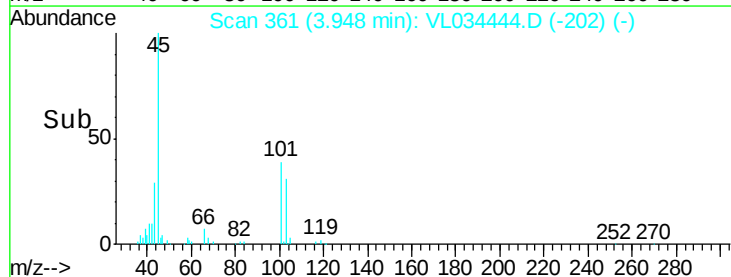
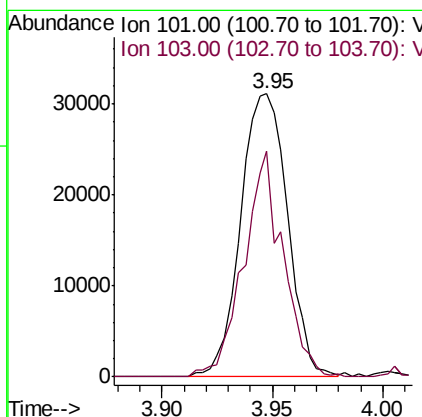
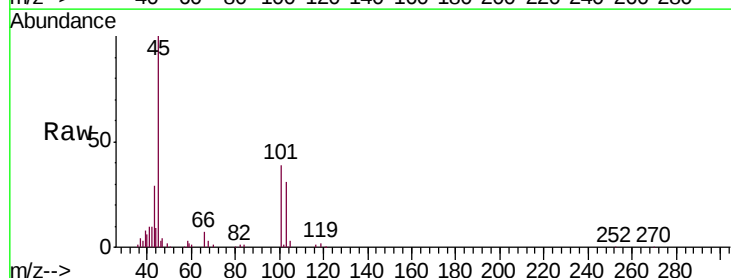
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2A

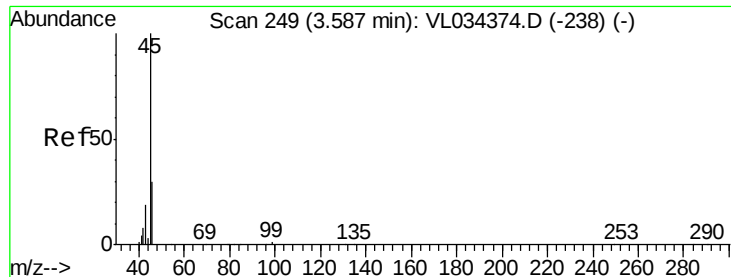
Tgt Ion: 43 Resp: 3265
 Ion Ratio Lower Upper
 43 100
 57 152.2 40.2 60.2#



#11
 Trichlorofluoromethane
 Concen: 0.338 ppbv
 RT: 3.95 min Scan# 361
 Delta R.T. 0.01 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Tgt Ion: 101 Resp: 45898
 Ion Ratio Lower Upper
 101 100
 103 79.9 55.4 83.0





#13

Ethanol

Concen: 62.894 ppbv

RT: 3.60 min Scan# 252

Delta R.T. 0.01 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

Instrument :

MSVOA_L

ClientSampleId :

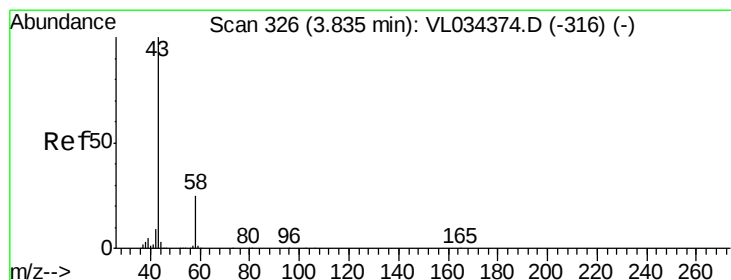
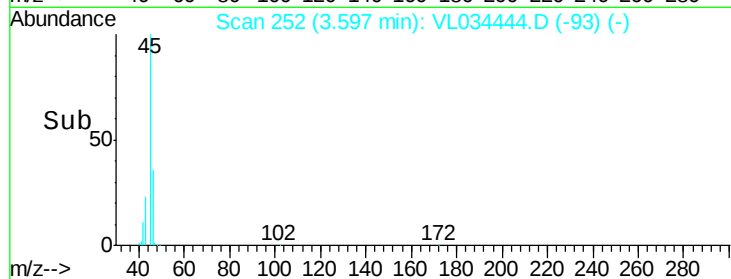
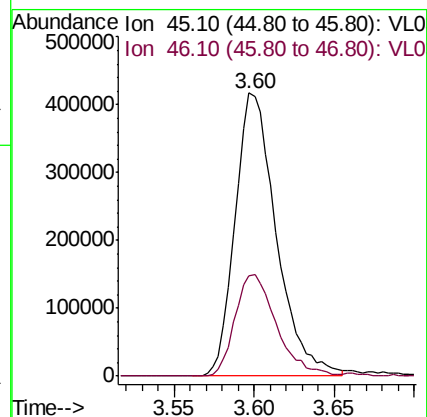
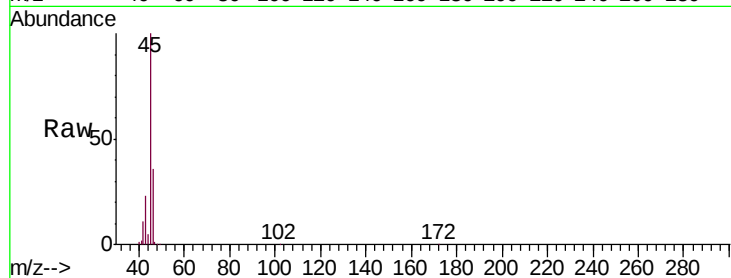
IA-2A

Tgt Ion: 45 Resp: 731846

Ion Ratio Lower Upper

45 100

46 36.9 13.8 55.4



#15

Acetone

Concen: 5.188 ppbv

RT: 3.84 min Scan# 329

Delta R.T. 0.01 min

Lab File: VL034444.D

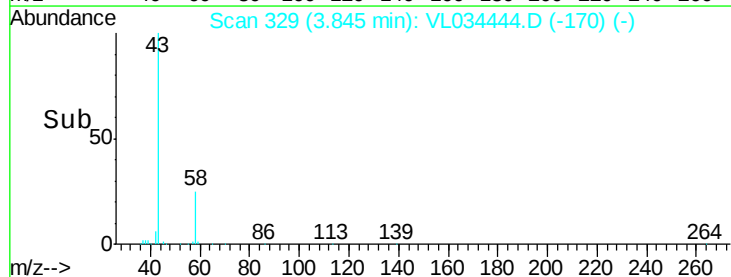
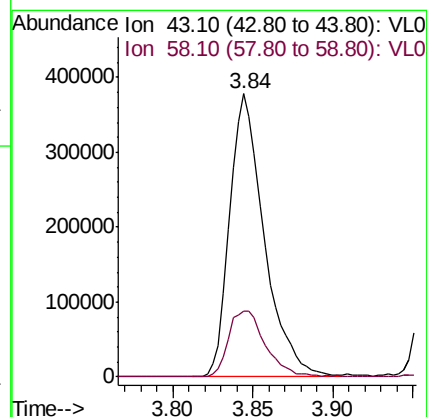
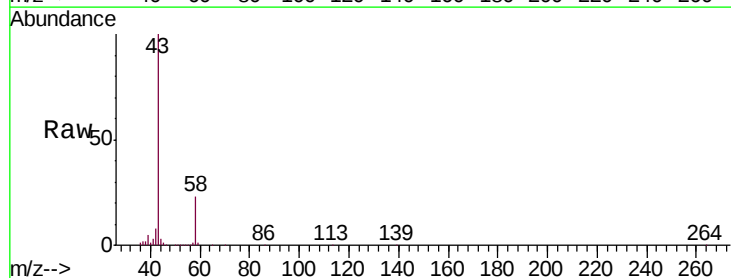
Acq: 3 Dec 2019 2:36

