

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL073019\
 Data File : VL034061.D
 Acq On : 30 Jul 2019 12:04
 Operator : SY/AP
 Sample : K4033-01DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jul 31 02:11:25 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL073019AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Jul 30 06:55:18 2019
 QLast Update : Tue Jul 30 06:55:18 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.72	49	1135122	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.25	114	4664012	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.18	117	3387696	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.52	95	2739176	10.23	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.30%

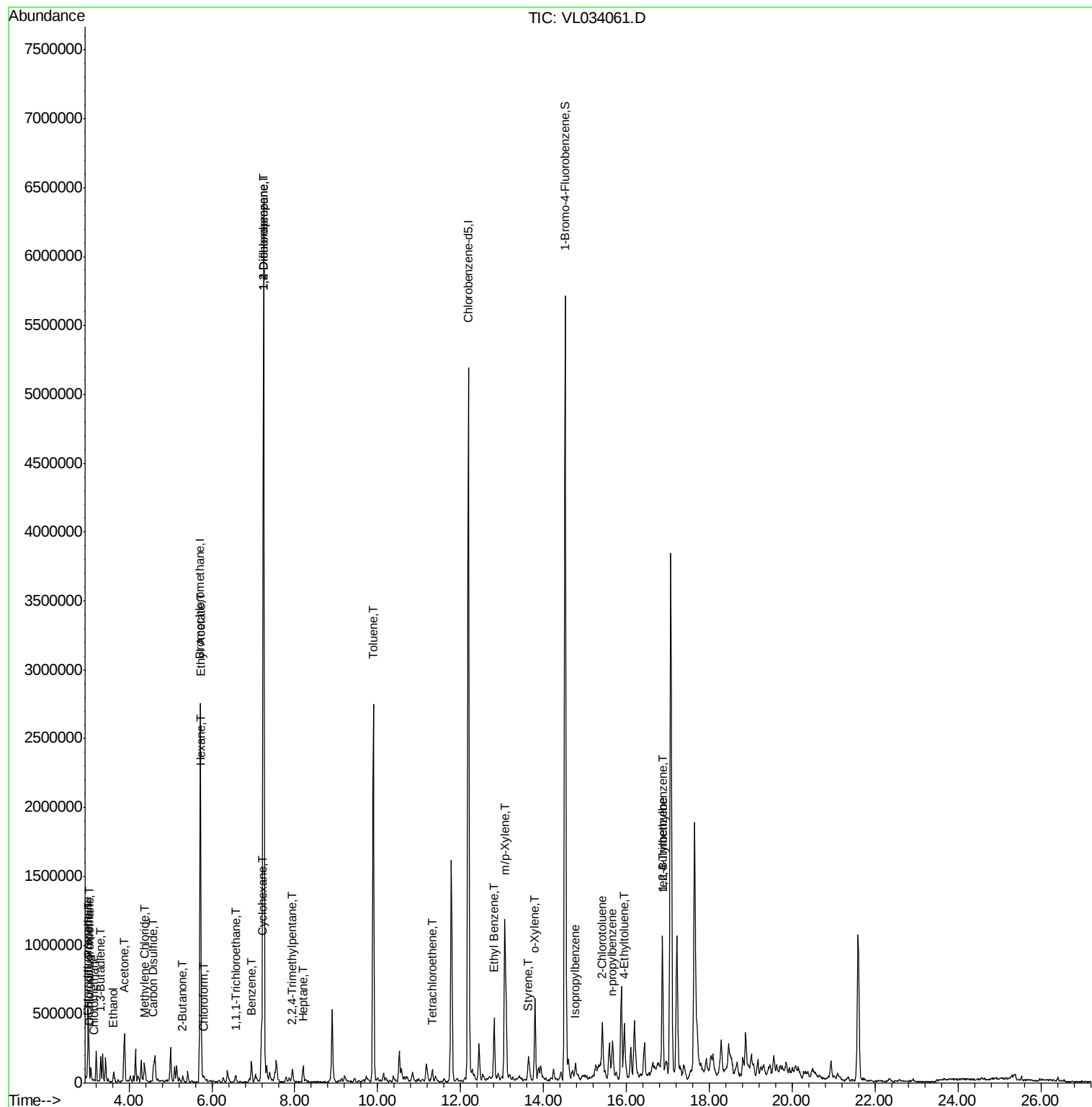
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	8343	0.038	ppbv	92
3) Chlorodifluoromethane	2.99	51	24808	0.189	ppbv	96
4) Chloromethane	3.14	50	2559	0.033	ppbv #	83
9) Propene	3.01	41	116922	2.486	ppbv	95
10) Heptane	8.19	43	20295	0.158	ppbv #	23
13) Ethanol	3.63	45	78351	4.185	ppbv	97
15) Acetone	3.88	43	284479	1.648	ppbv	92
16) 1,3-Butadiene	3.32	39	52371	0.781	ppbv #	27
20) Methylene Chloride	4.37	84	46290	0.701	ppbv	97
25) Ethyl Acetate	5.73	43	22526	0.088	ppbv #	74
26) Hexane	5.74	57	81093	0.699	ppbv #	39
27) Carbon Disulfide	4.59	76	66108	0.366	ppbv #	71
29) Chloroform	5.80	83	8127	0.038	ppbv	98
30) Cyclohexane	7.21	84	61437	0.521	ppbv #	1
32) 1,1,1-Trichloroethane	6.57	97	7769	0.035	ppbv #	22
34) 2-Butanone	5.29	43	25677	0.134	ppbv #	50
36) Benzene	6.96	78	120581	0.388	ppbv	94
39) 1,2-Dichloropropane	7.24	63	1151958	9.143	ppbv #	25
44) 2,2,4-Trimethylpentane	7.94	57	38000	0.074	ppbv #	39
52) Tetrachloroethene	11.31	164	3839	0.032	ppbv #	59
53) Toluene	9.89	91	2113170	6.523	ppbv	100
58) Ethyl Benzene	12.81	91	373474	0.932	ppbv	100
59) m/p-Xylene	13.07	91	1289095	3.537	ppbv	100
60) o-Xylene	13.79	91	456329	1.260	ppbv	96
61) Styrene	13.63	104	34304	0.143	ppbv #	27
62) Isopropylbenzene	14.77	105	45179	0.093	ppbv #	55
64) n-propylbenzene	15.67	120	34395	0.274	ppbv #	45
65) tert-Butylbenzene	16.88	119	31724	0.071	ppbv #	1
71) 2-Chlorotoluene	15.41	91	15952	0.045	ppbv	76
72) 4-Ethyltoluene	15.95	105	253597	0.619	ppbv	97
74) 1,2,4-Trimethylbenzene	16.87	105	763278	1.667	ppbv #	83

