

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL112519\
 Data File : VL034411.D
 Acq On : 25 Nov 2019 18:21
 Operator : SY/AP
 Sample : K5971-04
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 26 00:44:33 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111919AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue 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	5.68	49	951595	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.20	114	1869485	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.14	117	1825264	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.47	95	1553842	10.12	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.20%

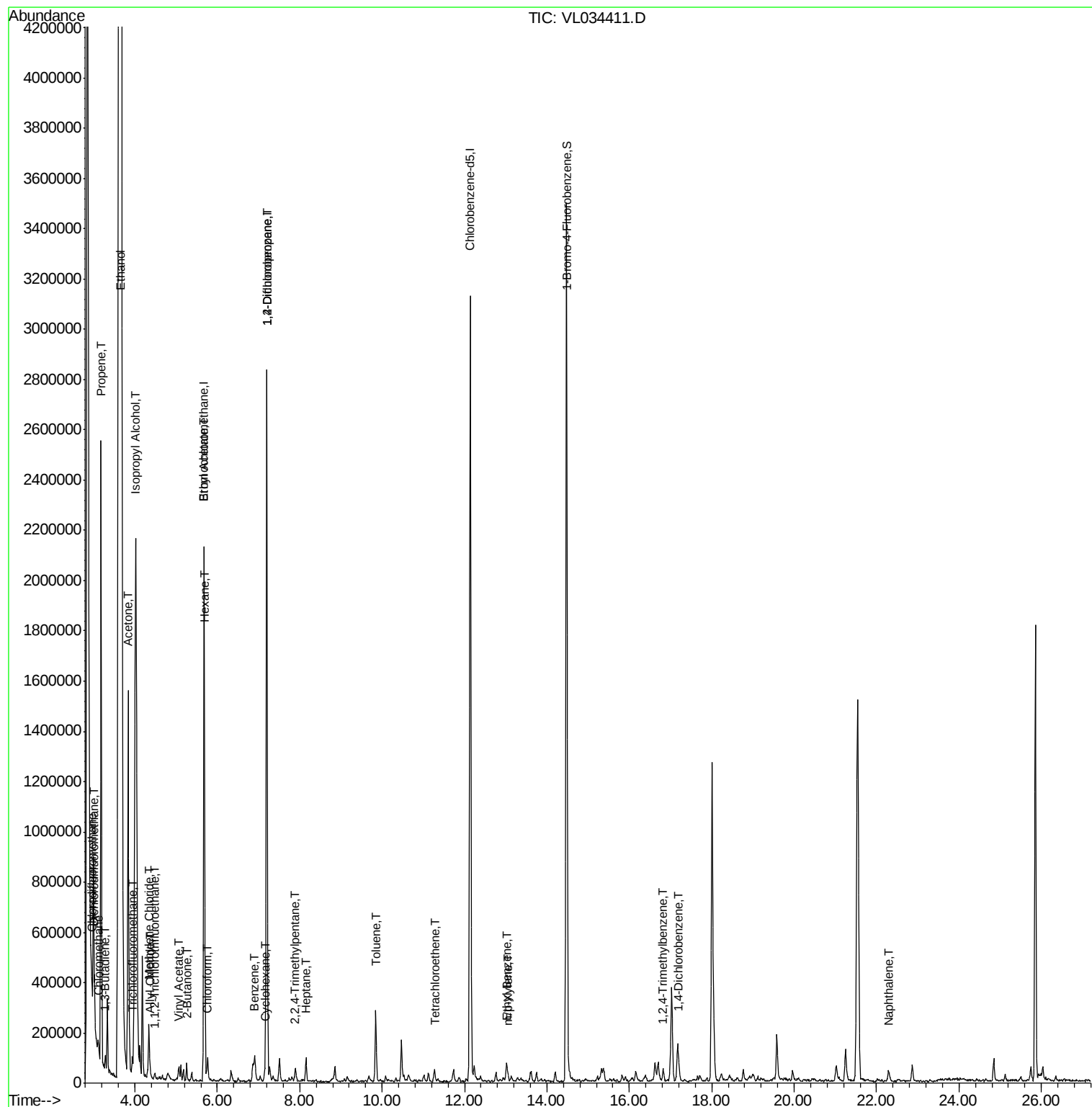
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	127255	0.739	ppbv	94
3) Chlorodifluoromethane	2.96	51	75710	0.638	ppbv #	81
4) Chloromethane	3.11	50	39750	0.568	ppbv #	88
9) Propene	3.18	41	679774	12.896	ppbv	95
10) Heptane	8.15	43	33445	0.246	ppbv	98
11) Trichlorofluoromethane	3.94	101	39398	0.230	ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.48	101	6690	0.059	ppbv	85
13) Ethanol	3.64	45	19731539	1343.794	ppbv	76
15) Acetone	3.83	43	1473571	10.814	ppbv	100
16) 1,3-Butadiene	3.28	39	10047	0.169	ppbv #	46
19) Isopropyl Alcohol	4.02	45	4485427	51.355	ppbv	100
20) Methylene Chloride	4.34	84	50048	1.036	ppbv #	77
21) Allyl Chloride	4.37	41	3975	0.049	ppbv #	18
23) Vinyl Acetate	5.06	43	42504	0.239	ppbv #	64
25) Ethyl Acetate	5.69	43	110486	0.454	ppbv #	97
26) Hexane	5.70	57	45037	0.431	ppbv	92
29) Chloroform	5.76	83	30799	0.182	ppbv	91
30) Cyclohexane	7.15	84	4046	0.051	ppbv #	1
34) 2-Butanone	5.25	43	67335	0.438	ppbv	98
36) Benzene	6.92	78	49297	0.264	ppbv	98
39) 1,2-Dichloropropane	7.20	63	546604	7.592	ppbv #	24
44) 2,2,4-Trimethylpentane	7.89	57	18163	0.053	ppbv #	1
52) Tetrachloroethene	11.27	164	3997	0.049	ppbv #	60
53) Toluene	9.85	91	178421	0.841	ppbv	100
58) Ethyl Benzene	13.04	91	10231	0.036	ppbv	90
59) m/p-Xylene	13.05	91	15010	0.061	ppbv #	33
74) 1,2,4-Trimethylbenzene	16.83	105	9346	0.032	ppbv #	63
76) 1,4-Dichlorobenzene	17.20	146	6206	0.038	ppbv #	1
79) Naphthalene	22.31	128	11066	0.044	ppbv	95

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

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 min Scan# 899

Delta R.T. -0.01 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :
MSVOA_L
ClientSampleId :

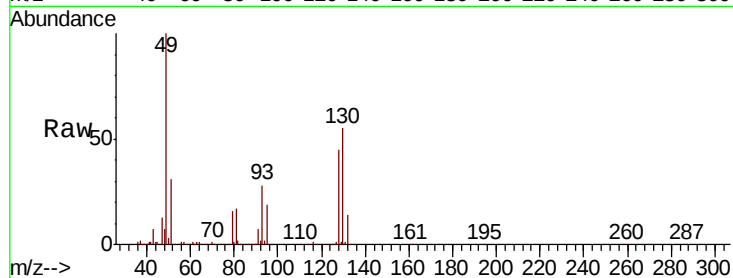
Tot Ion: 49 Resp: 951595

Ion Ratio Lower Upper

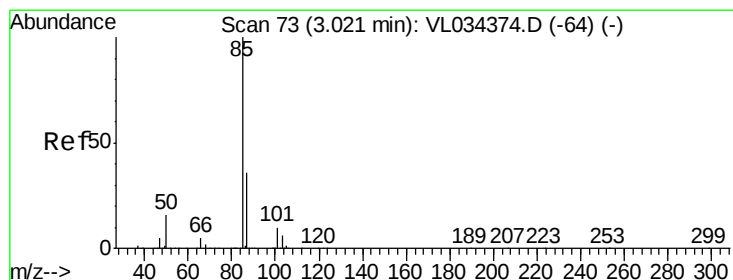
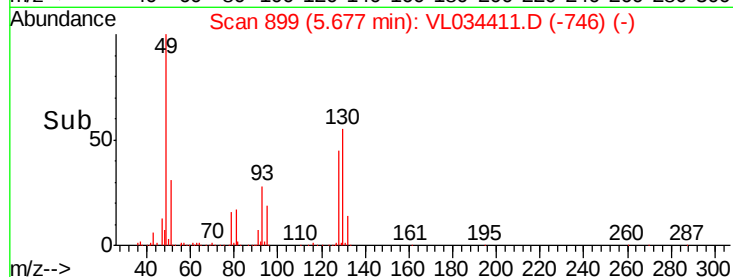
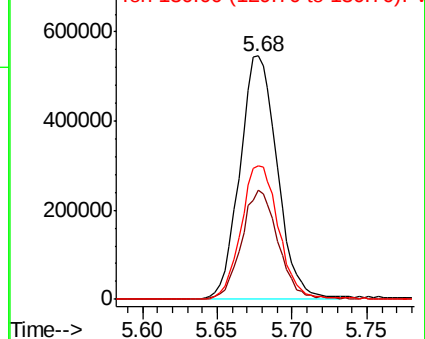
49 100

128 44.1 21.8 65.3

130 55.7 28.0 84.0



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.739 ppbv

RT: 3.02 min Scan# 72

Delta R.T. -0.00 min

Lab File: VL034411.D

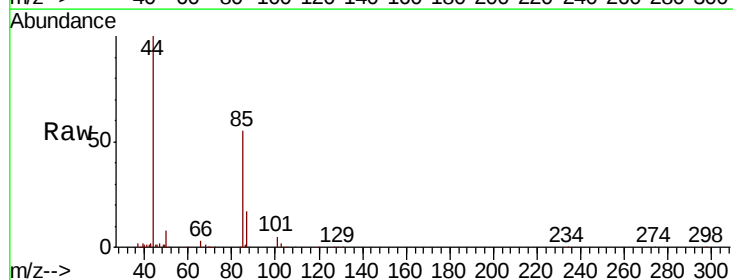
Acq: 25 Nov 2019 18:21

Tgt Ion: 85 Resp: 127255

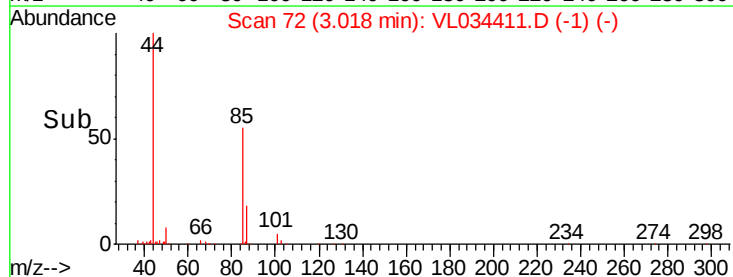
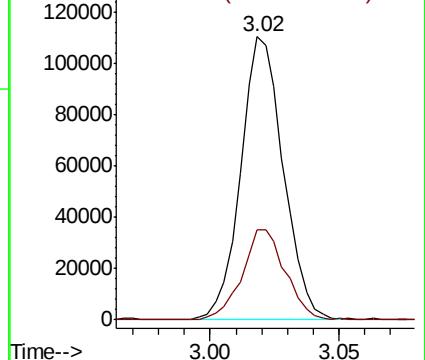
Ion Ratio Lower Upper

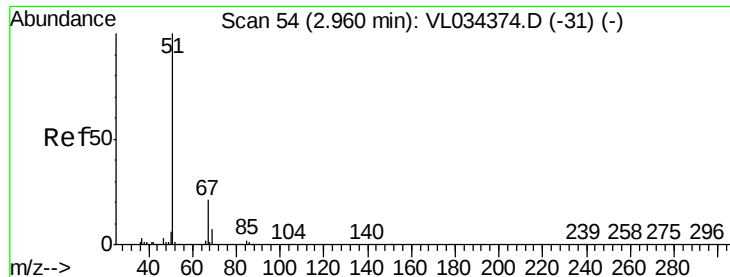
85 100

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: 0.638 ppbv

RT: 2.96 min Scan# 54

Delta R.T. -0.00 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :