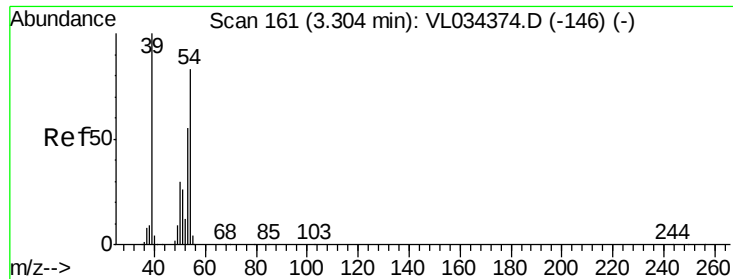
Tgt Ion: 43 Resp: 560261

Ion Ratio Lower Upper

43 100

58 25.0 20.2 30.4

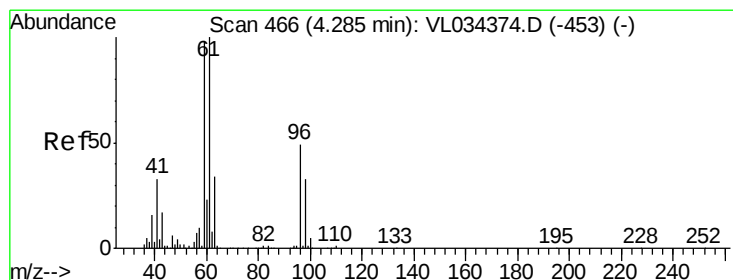
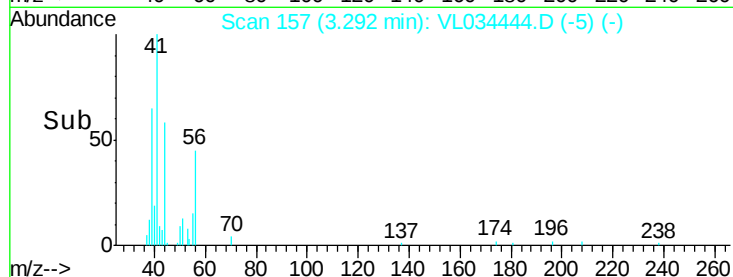
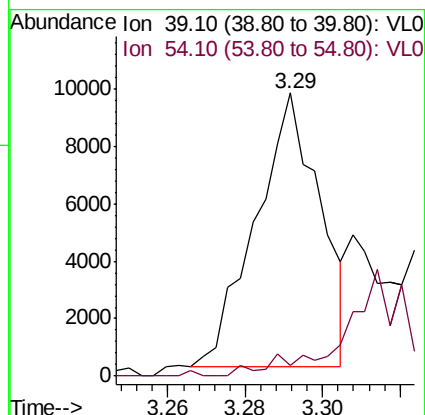
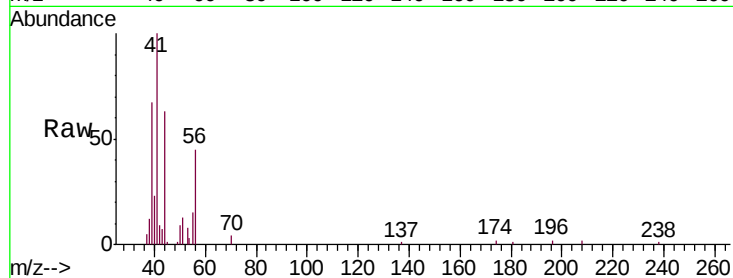




#16
1,3-Butadiene
Concen: 0.234 ppbv
RT: 3.29 min Scan# 157
Delta R.T. -0.01 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

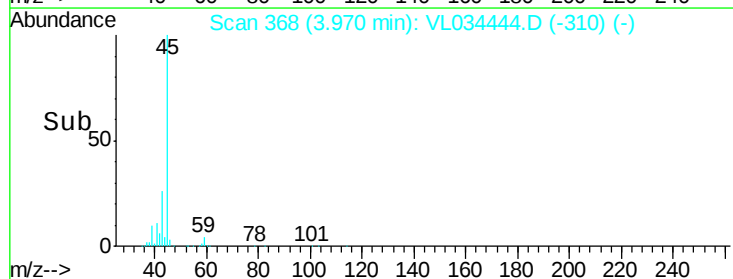
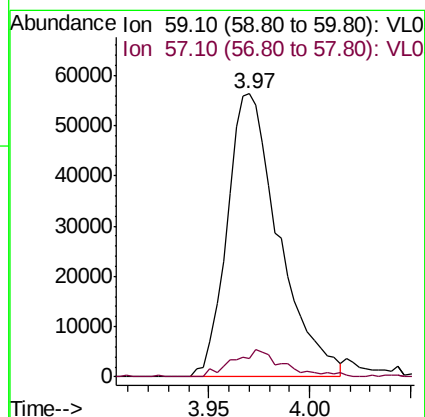
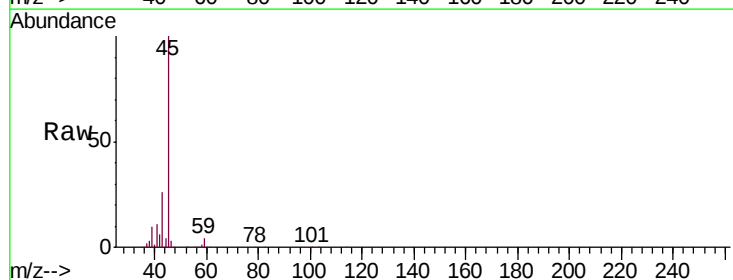
Instrument :
MSVOA_L
ClientSampleId :
IA-2A

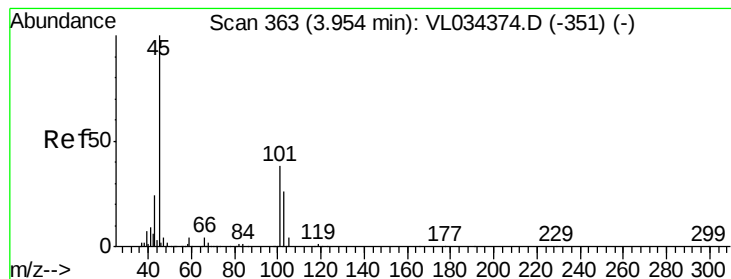
Tgt Ion: 39 Resp: 11004
Ion Ratio Lower Upper
39 100
54 46.4 64.7 97.1#



#17
tert-Butyl alcohol
Concen: 1.109 ppbv
RT: 3.97 min Scan# 368
Delta R.T. -0.32 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

Tgt Ion: 59 Resp: 100641
Ion Ratio Lower Upper
59 100
57 9.7 8.8 13.2



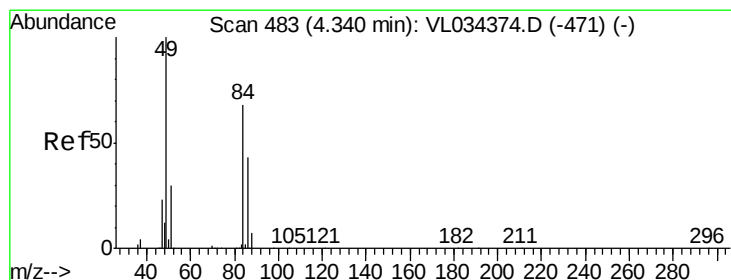
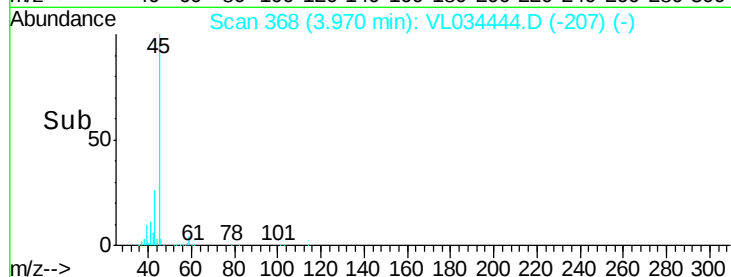
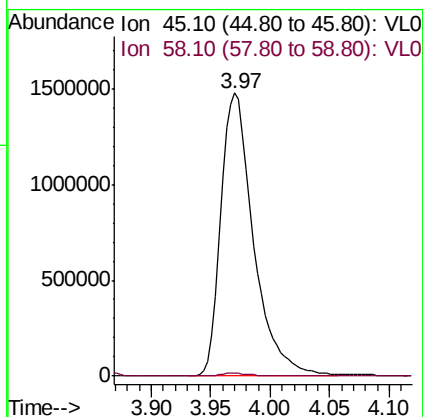
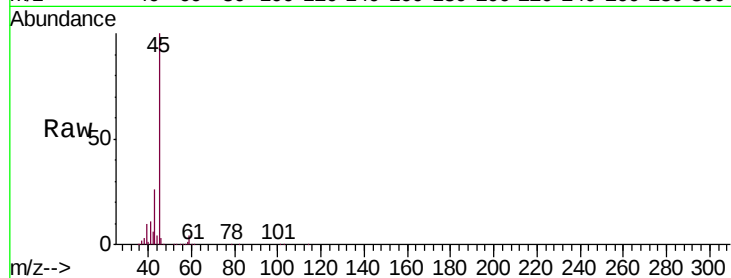


#19

Isopropyl Alcohol
 Concen: 40.795 ppbv
 RT: 3.97 min Scan# 368
 Delta R.T. 0.02 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2A

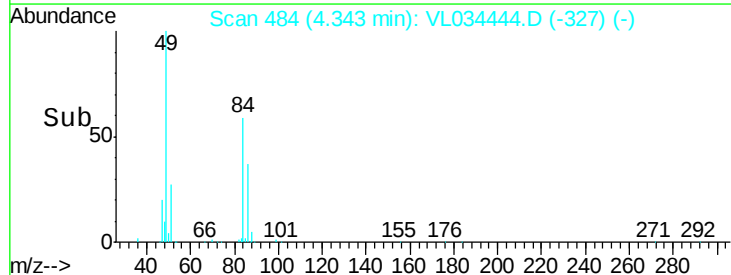
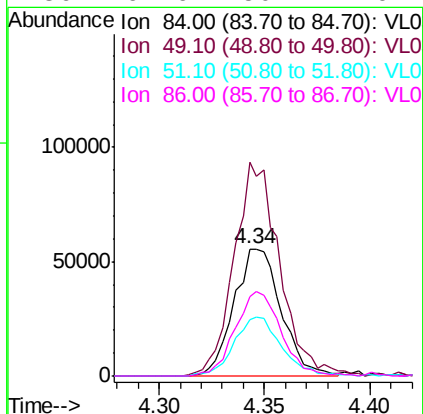
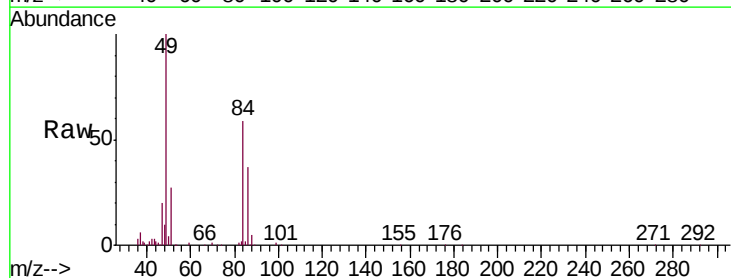
Tgt Ion: 45 Resp: 2823637
 Ion Ratio Lower Upper
 45 100
 58 1.1 1.3 1.9#