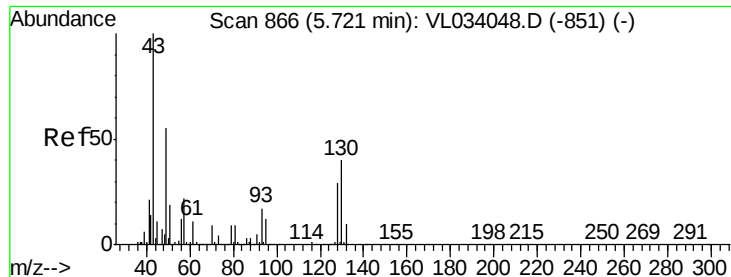
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Jul 30 06:55:18 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.72 min Scan# 865

Delta R.T. -0.00 min

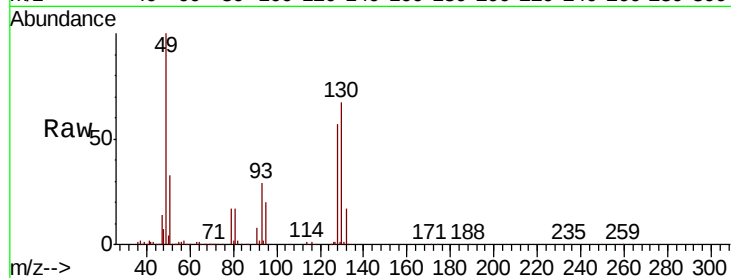
Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 49 Resp: 1135122