MSVOA_L

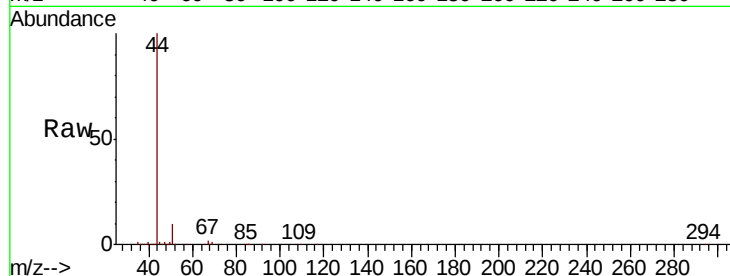
ClientSampleId :

Tot Ion: 51 Resp: 75710

Ion Ratio Lower Upper

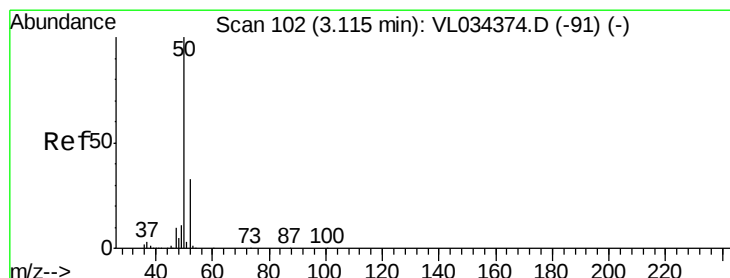
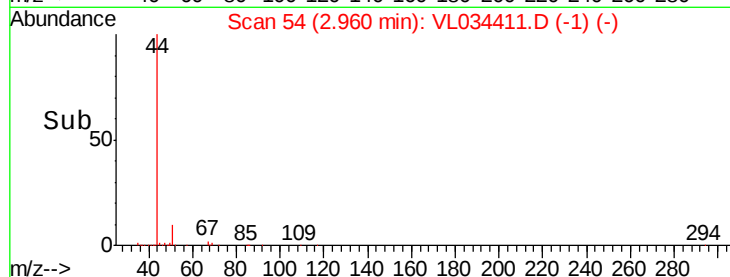
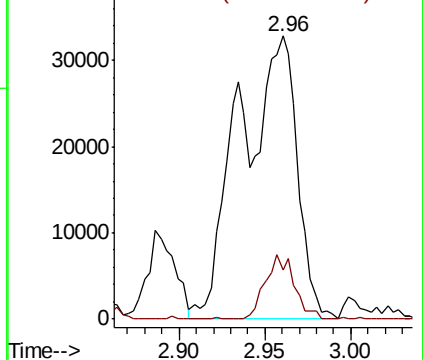
51 100

67 11.5 16.2 24.2#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.568 ppbv

RT: 3.11 min Scan# 101

Delta R.T. -0.00 min

Lab File: VL034411.D

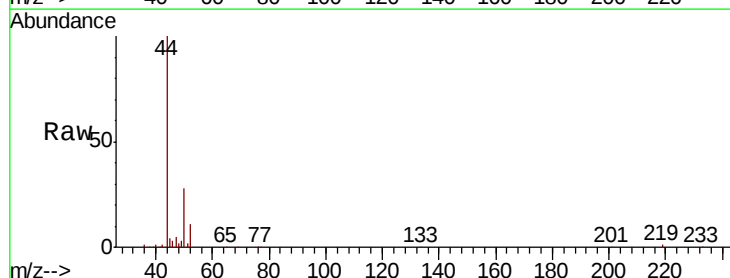
Acq: 25 Nov 2019 18:21

Tgt Ion: 50 Resp: 39750

Ion Ratio Lower Upper

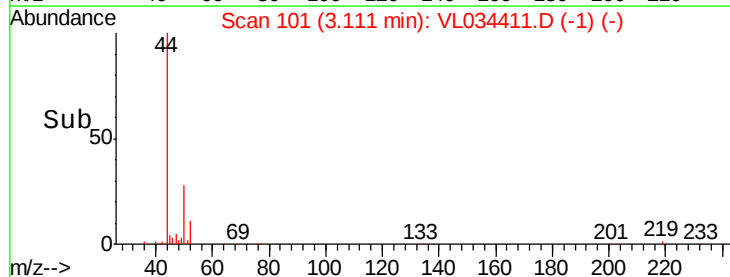
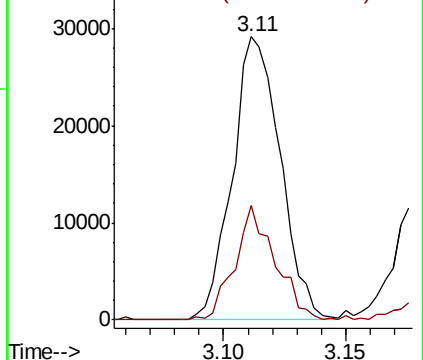
50 100

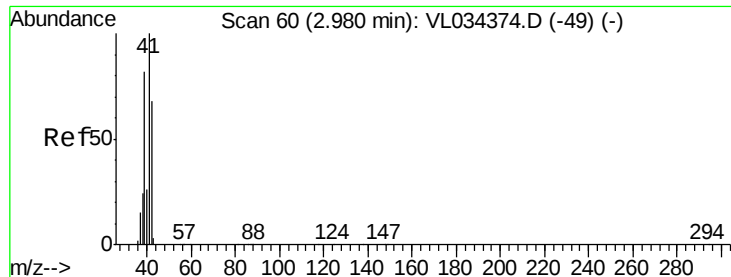
52 40.5 26.8 40.2#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 12.896 ppbv

RT: 3.18 min Scan# 122

Delta R.T. 0.20 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :

MSVOA_L

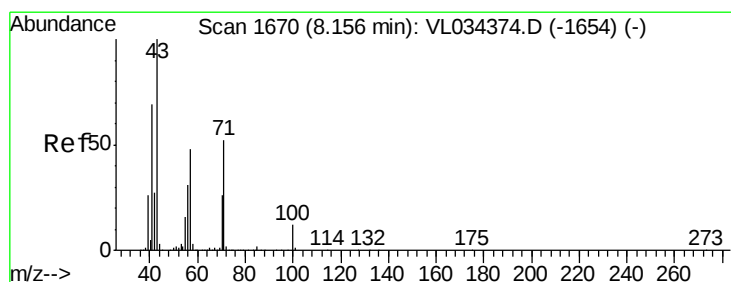
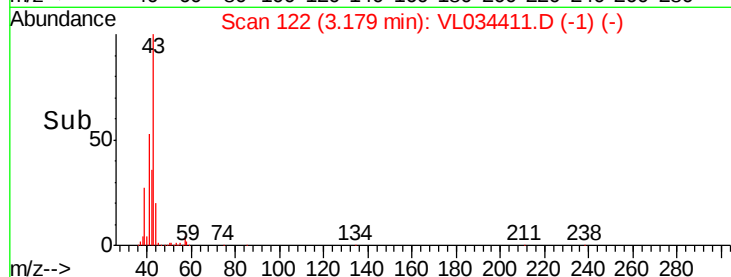
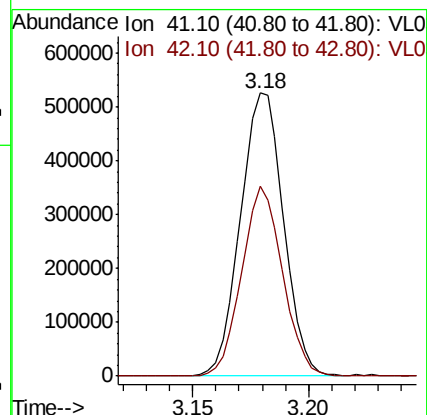
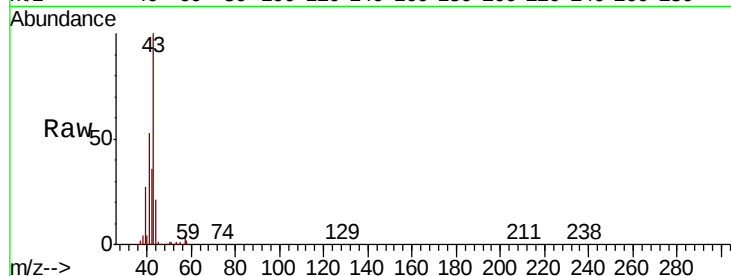
ClientSampleId :

Tot Ion: 41 Resp: 679774

Ion Ratio Lower Upper

41 100

42 63.9 54.6 82.0



#10

Heptane

Concen: 0.246 ppbv

RT: 8.15 min Scan# 1669

Delta R.T. -0.00 min

Lab File: VL034411.D

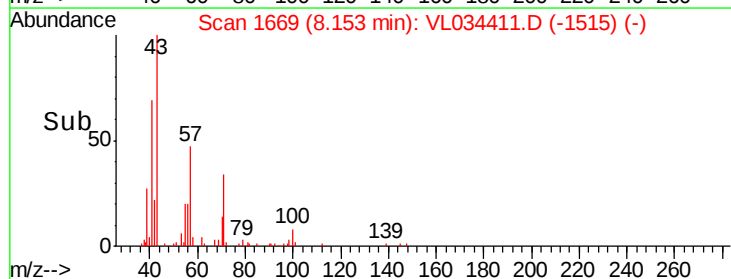
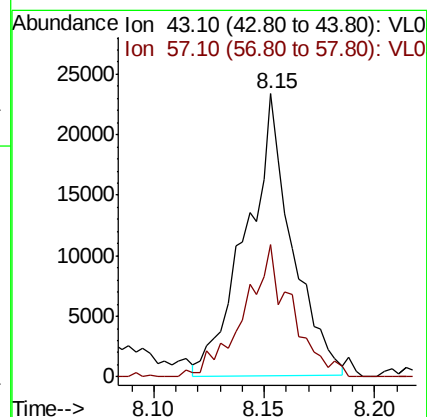
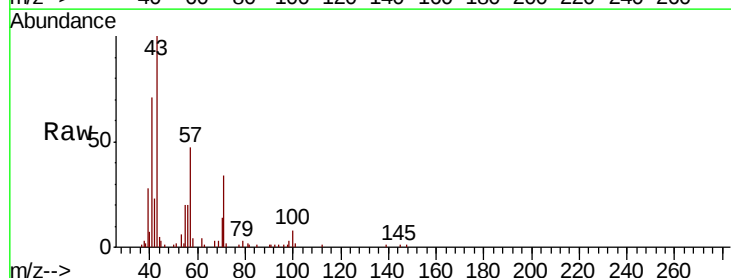
Acq: 25 Nov 2019 18:21

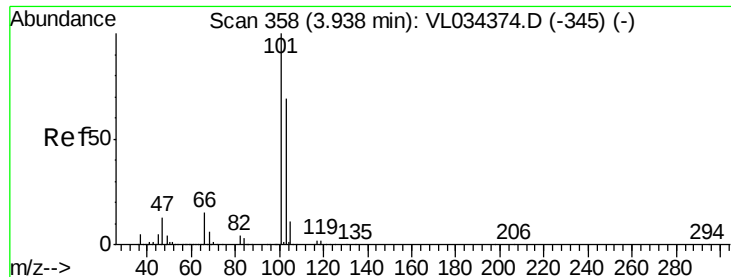
Tgt Ion: 43 Resp: 33445

Ion Ratio Lower Upper

43 100

57 49.2 40.2 60.2

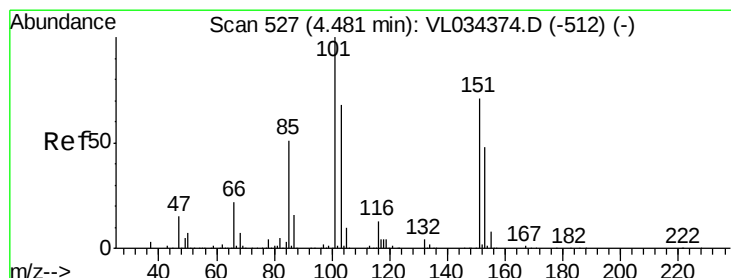
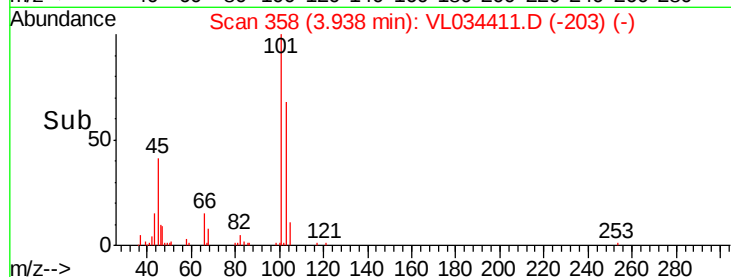
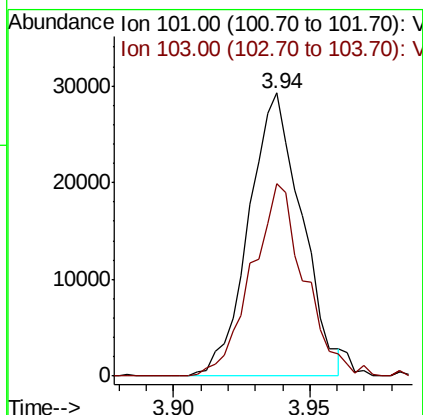
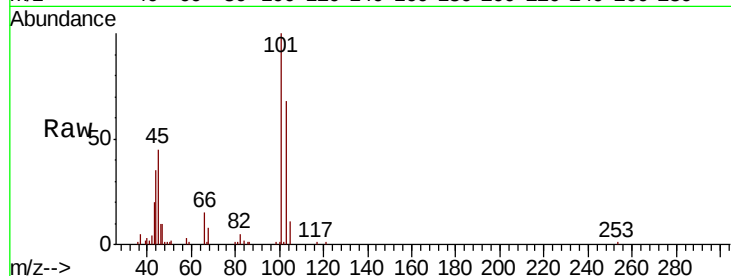