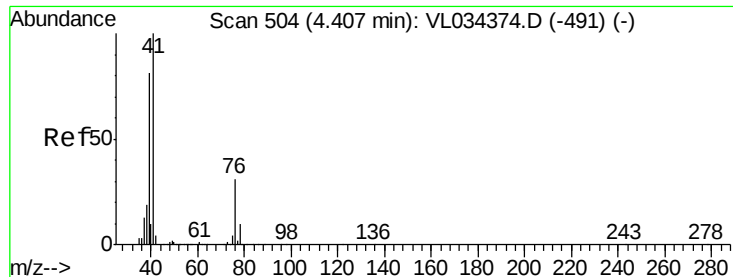


#20

Methylene Chloride
 Concen: 2.254 ppbv
 RT: 4.34 min Scan# 484
 Delta R.T. 0.00 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Tgt Ion: 84 Resp: 86297
 Ion Ratio Lower Upper
 84 100
 49 167.3 116.8 175.2
 51 44.4 35.6 53.4
 86 62.6 50.7 76.1

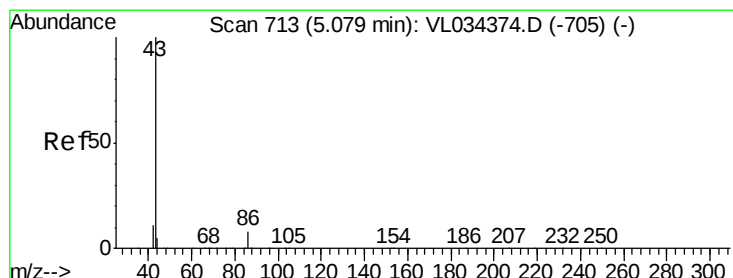
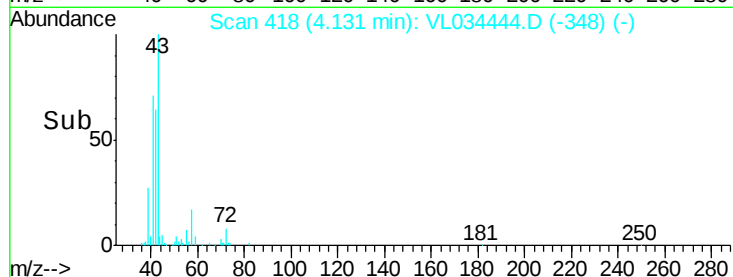
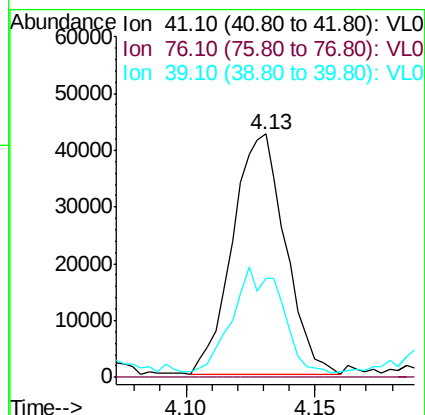
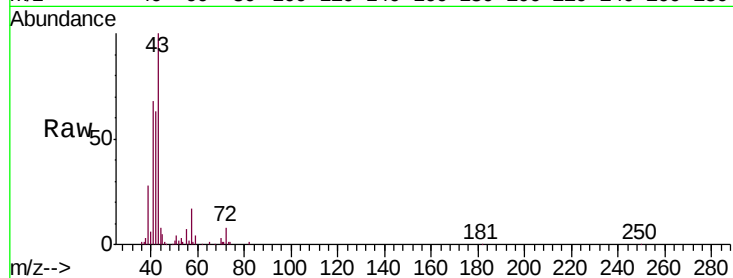




#21
 Allyl Chloride
 Concen: 0.933 ppbv
 RT: 4.13 min Scan# 418
 Delta R.T. -0.28 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

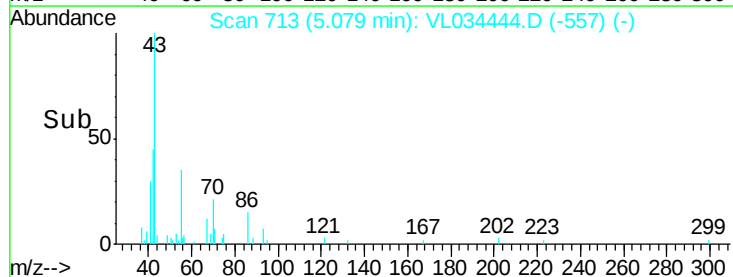
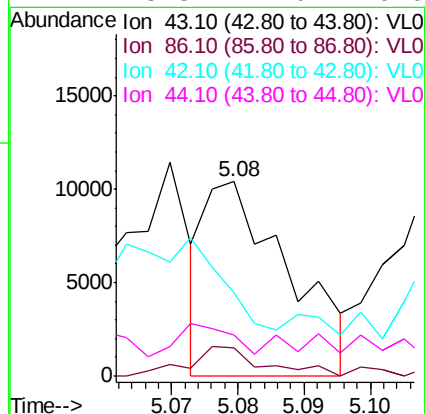
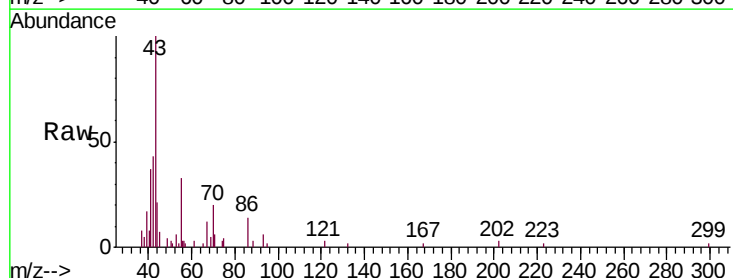
Instrument :
 MSVOA_L
 ClientSampled :
 IA-2A

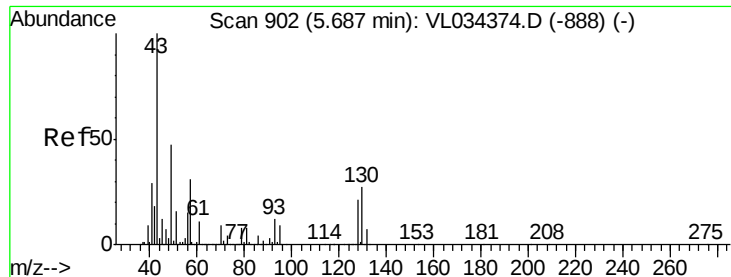
Tgt Ion: 41 Resp: 60361
 Ion Ratio Lower Upper
 41 100
 76 0.2 24.2 36.2#
 39 45.8 66.9 100.3#



#23
 Vinyl Acetate
 Concen: 0.065 ppbv
 RT: 5.08 min Scan# 713
 Delta R.T. 0.00 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Tgt Ion: 43 Resp: 9148
 Ion Ratio Lower Upper
 43 100
 86 21.0 5.8 8.6#
 42 32.5 8.9 13.3#
 44 13.5 4.0 6.0#

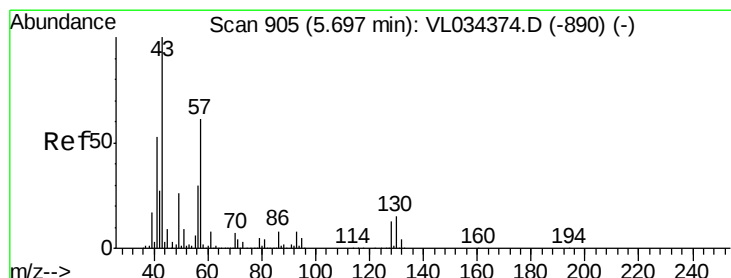
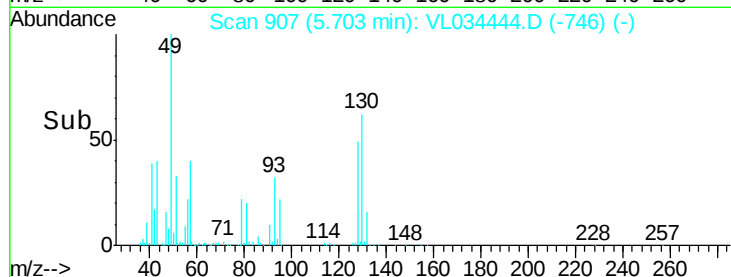
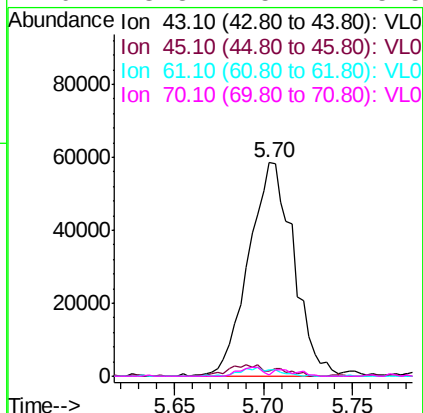
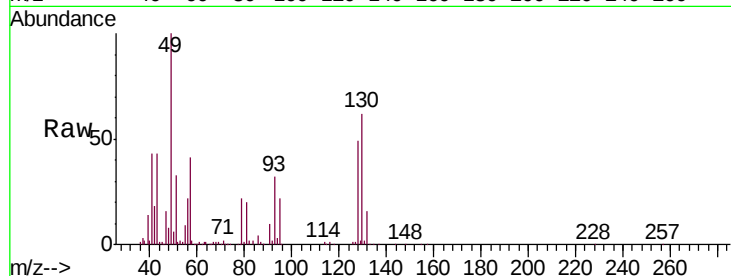