Ion	Ratio	Lower	Upper
49	100		
128	54.9	27.0	81.0
130	70.0	35.0	105.0

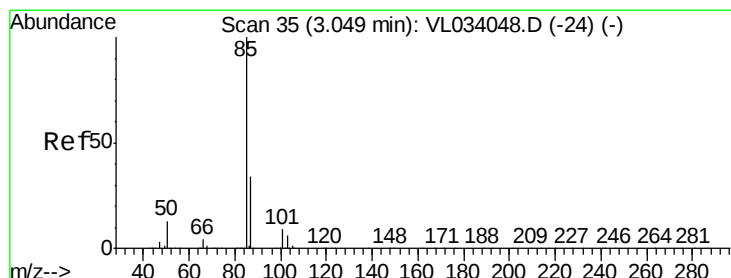
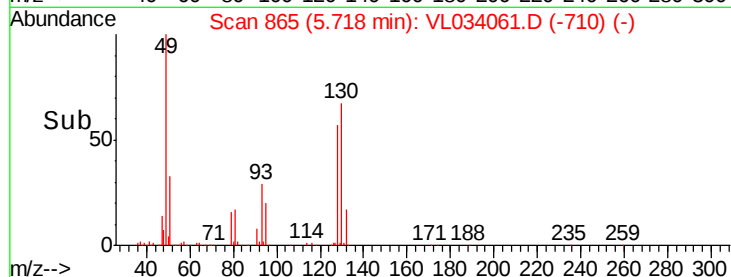


Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V

Time-->



#2

Dichlorodifluoromethane

Concen: 0.038 ppbv

RT: 3.05 min Scan# 35

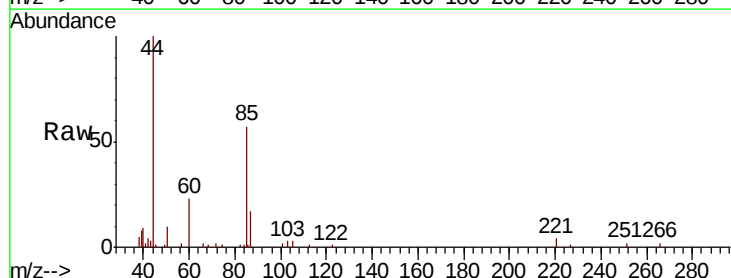
Delta R.T. 0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Tgt Ion: 85 Resp: 8343

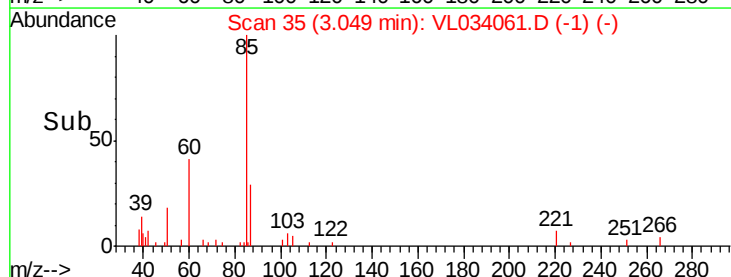
Ion	Ratio	Lower	Upper
85	100		
87	29.0	27.0	40.4