#11
 Trichlorofluoromethane
 Concen: 0.230 ppbv
 RT: 3.94 min Scan# 358
 Delta R.T. -0.00 min
 Lab File: VL034411.D
 Acq: 25 Nov 2019 18:21

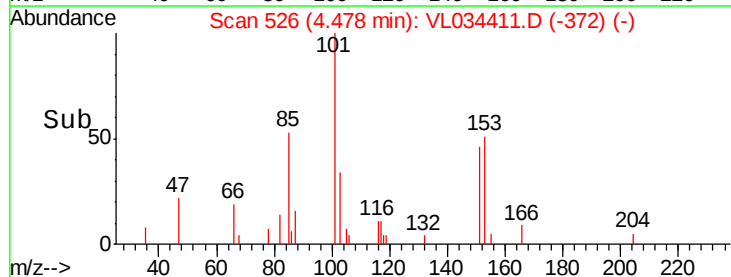
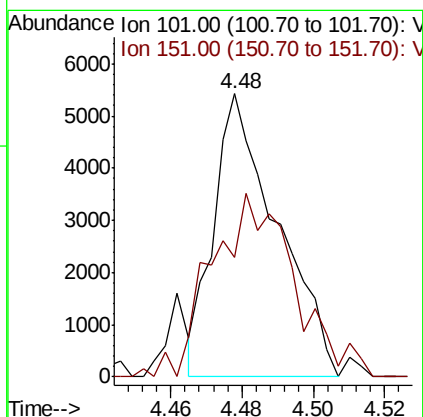
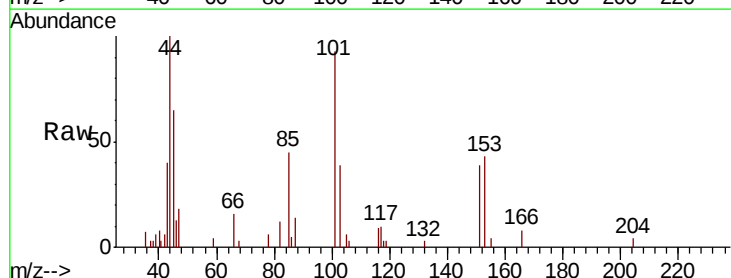
Instrument :
 MSVOA_L
 ClientSampleId :

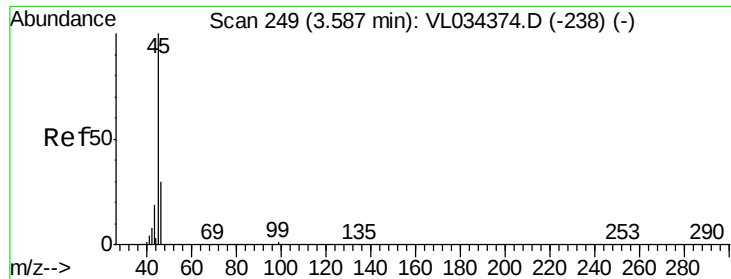
Tot Ion:101 Resp: 39398
 Ion Ratio Lower Upper
 101 100
 103 67.5 55.4 83.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.059 ppbv
 RT: 4.48 min Scan# 526
 Delta R.T. -0.00 min
 Lab File: VL034411.D
 Acq: 25 Nov 2019 18:21

Tgt Ion:101 Resp: 6690
 Ion Ratio Lower Upper
 101 100
 151 84.3 57.4 86.2

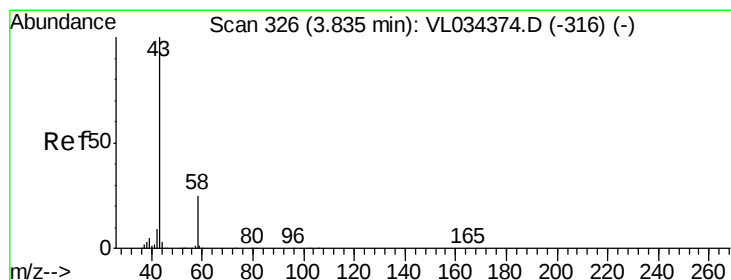
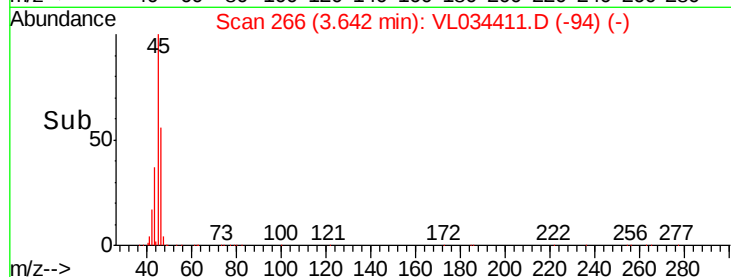
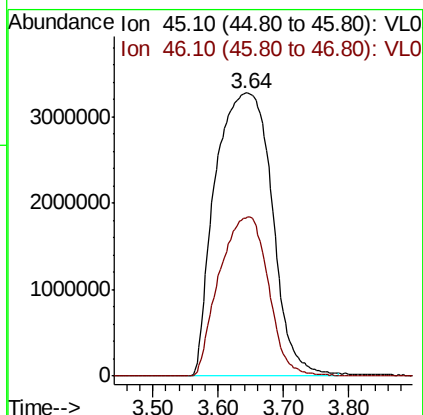
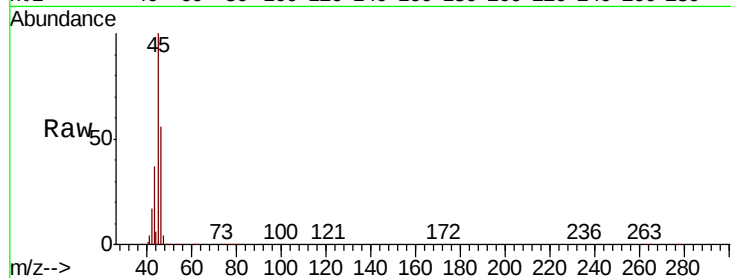




#13
Ethanol
Concen: 1343.794 ppbv
RT: 3.64 min Scan# 266
Delta R.T. 0.05 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

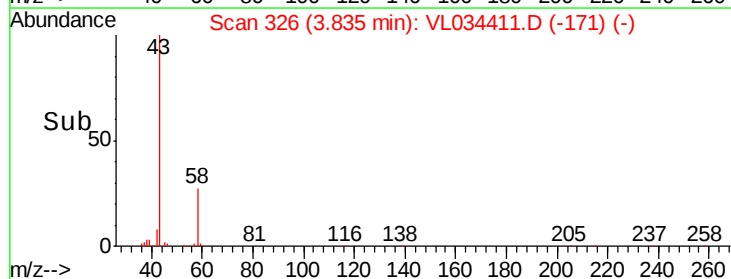
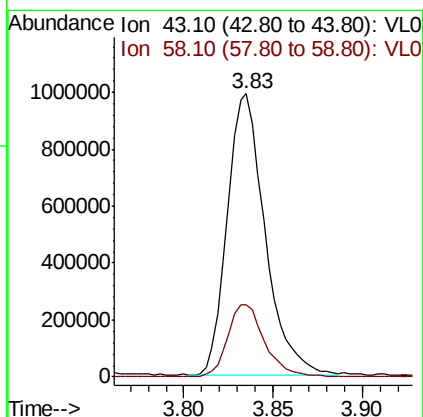
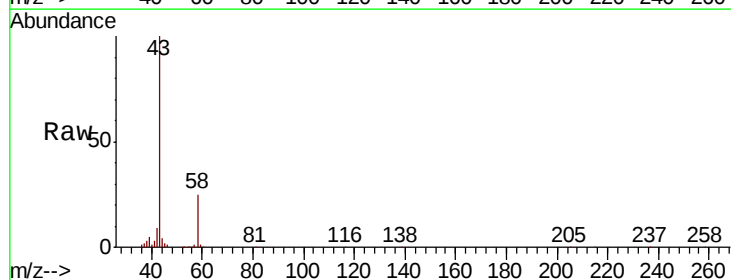
Instrument :
MSVOA_L
ClientSampleId :

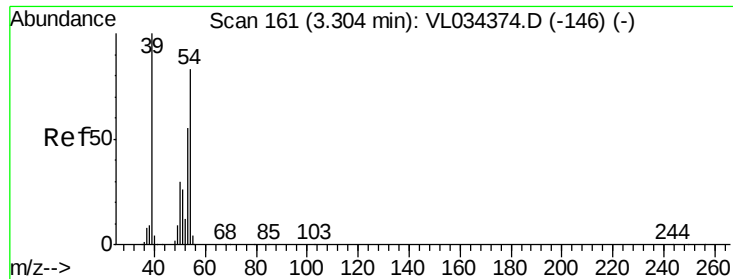
Tot Ion: 45 Resp:19731539
Ion Ratio Lower Upper
45 100
46 48.7 13.8 55.4



#15
Acetone
Concen: 10.814 ppbv
RT: 3.83 min Scan# 326
Delta R.T. -0.00 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

Tgt Ion: 43 Resp: 1473571
Ion Ratio Lower Upper
43 100
58 25.3 20.2 30.4





#16

1,3-Butadiene

Concen: 0.169 ppbv

RT: 3.28 min Scan# 154

Delta R.T. -0.02 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :

MSVOA_L

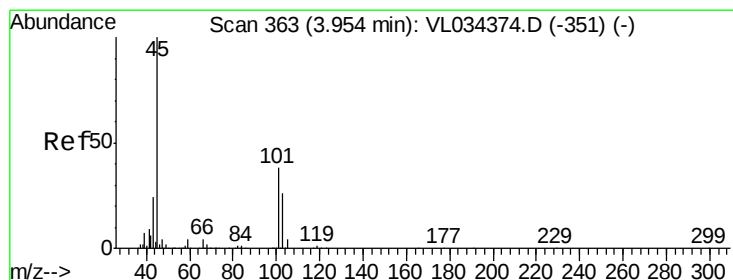
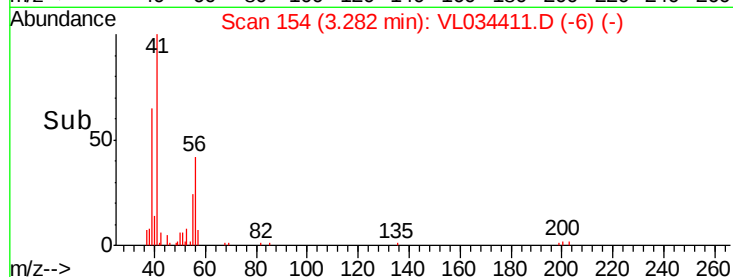
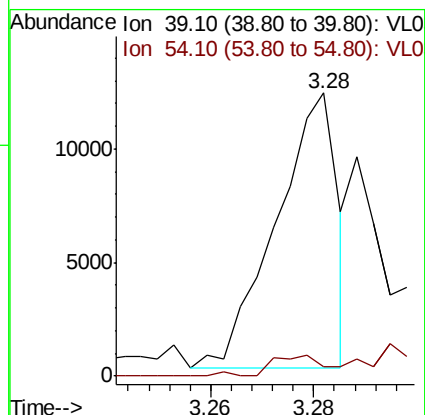
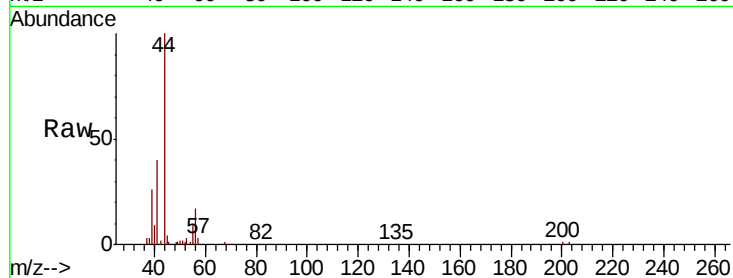
ClientSampled :

Tot Ion: 39 Resp: 10047

Ion Ratio Lower Upper

39 100

54 33.0 64.7 97.1#



#19

Isopropyl Alcohol

Concen: 51.355 ppbv

RT: 4.02 min Scan# 384

Delta R.T. 0.07 min

Lab File: VL034411.D

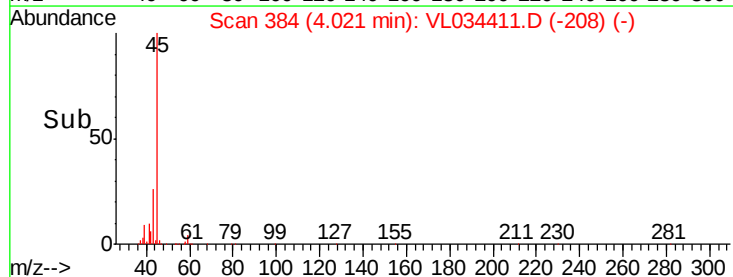
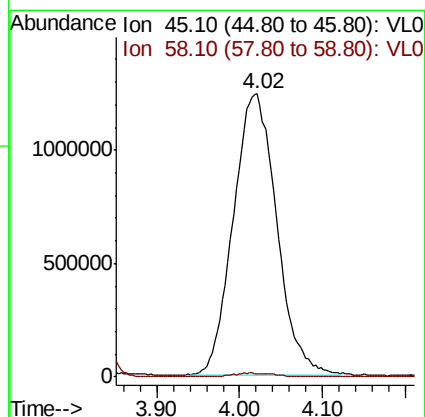
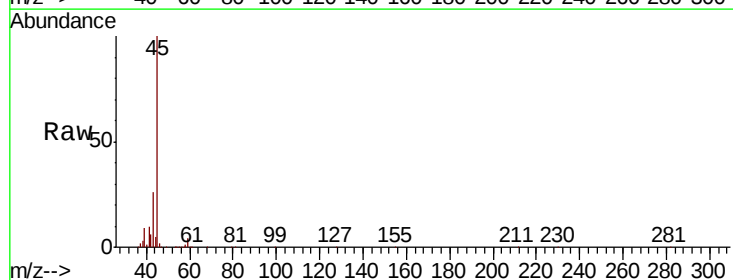
Acq: 25 Nov 2019 18:21

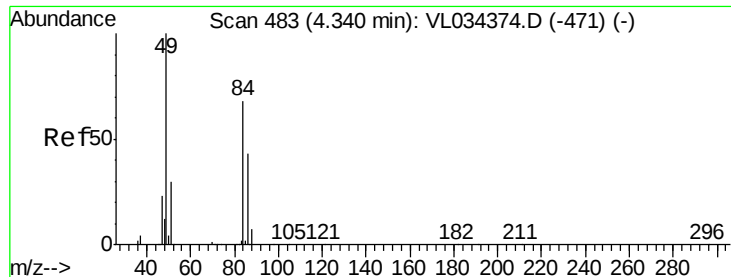
Tgt Ion: 45 Resp: 4485427

Ion Ratio Lower Upper

45 100

58 1.5 1.3 1.9

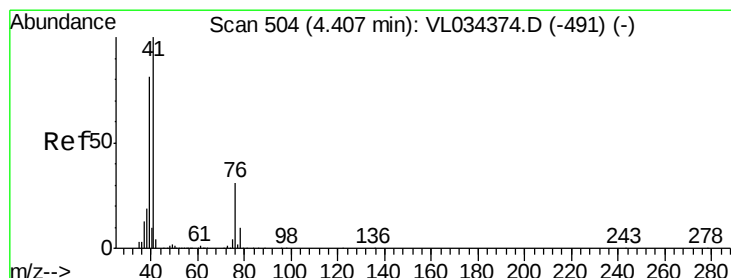
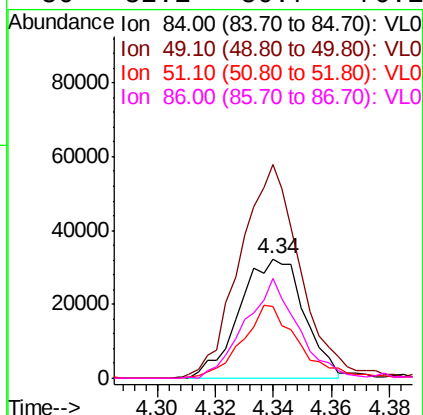
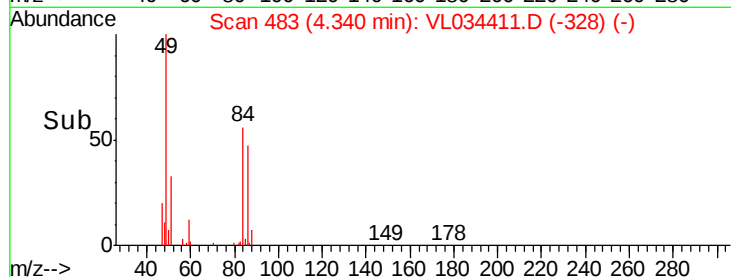
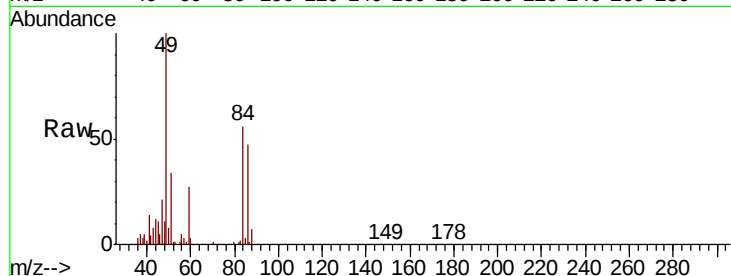




#20
Methylene Chloride
Concen: 1.036 ppbv
RT: 4.34 min Scan# 483
Delta R.T. -0.00 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

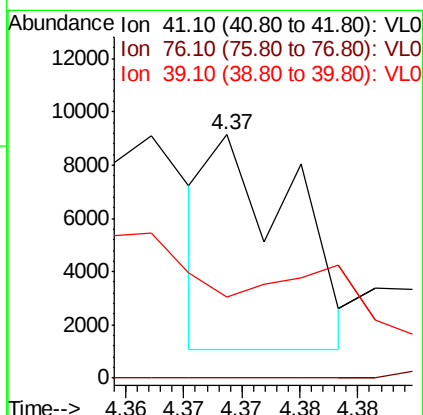
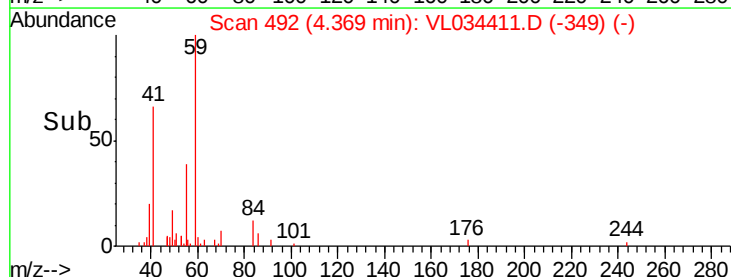
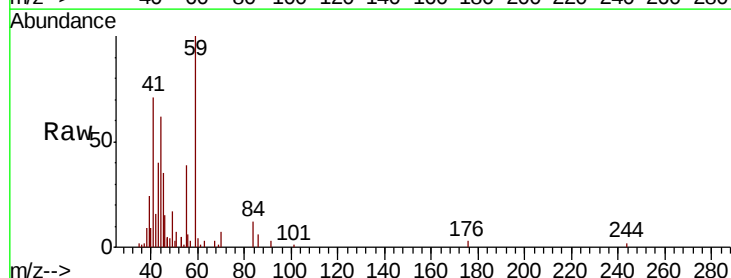
Instrument :
MSVOA_L
ClientSampleId :

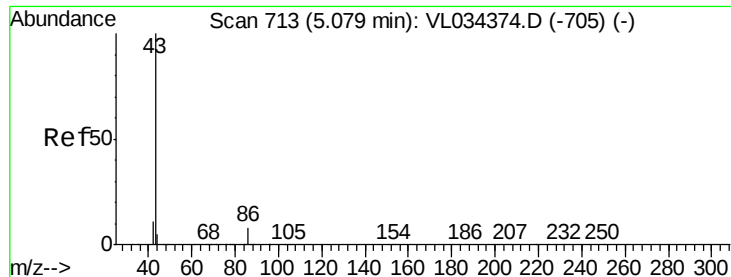
Tot Ion: 84 Resp: 50048
Ion Ratio Lower Upper
84 100
49 175.2 116.8 175.2
51 58.8 35.6 53.4#
86 82.1 50.7 76.1#



#21
Allyl Chloride
Concen: 0.049 ppbv
RT: 4.37 min Scan# 492
Delta R.T. -0.04 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

Tgt Ion: 41 Resp: 3975
Ion Ratio Lower Upper
41 100
76 1.3 24.2 36.2#
39 0.0 66.9 100.3#





#23

Vinyl Acetate

Concen: 0.239 ppbv

RT: 5.06 min Scan# 708

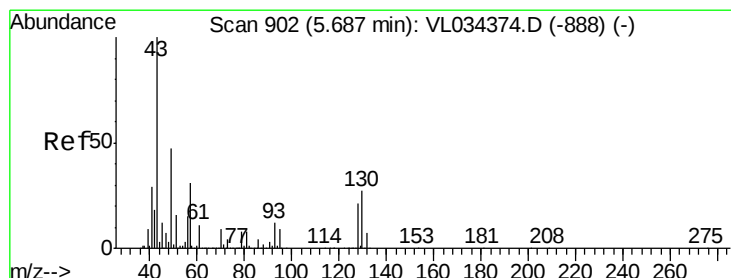
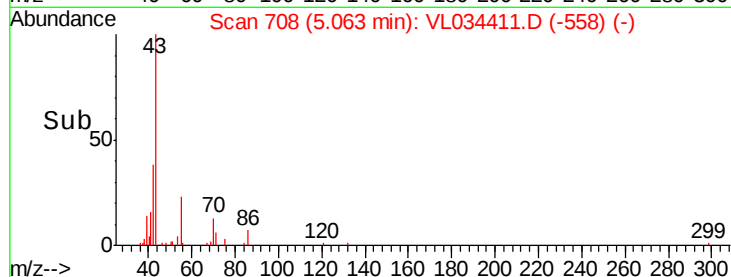
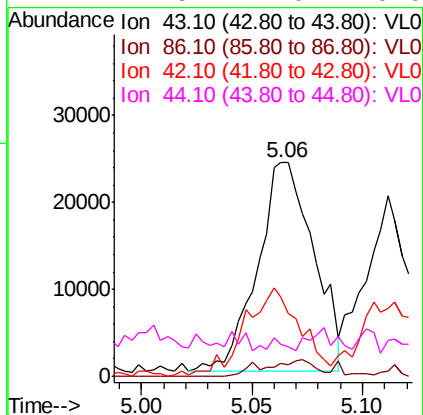
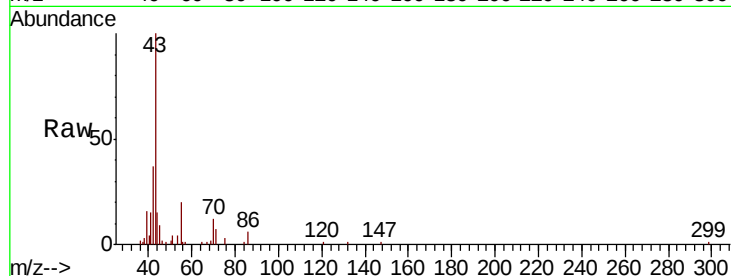
Delta R.T. -0.02 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	43	Resp:	42504
Ion	Ratio	Lower	Upper
43	100		
86	6.3	5.8	8.6
42	37.3	8.9	13.3#
44	1.5	4.0	6.0#