#25
Ethyl Acetate
Concen: 0.535 ppbv
RT: 5.70 min Scan# 907
Delta R.T. 0.02 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

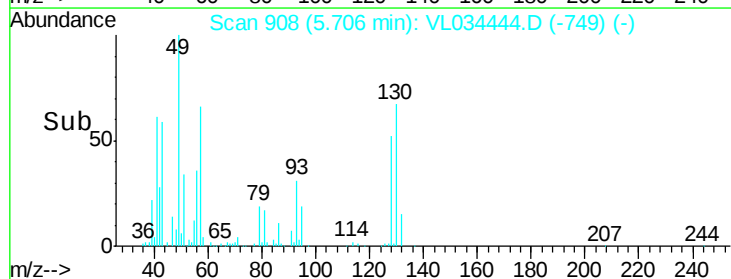
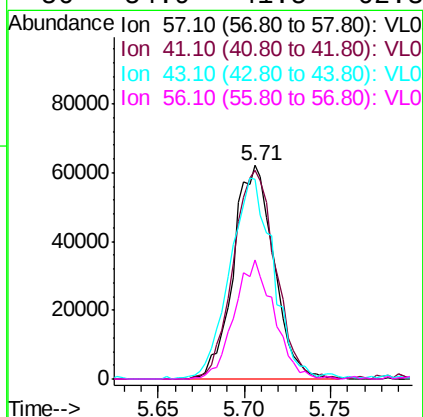
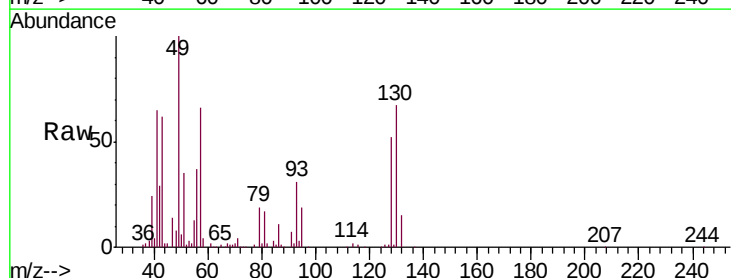
Instrument :
MSVOA_L
ClientSampleId :
IA-2A

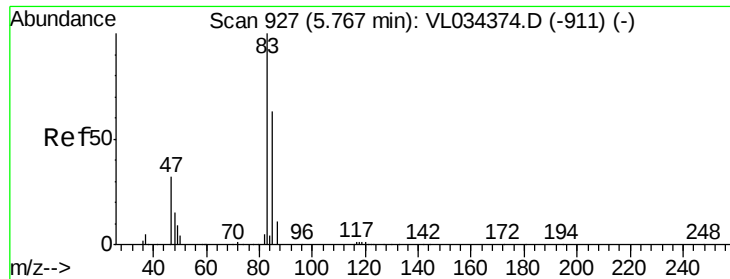
Tgt Ion:	43	Resp:	103106
Ion	Ratio	Lower	Upper
43	100		
45	6.0	8.2	12.4#
61	3.5	7.5	11.3#
70	3.8	5.7	8.5#



#26
Hexane
Concen: 1.233 ppbv
RT: 5.71 min Scan# 908
Delta R.T. 0.01 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

Tgt Ion:	57	Resp:	102134
Ion	Ratio	Lower	Upper
57	100		
41	102.1	75.0	112.4
43	104.0	186.6	279.8#
56	54.9	41.5	62.3





#29

Chloroform

Concen: 0.169 ppbv

RT: 5.77 min Scan# 928

Delta R.T. 0.00 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

Instrument :

MSVOA_L

ClientSampleId :

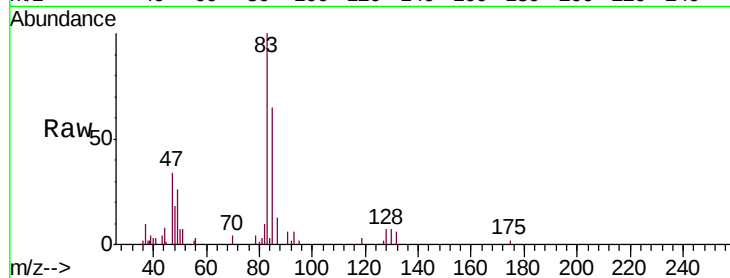
IA-2A

Tgt Ion: 83 Resp: 22598

Ion Ratio Lower Upper

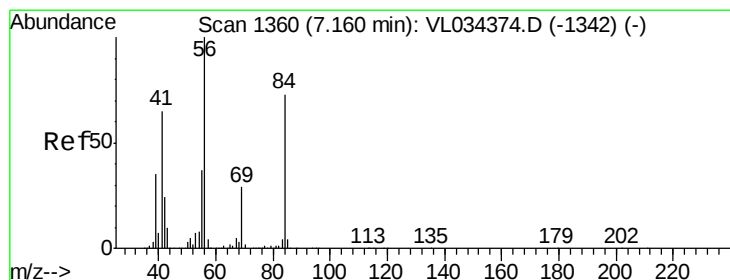
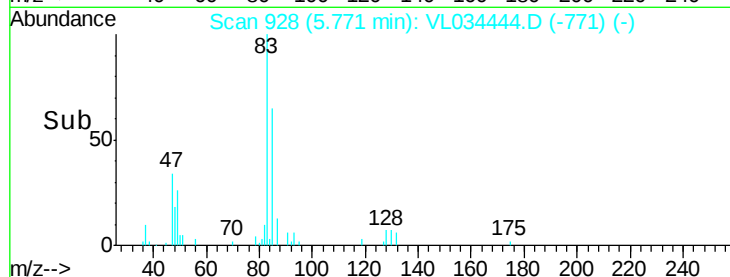
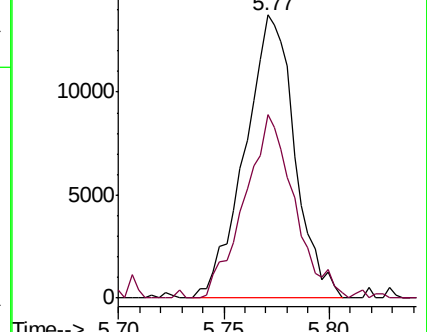
83 100

85 64.8 50.4 75.6



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#30

Cyclohexane

Concen: 0.251 ppbv

RT: 7.17 min Scan# 1363

Delta R.T. 0.01 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

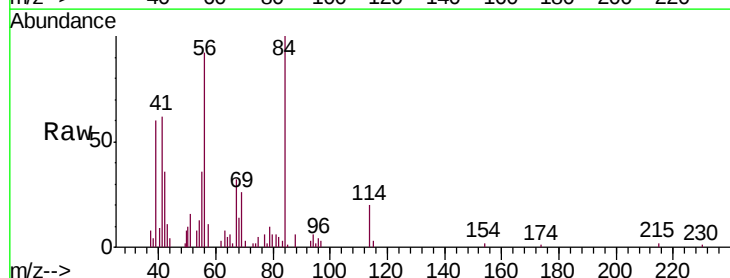
Tgt Ion: 84 Resp: 15705

Ion Ratio Lower Upper

84 100

56 0.0 112.6 169.0#

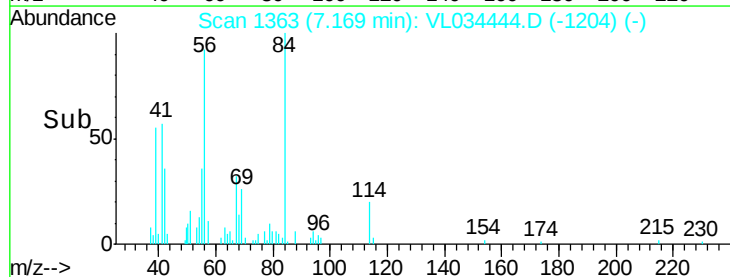
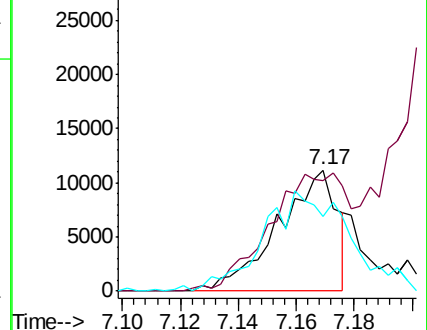
41 123.7 73.4 110.2#