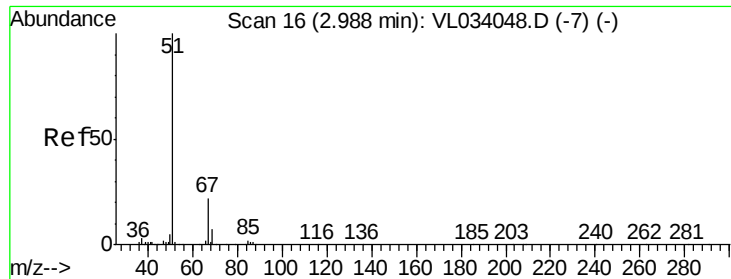


Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

Time-->

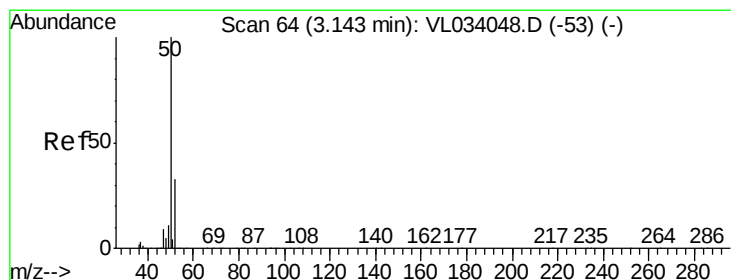
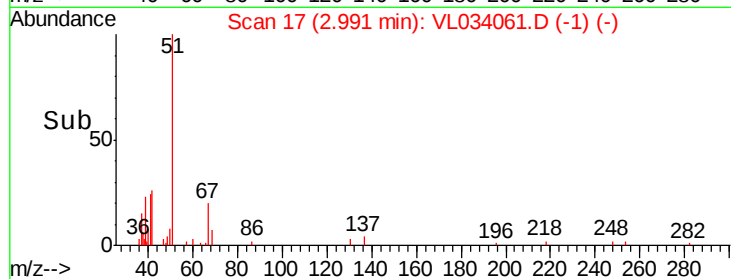
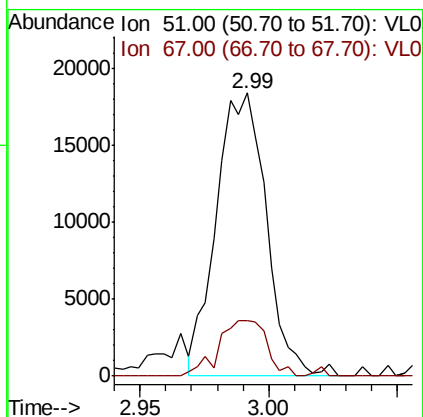
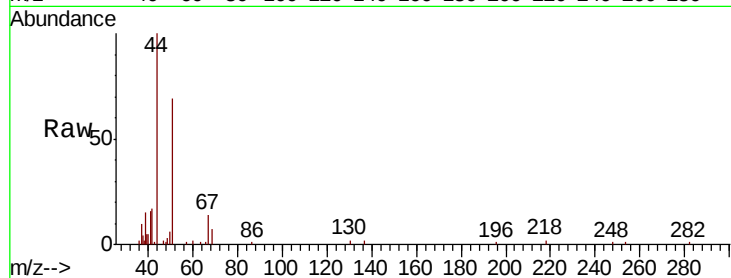




#3
Chlorodifluoromethane
Concen: 0.189 ppbv
RT: 2.99 min Scan# 17
Delta R.T. 0.00 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

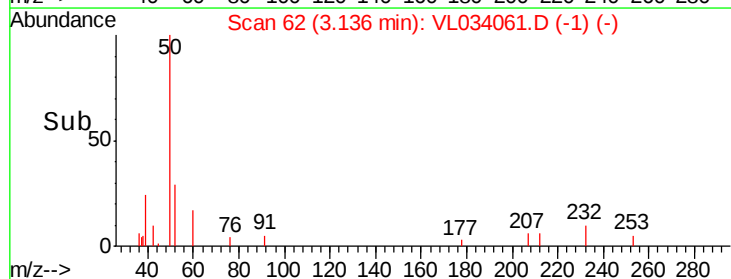
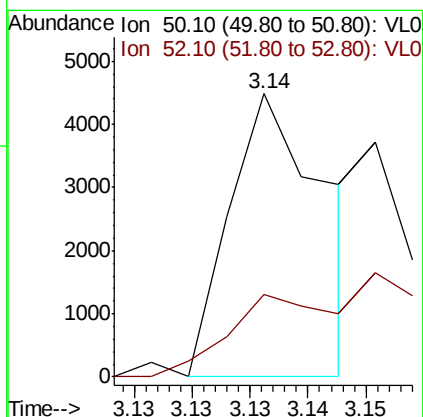
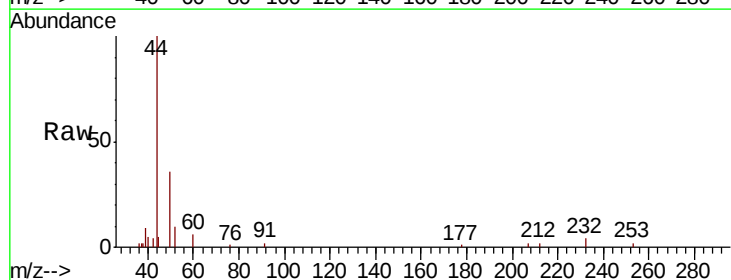
Instrument :
MSVOA_L
ClientSampleId :