#25

Ethyl Acetate

Concen: 0.454 ppbv

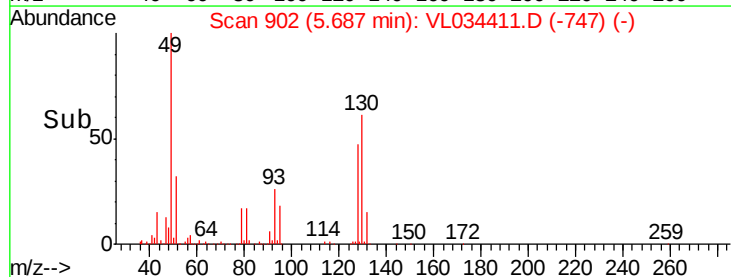
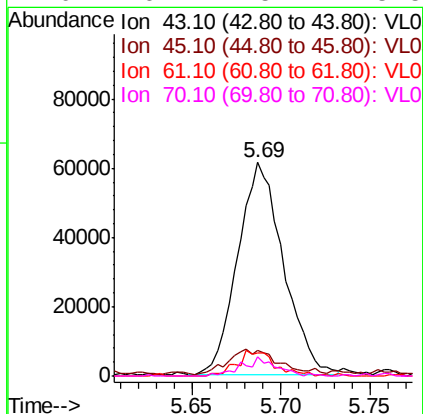
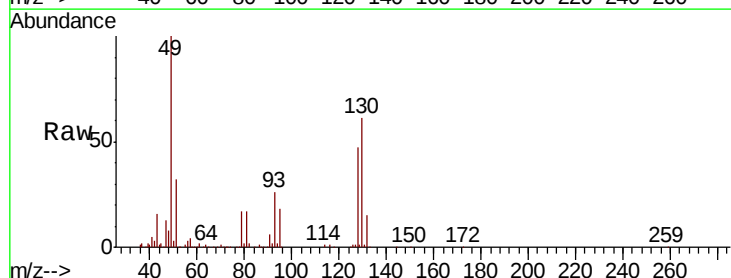
RT: 5.69 min Scan# 902

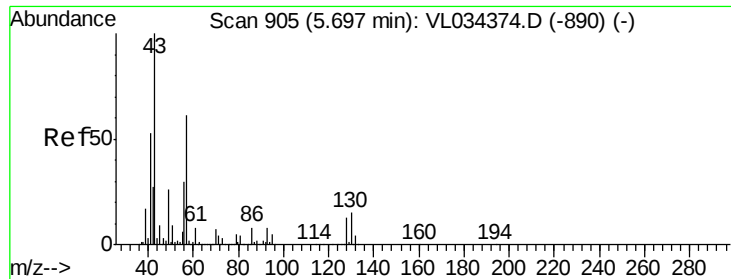
Delta R.T. -0.00 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Tgt Ion:	43	Resp:	110486
Ion	Ratio	Lower	Upper
43	100		
45	12.6	8.2	12.4#
61	10.0	7.5	11.3
70	6.7	5.7	8.5

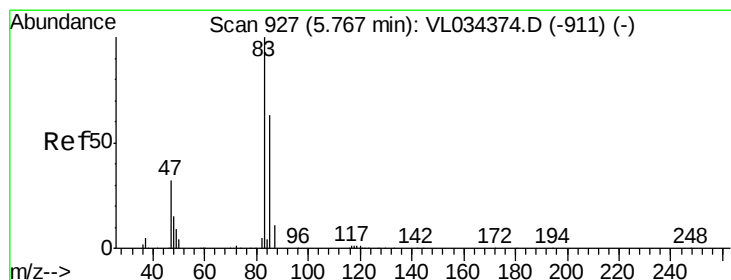
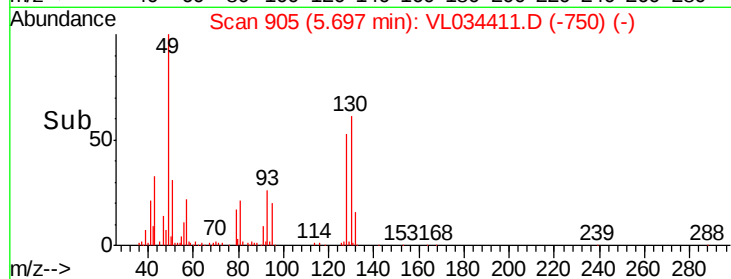
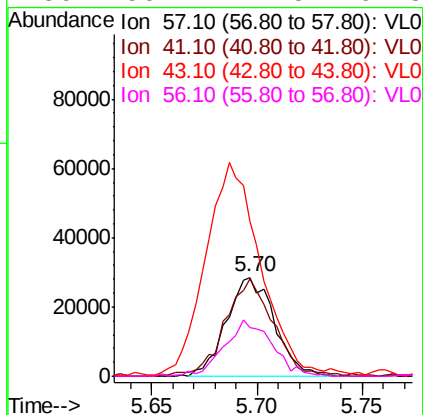
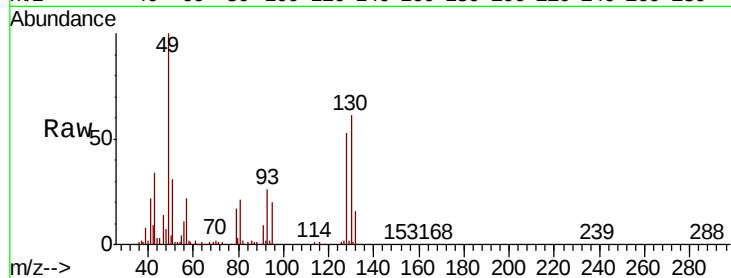




#26
Hexane
Concen: 0.431 ppbv
RT: 5.70 min Scan# 905
Delta R.T. -0.00 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

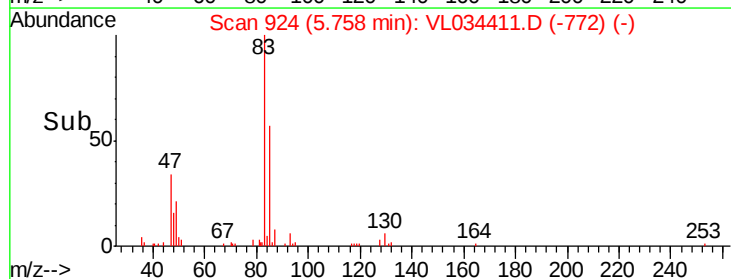
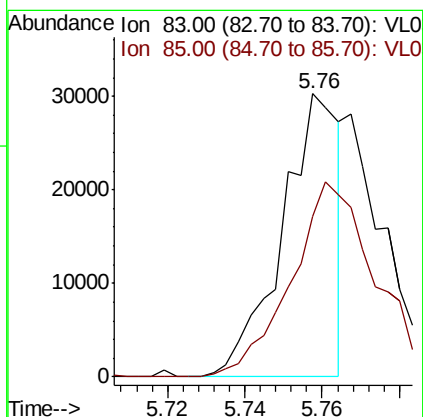
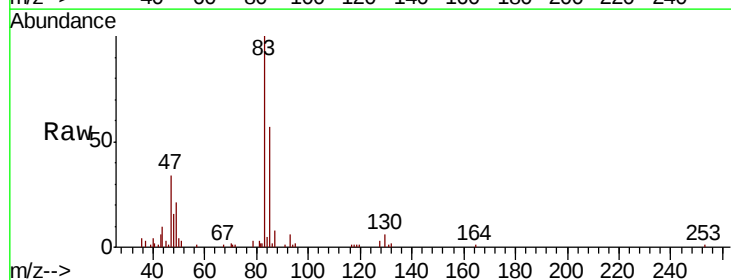
Instrument :
MSVOA_L
ClientSampleId :

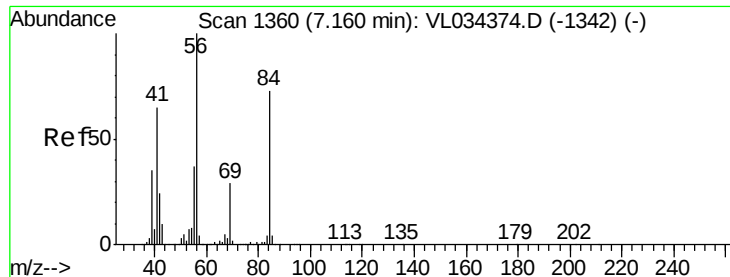
Tot Ion:	57	Resp:	45037
Ion	Ratio	Lower	Upper
57	100		
41	102.3	75.0	112.4
43	246.3	186.6	279.8
56	56.7	41.5	62.3



#29
Chloroform
Concen: 0.182 ppbv
RT: 5.76 min Scan# 924
Delta R.T. -0.01 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

Tgt Ion:	83	Resp:	30799
Ion	Ratio	Lower	Upper
83	100		
85	56.2	50.4	75.6

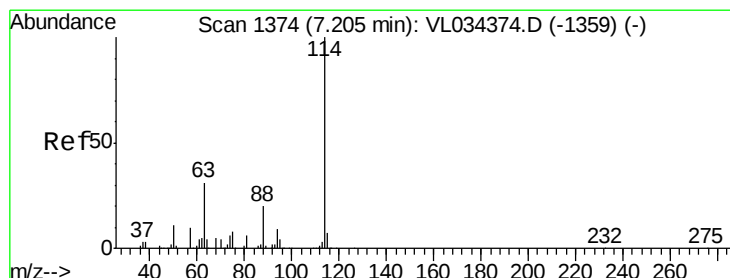
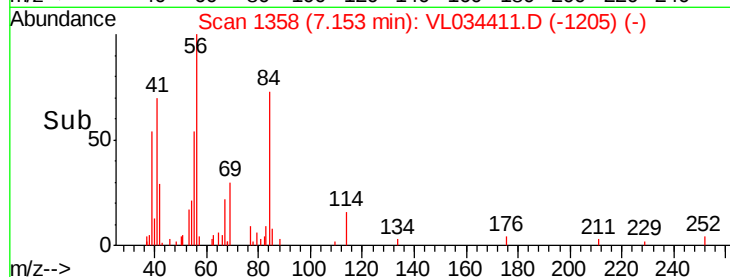
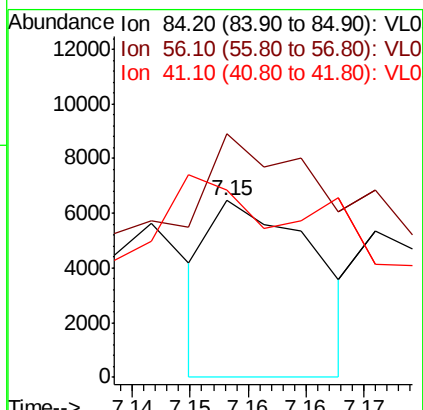
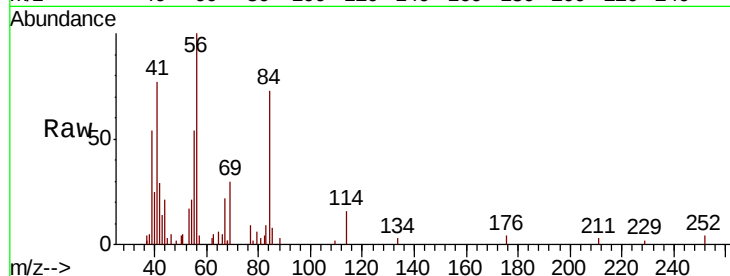