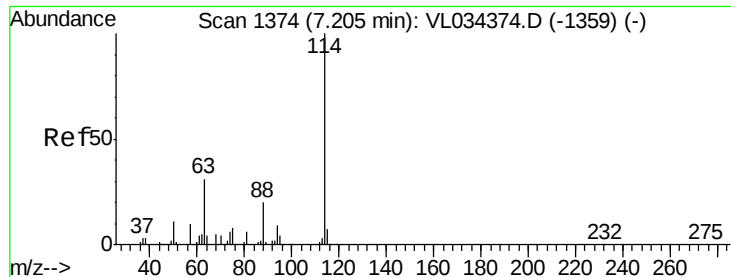


Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

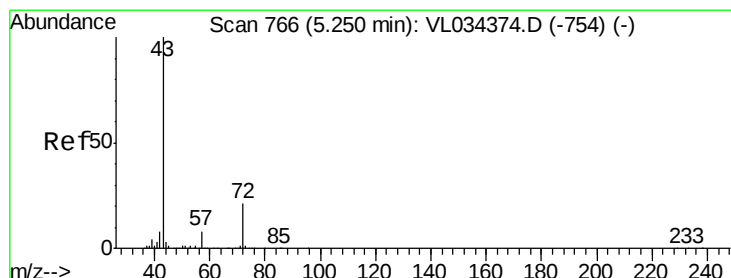
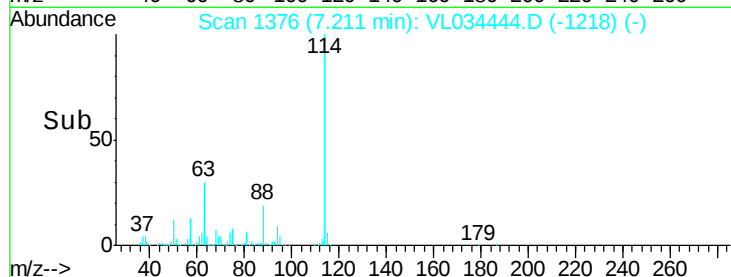
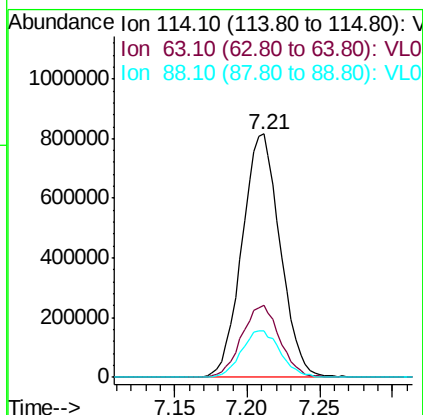
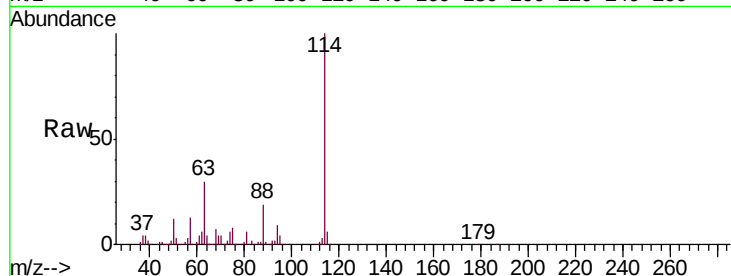




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.21 min Scan# 1376
 Delta R.T. 0.01 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

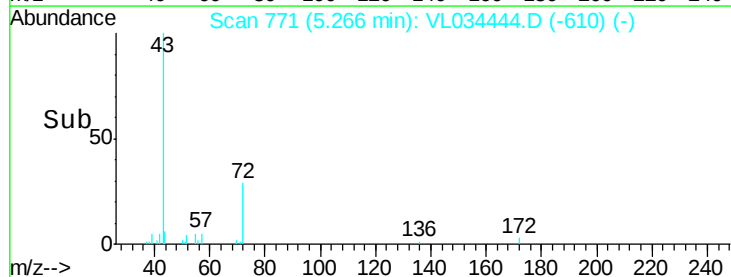
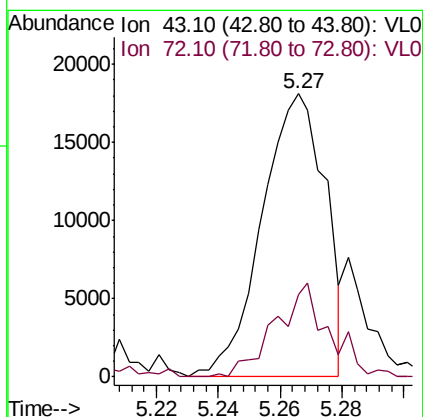
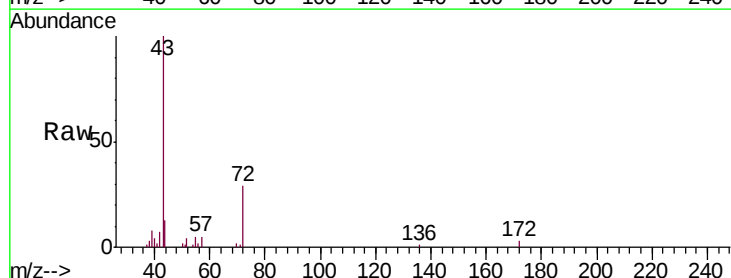
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2A

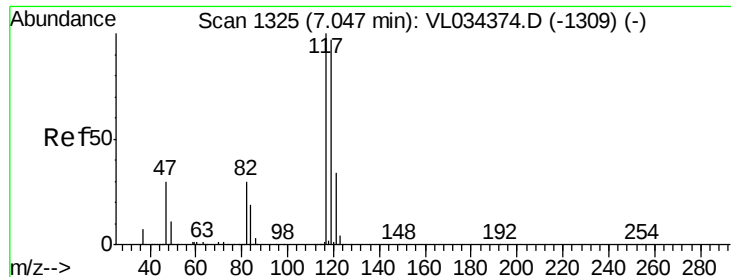
Tgt Ion:114 Resp: 1490978
 Ion Ratio Lower Upper
 114 100
 63 29.7 24.2 36.4
 88 19.6 15.9 23.9



#34
 2-Butanone
 Concen: 0.210 ppbv
 RT: 5.27 min Scan# 771
 Delta R.T. 0.02 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Tgt Ion: 43 Resp: 25715
 Ion Ratio Lower Upper
 43 100
 72 28.4 17.0 25.6#





#35

Carbon Tetrachloride

Concen: 0.041 ppbv

RT: 7.05 min Scan# 1325

Delta R.T. 0.00 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

Instrument :

MSVOA_L

ClientSampleId :

IA-2A

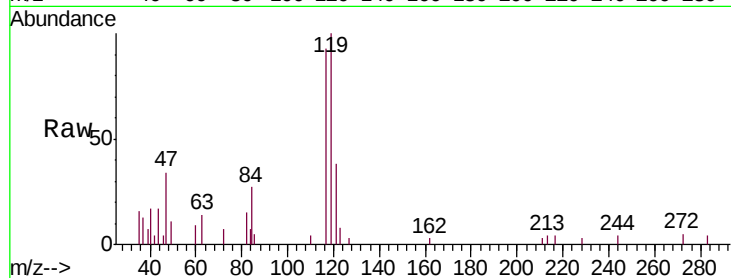
Tgt Ion: 117 Resp: 5240

Ion Ratio Lower Upper

117 100

119 99.9 77.3 115.9

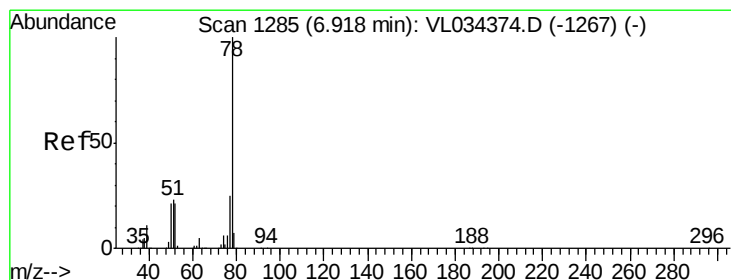
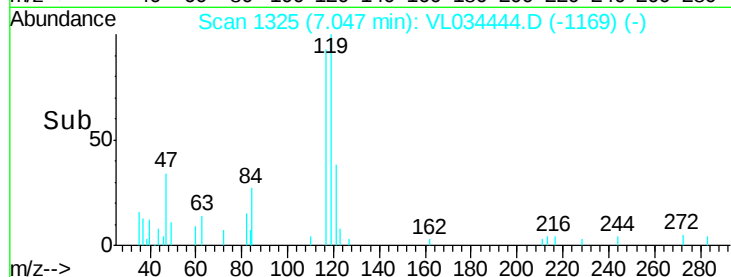
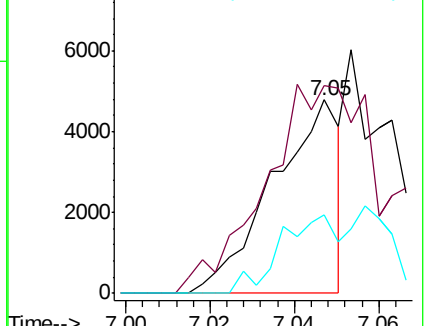
121 40.7 27.4 41.2



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: 0.173 ppbv

RT: 6.92 min Scan# 1285

Delta R.T. 0.00 min

Lab File: VL034444.D

Acq: 3 Dec 2019 2:36

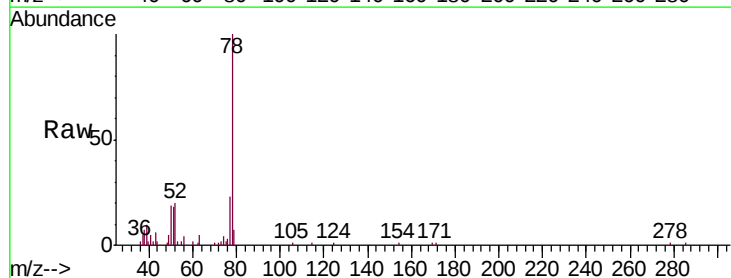
Tgt Ion: 78 Resp: 25774

Ion Ratio Lower Upper

78 100

77 22.2 20.2 30.4

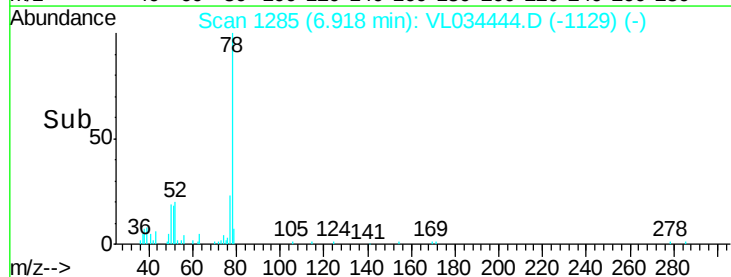
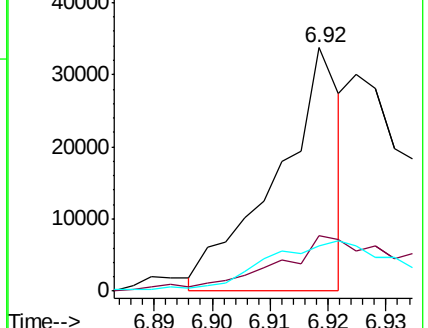
50 18.0 17.1 25.7

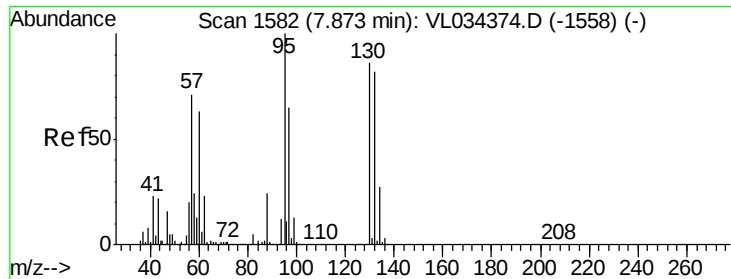


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

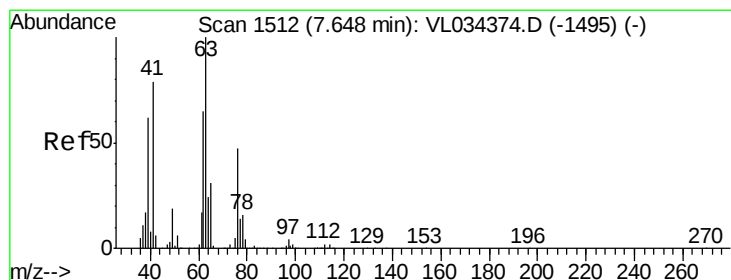
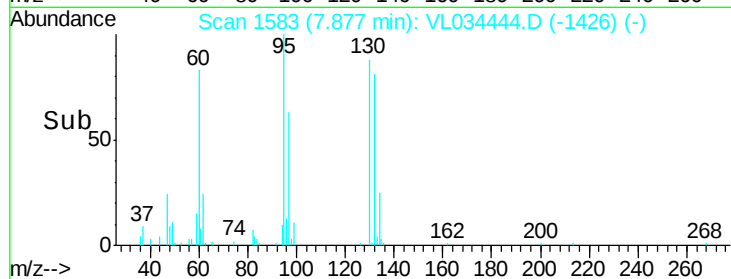
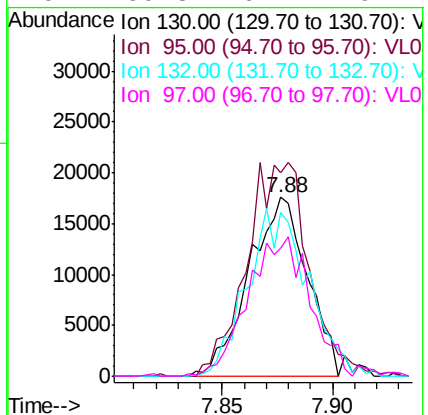
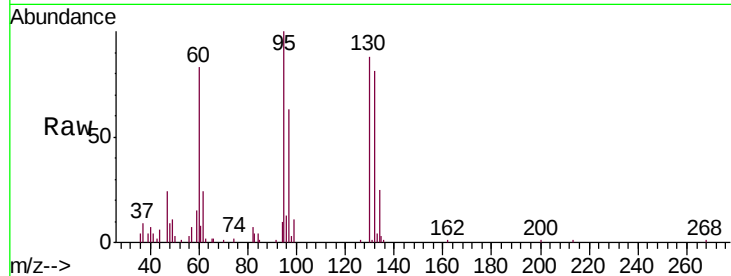




#38
 Trichloroethene
 Concen: 0.527 ppbv
 RT: 7.88 min Scan# 1583
 Delta R.T. 0.00 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

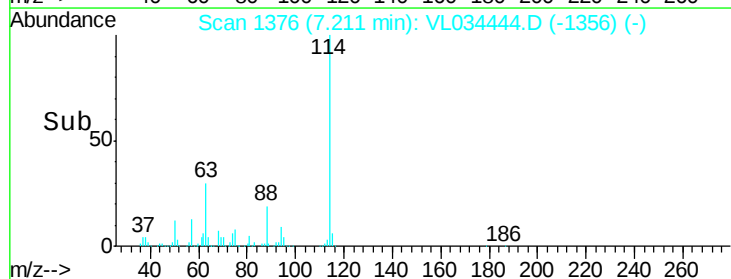
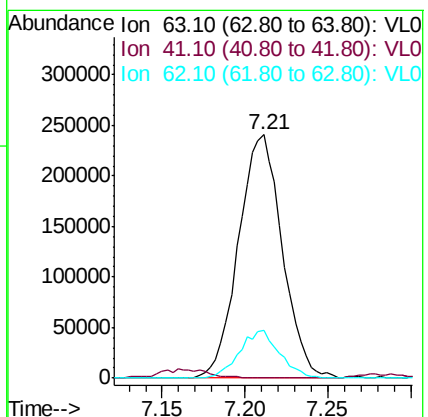
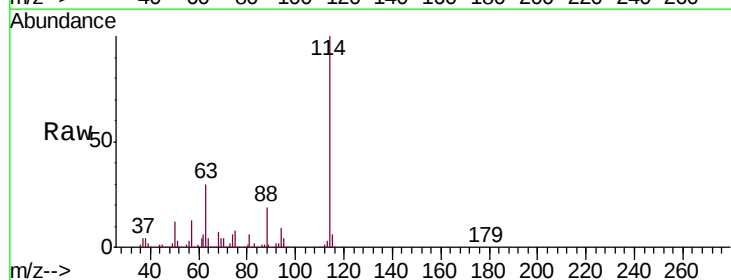
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2A

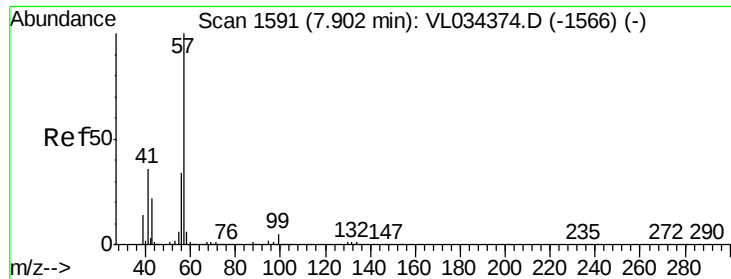
Tgt Ion:130 Resp: 32245
 Ion Ratio Lower Upper
 130 100
 95 112.8 93.4 140.0
 132 91.0 76.4 114.6
 97 69.3 61.1 91.7



#39
 1,2-Dichloropropane
 Concen: 7.663 ppbv
 RT: 7.21 min Scan# 1376
 Delta R.T. -0.44 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Tgt Ion: 63 Resp: 440025
 Ion Ratio Lower Upper
 63 100
 41 0.0 63.1 94.7#
 62 19.8 52.3 78.5#

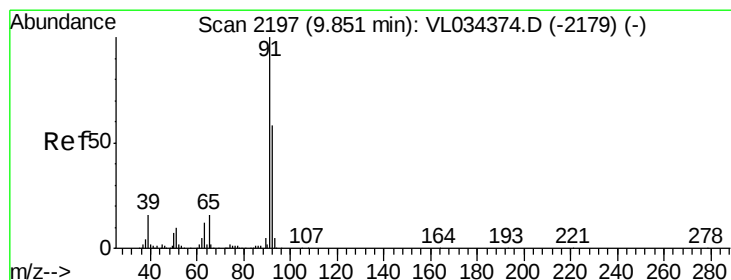
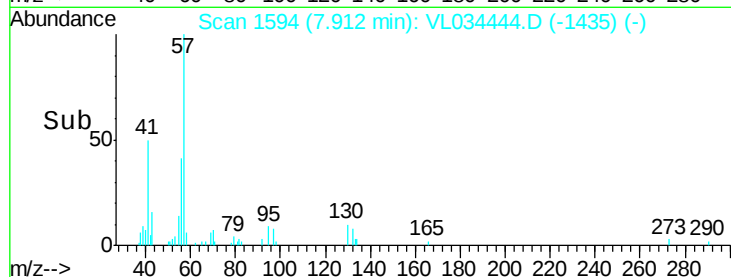
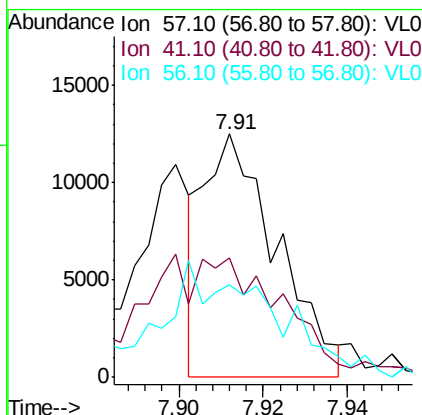
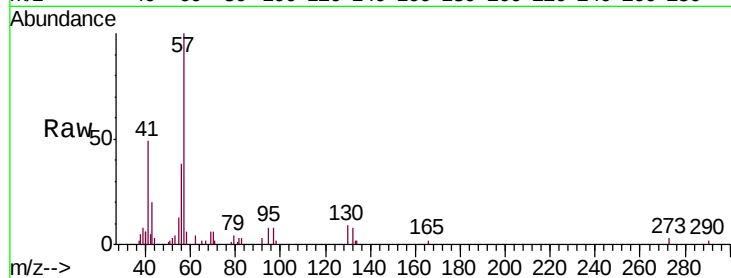