#30
Cyclohexane
Concen: 0.051 ppbv
RT: 7.15 min Scan# 1358
Delta R.T. -0.01 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

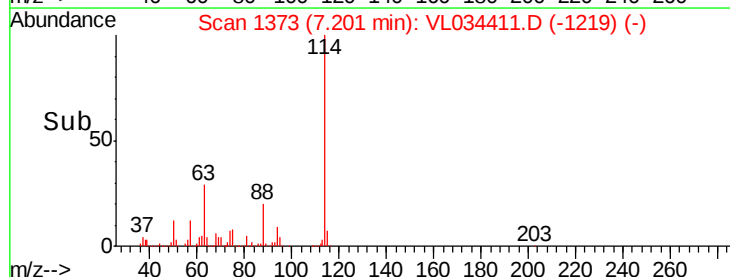
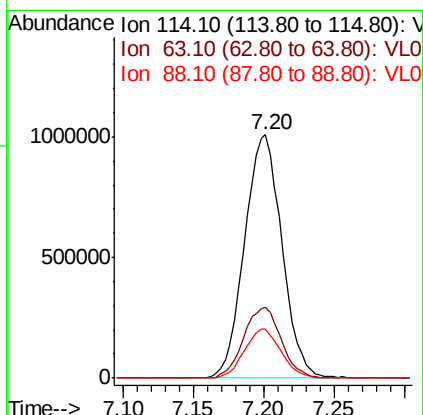
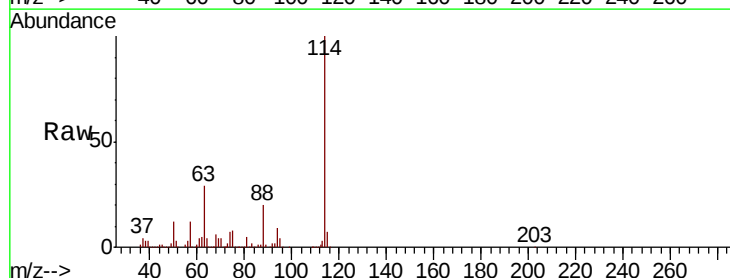
Instrument :
MSVOA_L
ClientSampled :

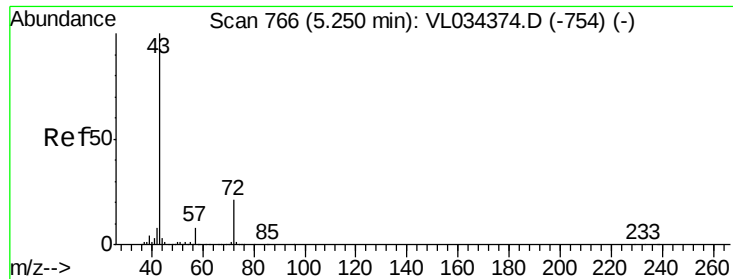
Tot Ion: 84 Resp: 4046
Ion Ratio Lower Upper
84 100
56 0.0 112.6 169.0#
41 336.6 73.4 110.2#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.20 min Scan# 1373
Delta R.T. -0.00 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

Tgt Ion: 114 Resp: 1869485
Ion Ratio Lower Upper
114 100
63 29.5 24.2 36.4
88 19.8 15.9 23.9

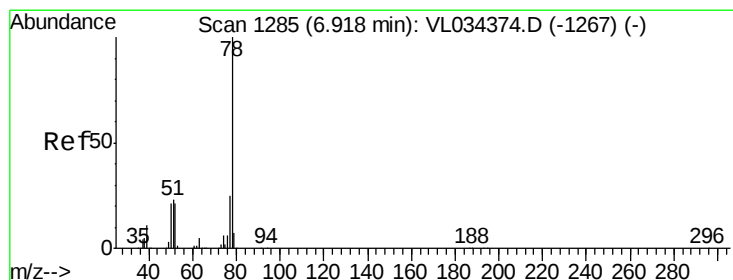
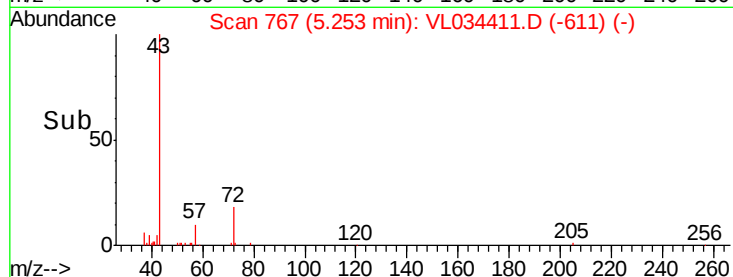
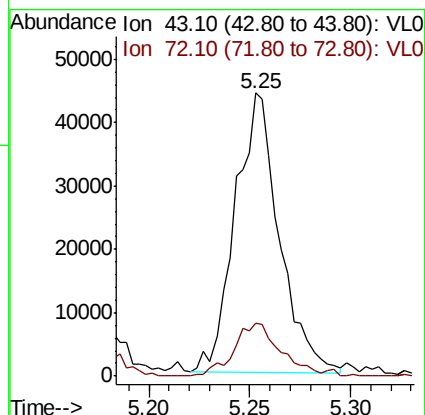
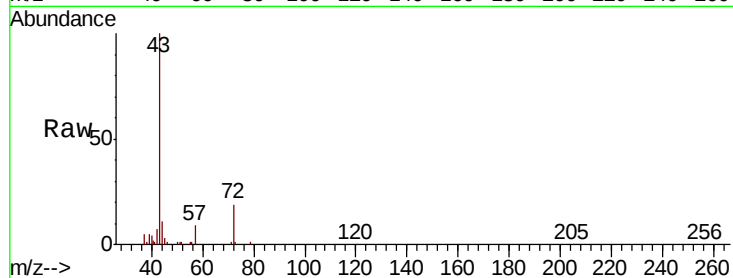




#34
2-Butanone
Concen: 0.438 ppbv
RT: 5.25 min Scan# 767
Delta R.T. 0.00 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

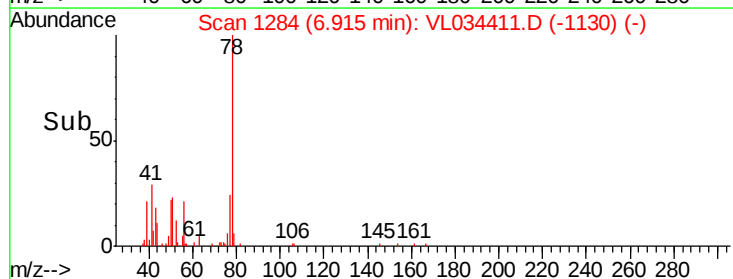
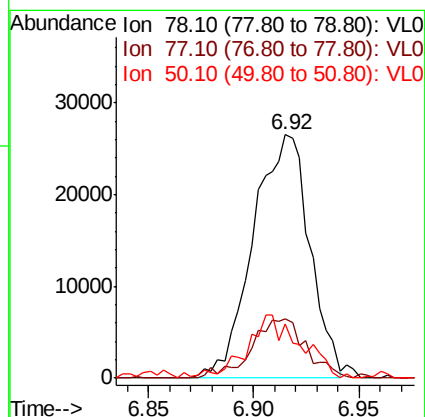
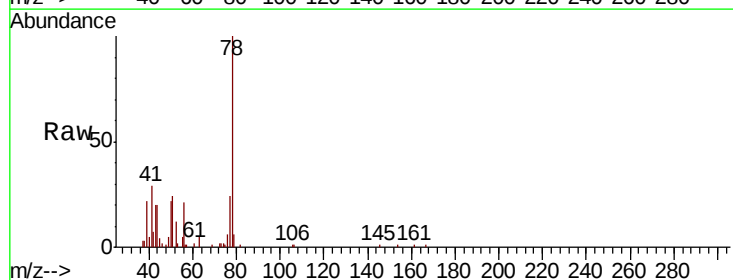
Instrument :
MSVOA_L
ClientSampled :

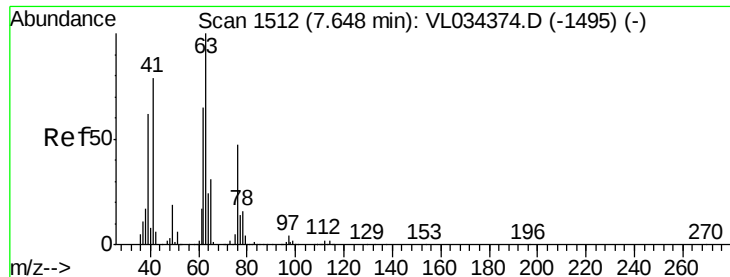
Tot Ion: 43 Resp: 67335
Ion Ratio Lower Upper
43 100
72 20.4 17.0 25.6



#36
Benzene
Concen: 0.264 ppbv
RT: 6.92 min Scan# 1284
Delta R.T. -0.00 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

Tgt Ion: 78 Resp: 49297
Ion Ratio Lower Upper
78 100
77 24.4 20.2 30.4
50 22.4 17.1 25.7





#39

1,2-Dichloropropane

Concen: 7.592 ppbv

RT: 7.20 min Scan# 1373

Delta R.T. -0.45 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :

MSVOA_L

ClientSampleId :

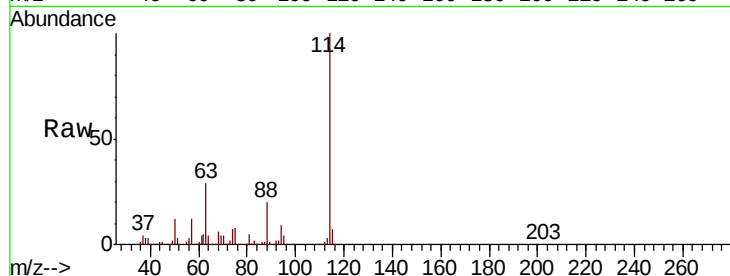
Tot Ion: 63 Resp: 546604

Ion Ratio Lower Upper

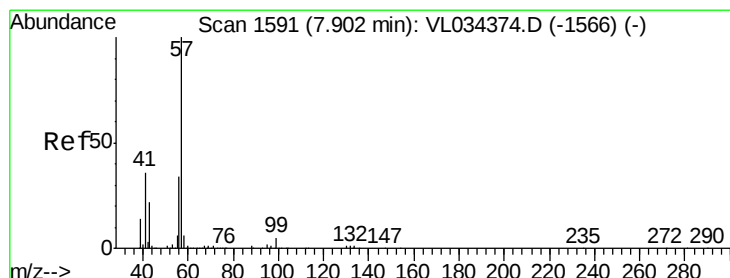
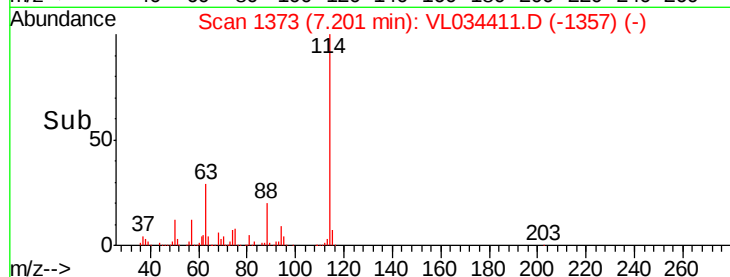
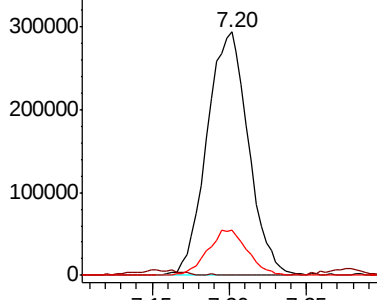
63 100