#44
 2,2,4-Trimethylpentane
 Concen: 0.055 ppbv
 RT: 7.91 min Scan# 1594
 Delta R.T. 0.01 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

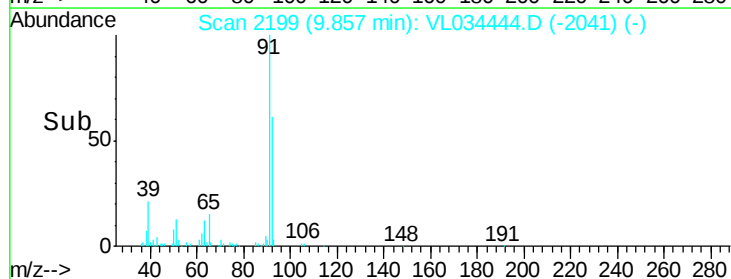
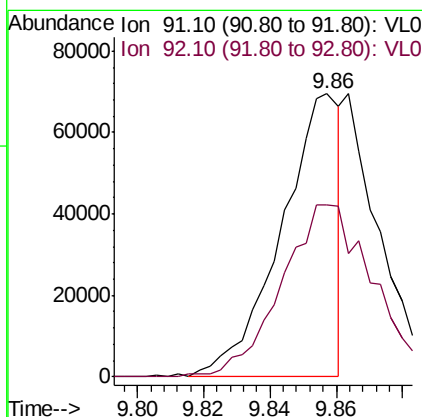
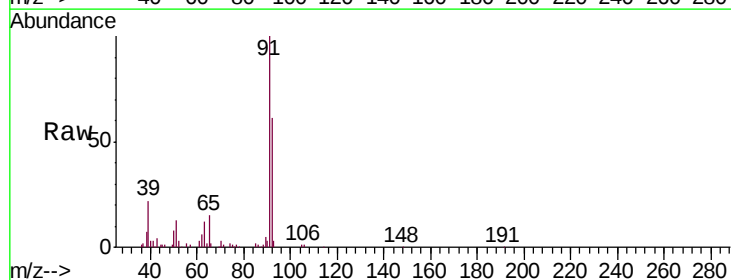
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2A

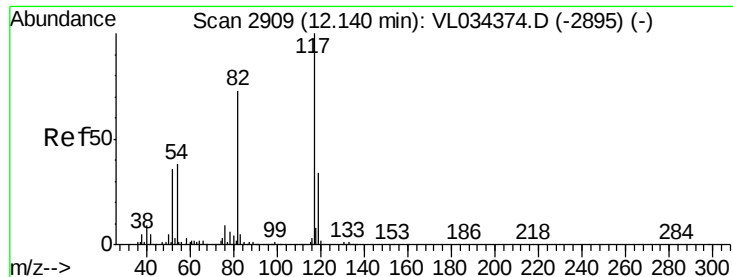
Tgt Ion	Resp	Lower	Upper
57	15015		
41	0.0	28.6	42.8#
56	0.0	25.3	37.9#



#53
 Toluene
 Concen: 0.502 ppbv
 RT: 9.86 min Scan# 2199
 Delta R.T. 0.01 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Tgt Ion	Resp	Lower	Upper
91	85038		
92	95.8	47.9	71.9#

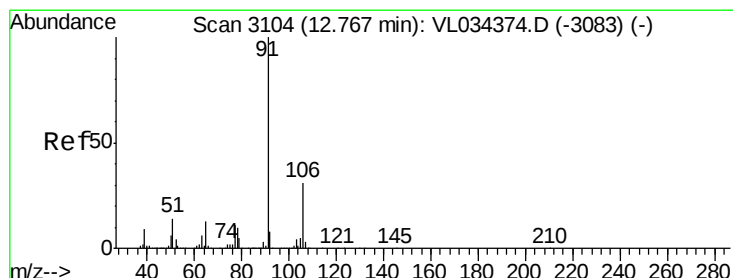
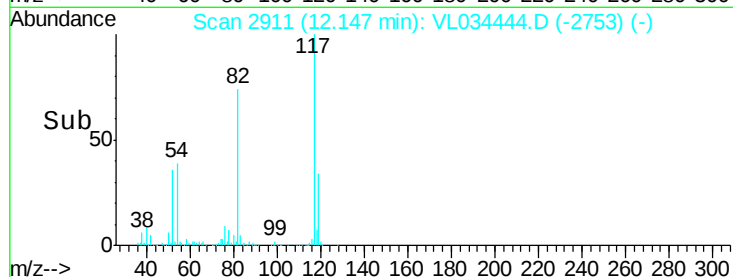
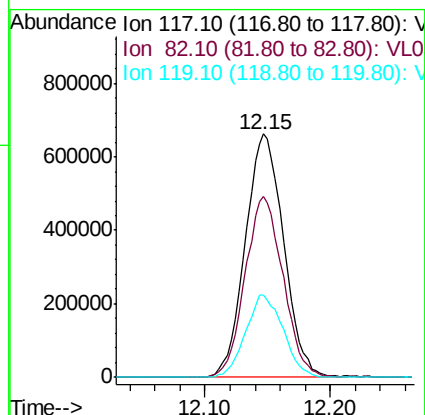
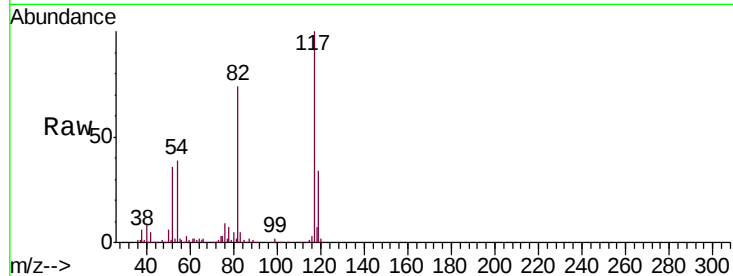




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.15 min Scan# 2911
Delta R.T. 0.01 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

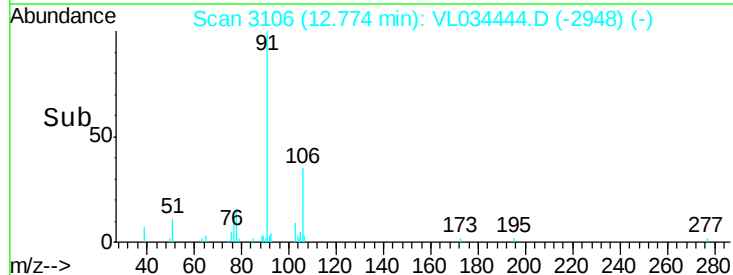
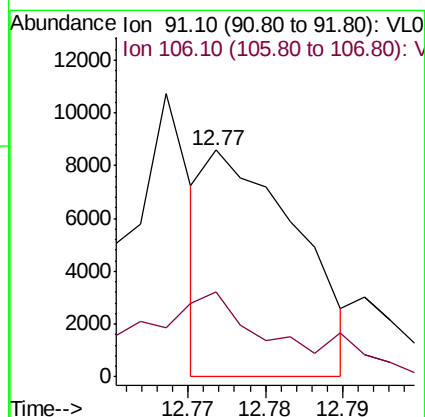
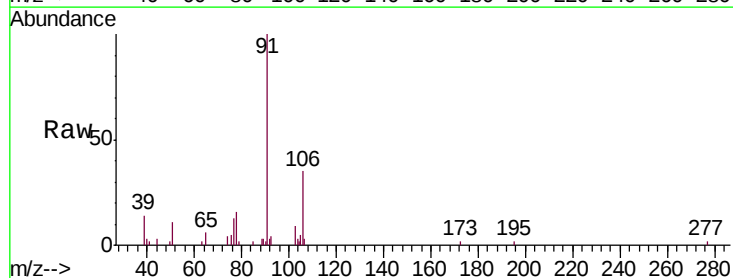
Instrument :
MSVOA_L
ClientSampled :
IA-2A

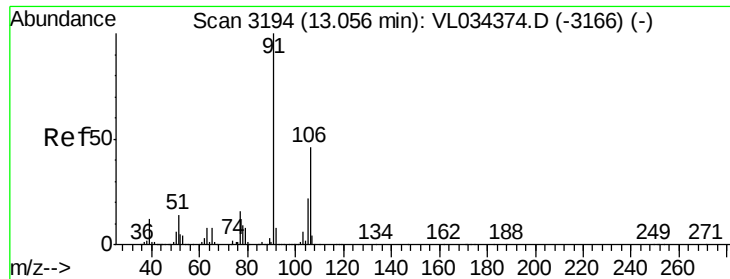
Tgt Ion: 117 Resp: 1410513
Ion Ratio Lower Upper
117 100
82 74.0 57.5 86.3
119 33.3 25.4 38.2



#58
Ethyl Benzene
Concen: 0.032 ppbv
RT: 12.77 min Scan# 3106
Delta R.T. 0.01 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

Tgt Ion: 91 Resp: 7076
Ion Ratio Lower Upper
91 100
106 25.0 24.8 37.2

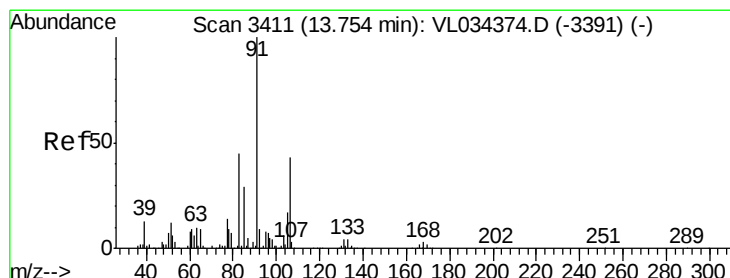
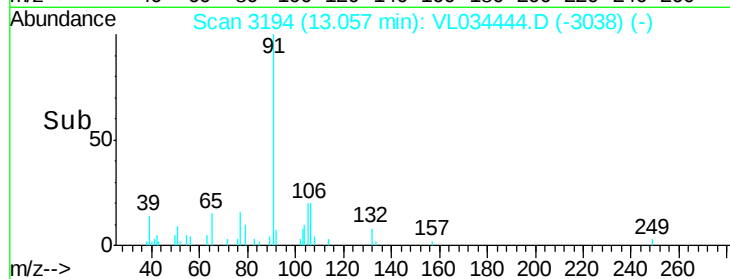
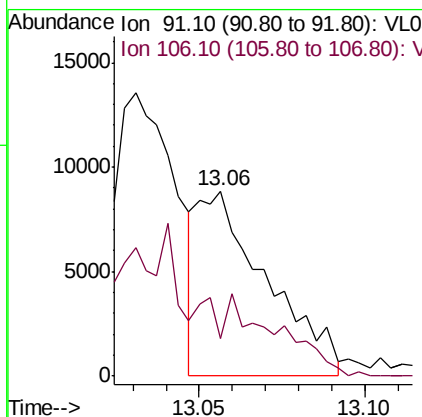
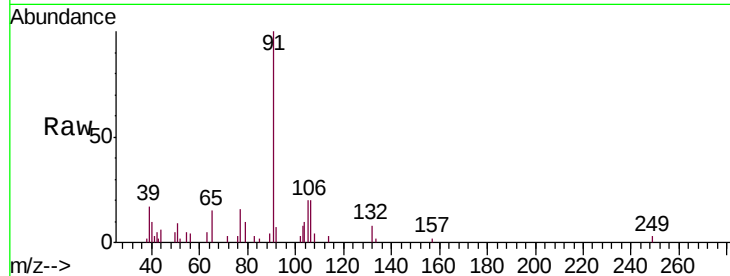




#59
m/p-Xylene
Concen: 0.068 ppbv
RT: 13.06 min Scan# 3194
Delta R.T. 0.00 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

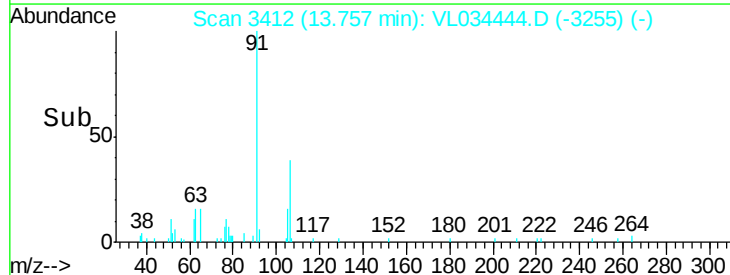
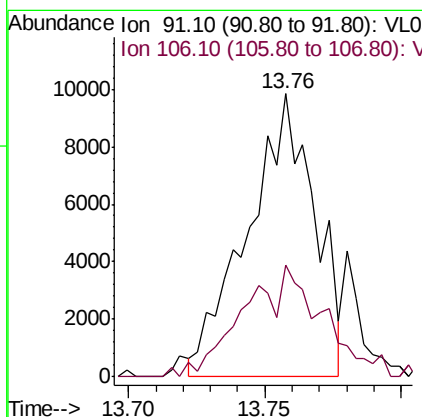
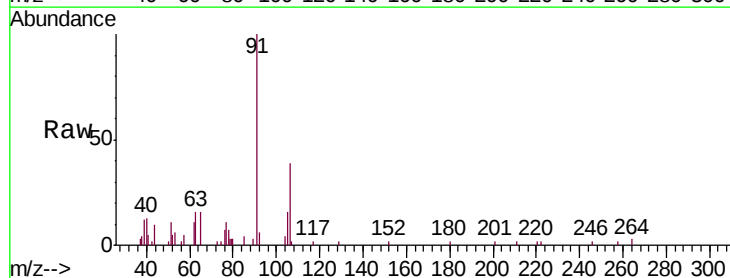
Instrument :
MSVOA_L
ClientSampleId :
IA-2A

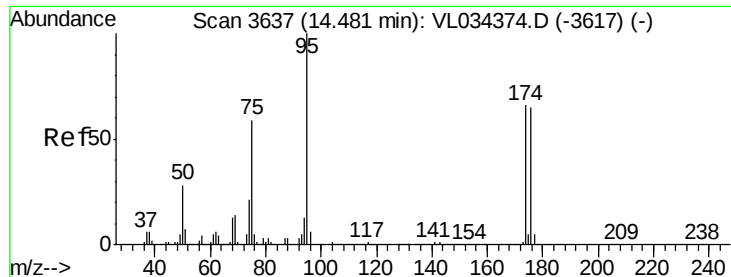
Tgt Ion: 91 Resp: 12882
Ion Ratio Lower Upper
91 100
106 32.1 34.6 51.8#



#60
o-Xylene
Concen: 0.090 ppbv
RT: 13.76 min Scan# 3412
Delta R.T. 0.00 min
Lab File: VL034444.D
Acq: 3 Dec 2019 2:36

Tgt Ion: 91 Resp: 16745
Ion Ratio Lower Upper
91 100
106 47.3 21.3 64.0

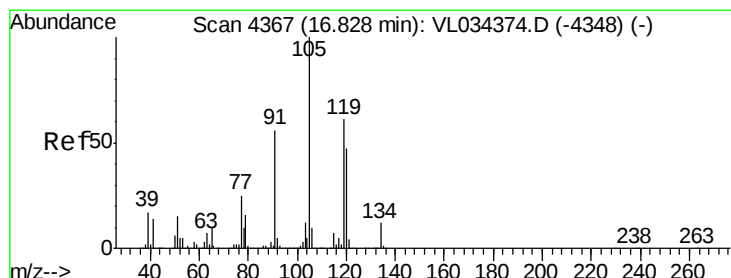
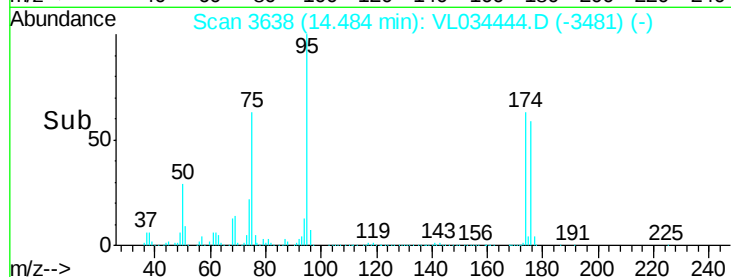
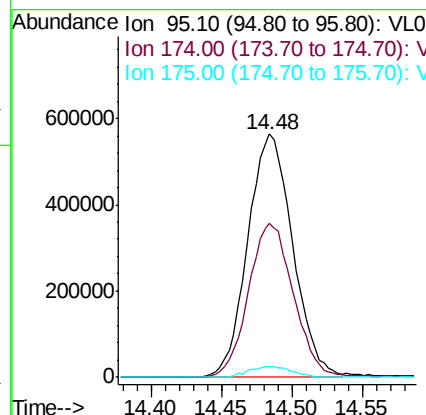
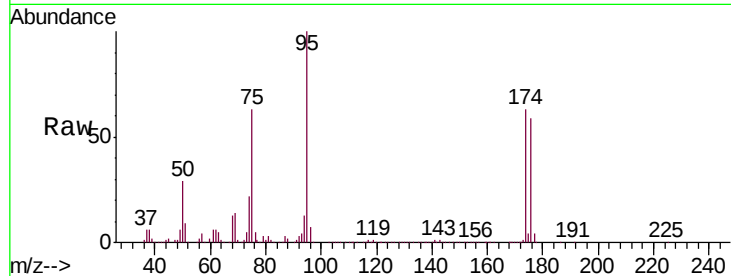




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.587 ppbv
 RT: 14.48 min Scan# 3638
 Delta R.T. 0.00 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2A

Tgt Ion: 95 Resp: 1256258
 Ion Ratio Lower Upper
 95 100
 174 63.7 52.2 78.2
 175 4.5 3.8 5.8



#74
 1,2,4-Trimethylbenzene
 Concen: 0.114 ppbv
 RT: 16.83 min Scan# 4369
 Delta R.T. 0.01 min
 Lab File: VL034444.D
 Acq: 3 Dec 2019 2:36

Tgt Ion: 105 Resp: 25513
 Ion Ratio Lower Upper
 105 100
 120 50.9 37.4 56.0
 91 3.7 46.3 69.5#
 77 8.0 20.6 30.8#