41 0.1 63.1 94.7#

62 18.4 52.3 78.5#



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



#44

2,2,4-Trimethylpentane

Concen: 0.053 ppbv

RT: 7.89 min Scan# 1588

Delta R.T. -0.01 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

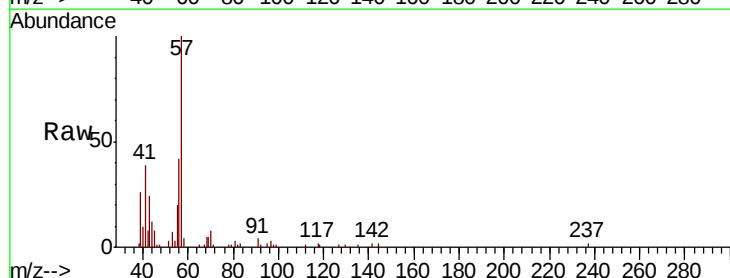
Tgt Ion: 57 Resp: 18163

Ion Ratio Lower Upper

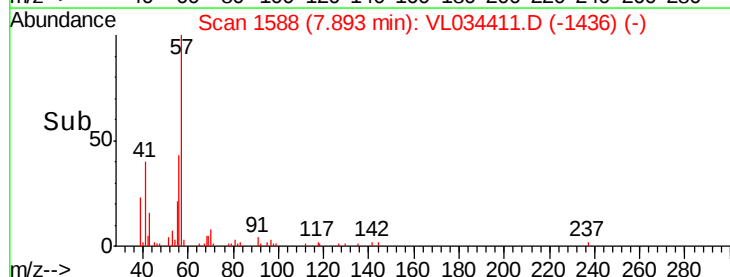
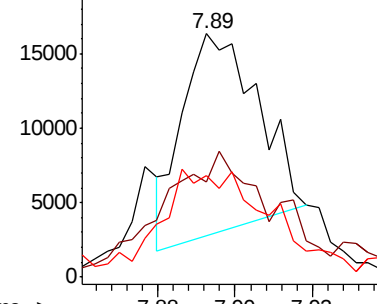
57 100

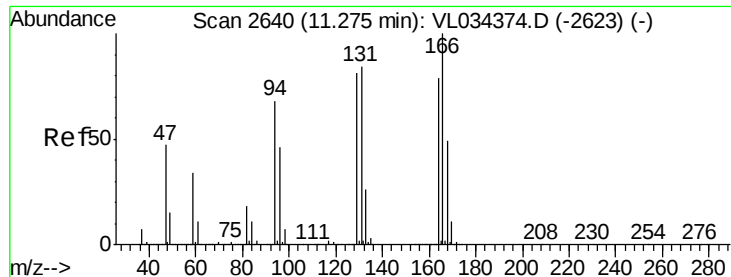
41 115.9 28.6 42.8#

56 92.7 25.3 37.9#



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





#52

Tetrachloroethene

Concen: 0.049 ppbv

RT: 11.27 min Scan# 2637

Delta R.T. -0.01 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 3997

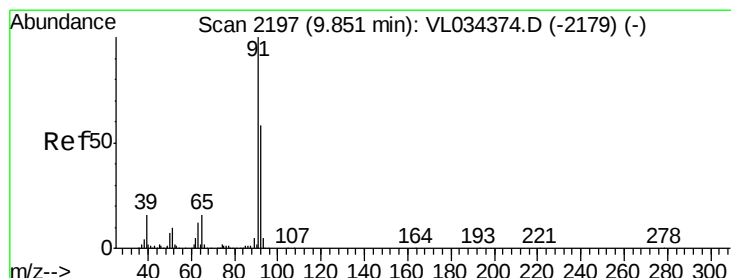
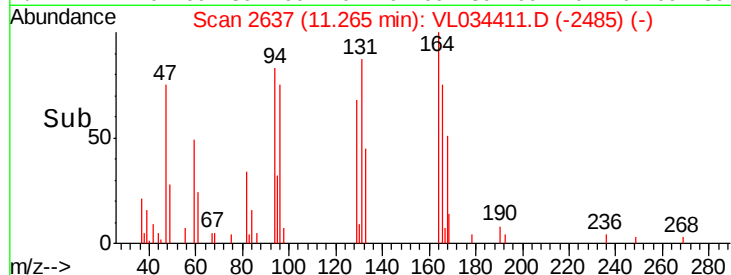
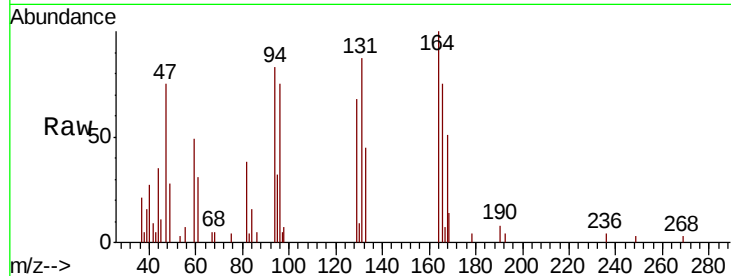
Ion Ratio Lower Upper

164 100

166 65.0 101.7 152.5#

129 56.9 82.6 123.8#

131 88.3 85.2 127.8



#53

Toluene

Concen: 0.841 ppbv

RT: 9.85 min Scan# 2196

Delta R.T. -0.00 min

Lab File: VL034411.D

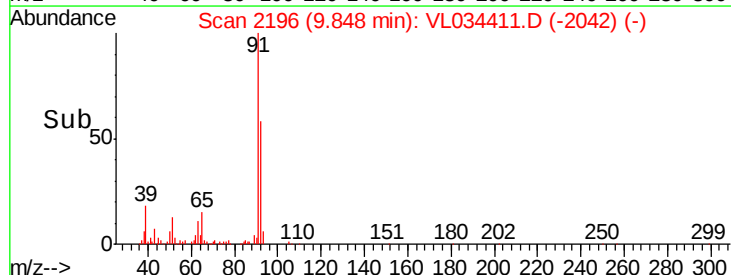
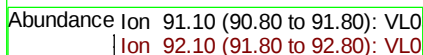
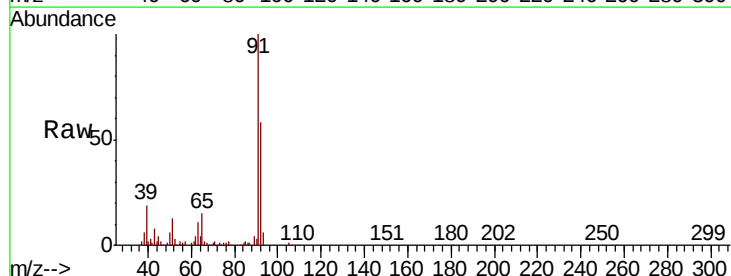
Acq: 25 Nov 2019 18:21

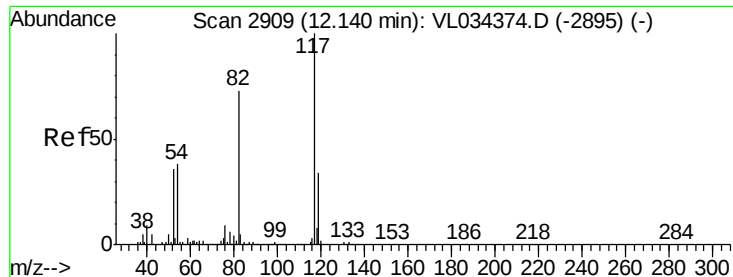
Tgt Ion: 91 Resp: 178421

Ion Ratio Lower Upper

91 100

92 60.1 47.9 71.9

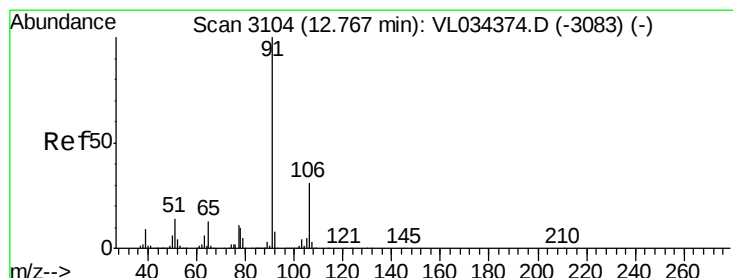
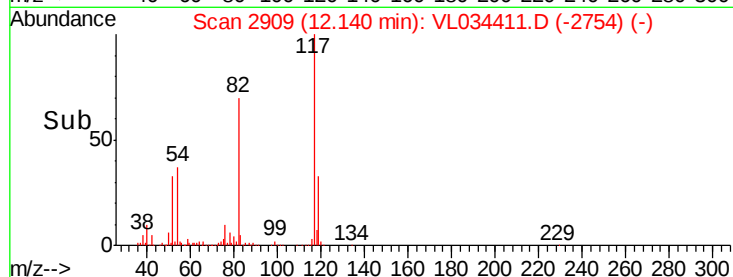
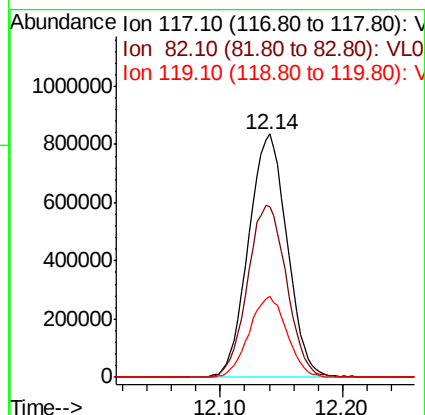
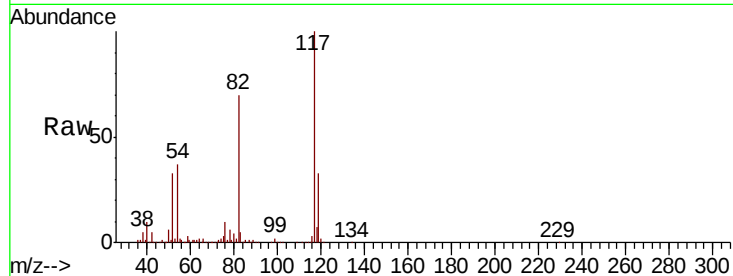




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.14 min Scan# 2909
Delta R.T. -0.00 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

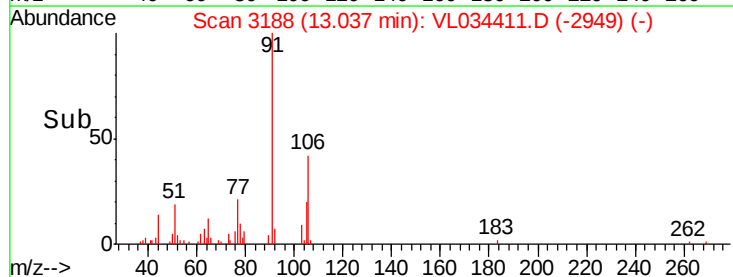
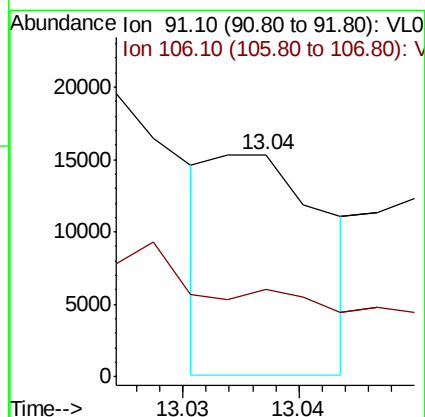
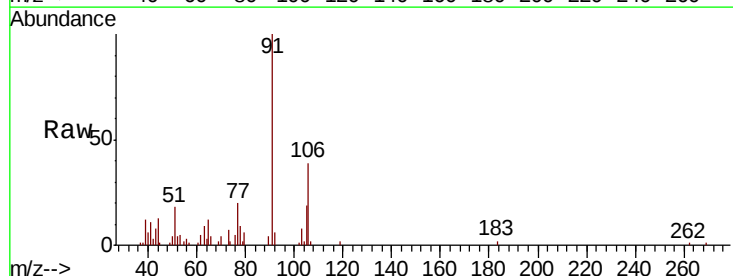
Instrument :
MSVOA_L
ClientSampleId :

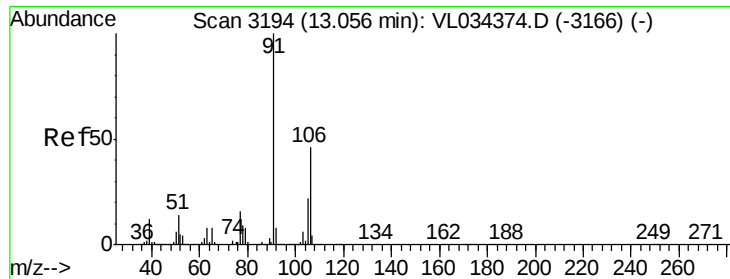
Tot Ion:117 Resp: 1825264
Ion Ratio Lower Upper
117 100
82 71.8 57.5 86.3
119 32.7 25.4 38.2



#58
Ethyl Benzene
Concen: 0.036 ppbv
RT: 13.04 min Scan# 3188
Delta R.T. 0.27 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

Tgt Ion: 91 Resp: 10231
Ion Ratio Lower Upper
91 100
106 36.6 24.8 37.2

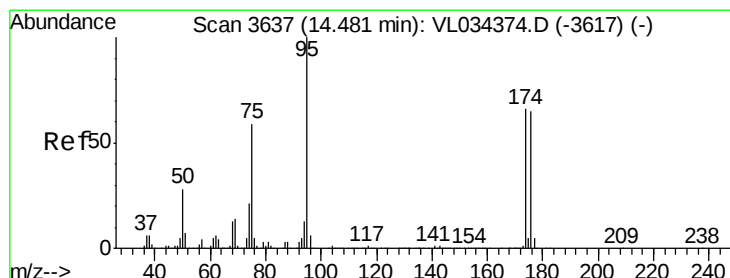
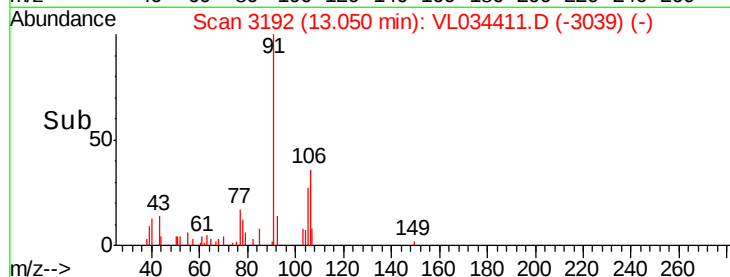
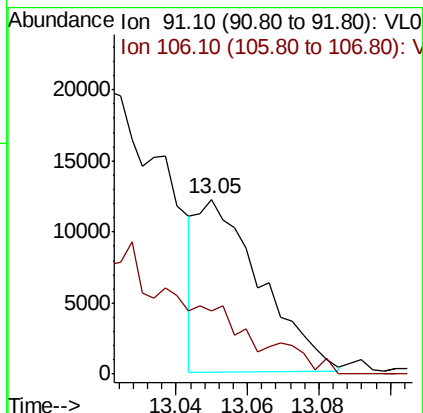
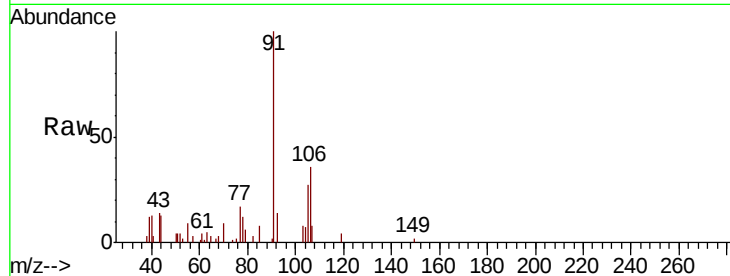




#59
m/p-Xylene
Concen: 0.061 ppbv
RT: 13.05 min Scan# 3192
Delta R.T. -0.01 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

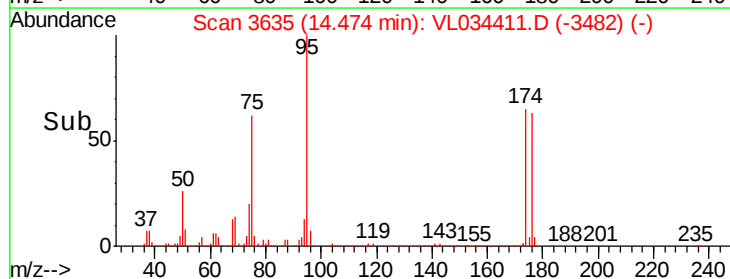
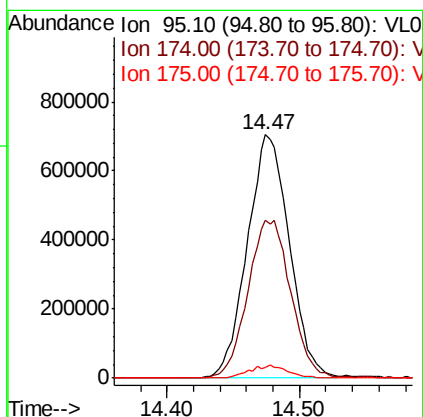
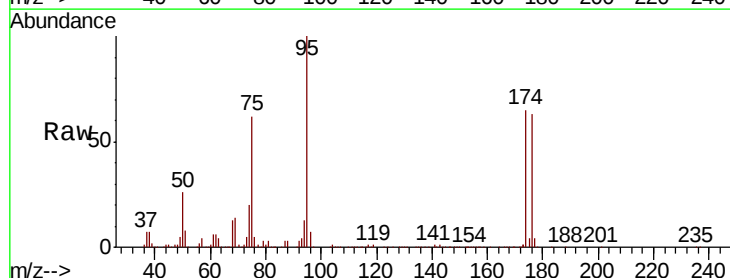
Instrument :
MSVOA_L
ClientSampled :

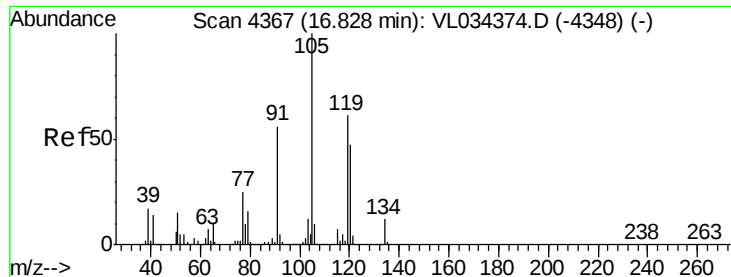
Tot Ion: 91 Resp: 15010
Ion Ratio Lower Upper
91 100
106 0.0 34.6 51.8#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.119 ppbv
RT: 14.47 min Scan# 3635
Delta R.T. -0.01 min
Lab File: VL034411.D
Acq: 25 Nov 2019 18:21

Tgt Ion: 95 Resp: 1553842
Ion Ratio Lower Upper
95 100
174 66.5 52.2 78.2
175 4.8 3.8 5.8





#74

1,2,4-Trimethylbenzene

Concen: 0.032 ppbv

RT: 16.83 min Scan# 4368

Delta R.T. 0.00 min

Lab File: VL034411.D

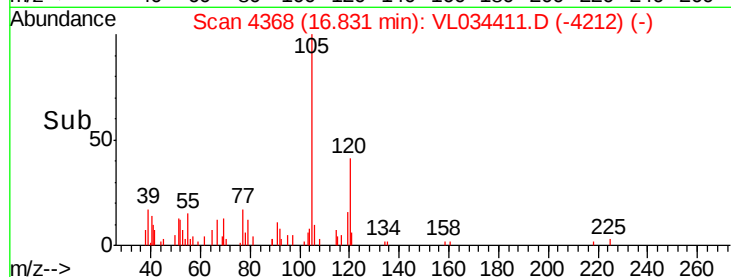
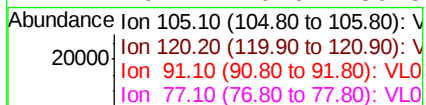
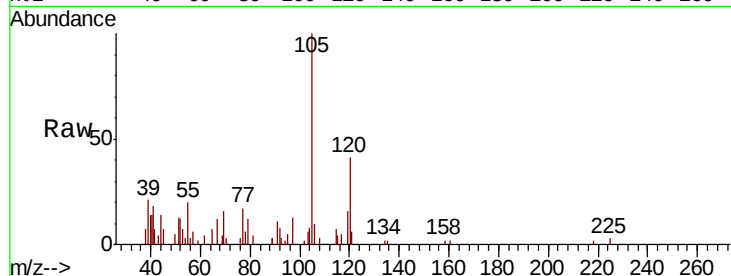
Acq: 25 Nov 2019 18:21

Instrument :

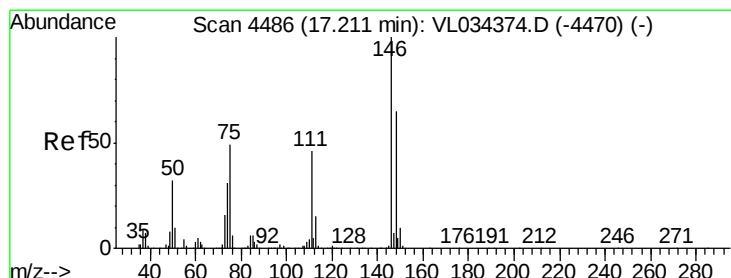
MSVOA_L

ClientSampleId :

Tot Ion:105	Resp:	9346
Ion Ratio	Lower	Upper
105	100	
120	39.7	37.4 56.0
91	7.1	46.3 69.5#
77	19.4	20.6 30.8#



Time-->



#76

1,4-Dichlorobenzene

Concen: 0.038 ppbv

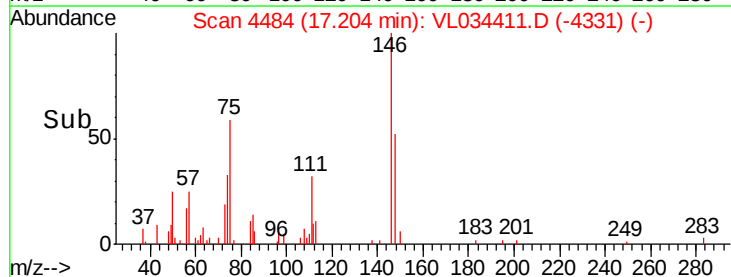
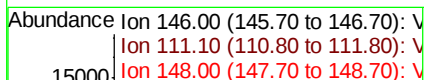
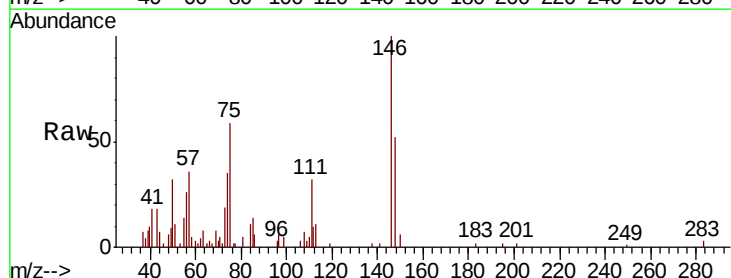
RT: 17.20 min Scan# 4484

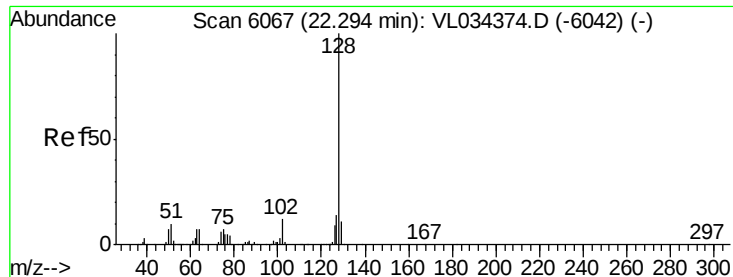
Delta R.T. -0.01 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Tgt Ion:146	Resp:	6206
Ion Ratio	Lower	Upper
146	100	
111	192.6	24.1 72.3#
148	0.0	32.9 98.6#





#79

Naphthalene

Concen: 0.044 ppbv

RT: 22.31 min Scan# 6072

Delta R.T. 0.02 min

Lab File: VL034411.D

Acq: 25 Nov 2019 18:21

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:128 Resp: 11066

Ion Ratio Lower Upper

128 100

127 11.5 11.0 16.6

129 13.1 8.9 13.3