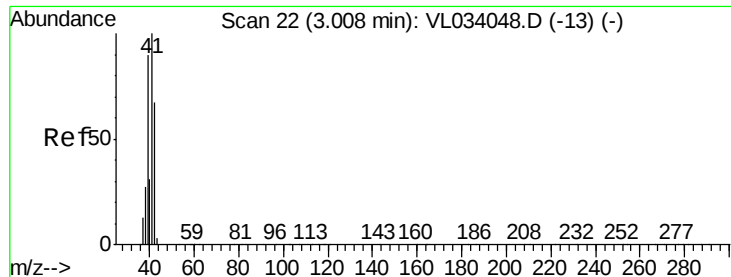
Tot Ion: 51 Resp: 24808
Ion Ratio Lower Upper
51 100
67 19.6 17.4 26.0



#4
Chloromethane
Concen: 0.033 ppbv
RT: 3.14 min Scan# 62
Delta R.T. -0.01 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

Tgt Ion: 50 Resp: 2559
Ion Ratio Lower Upper
50 100
52 23.5 26.7 40.1#





#9

Propene

Concen: 2.486 ppbv

RT: 3.01 min Scan# 24

Delta R.T. 0.01 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

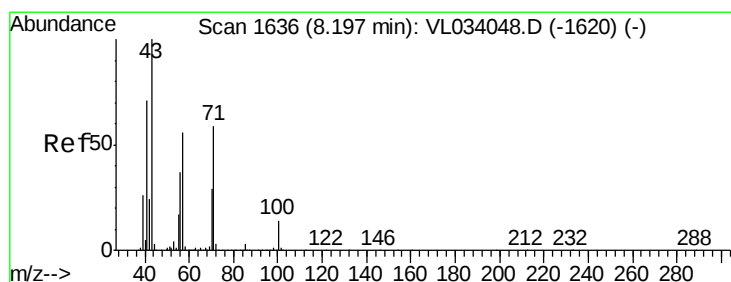
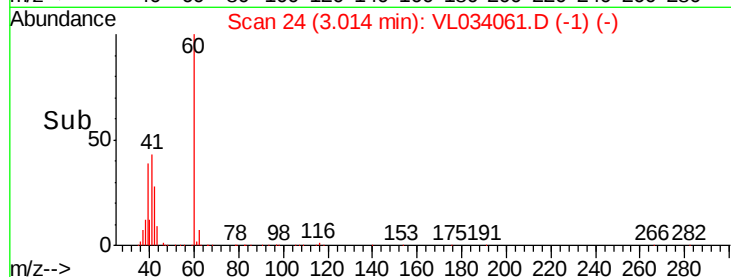
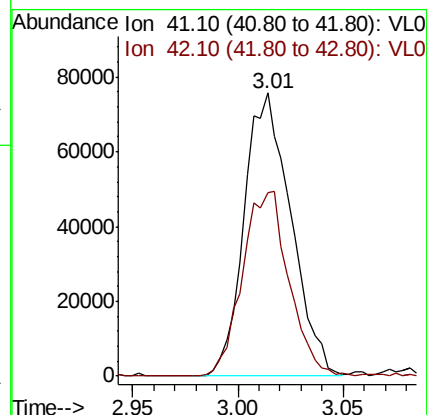
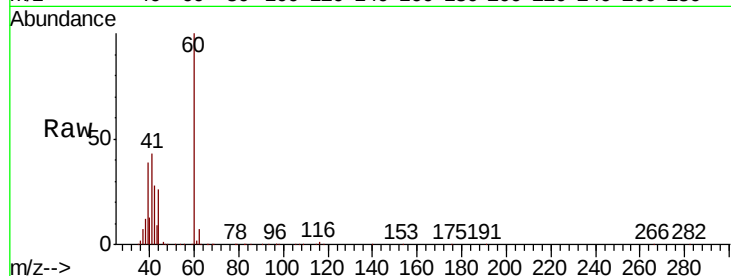
ClientSampleId :

Tot Ion: 41 Resp: 116922

Ion Ratio Lower Upper

41 100

42 65.0 55.4 83.2



#10

Heptane

Concen: 0.158 ppbv

RT: 8.19 min Scan# 1635

Delta R.T. -0.00 min

Lab File: VL034061.D

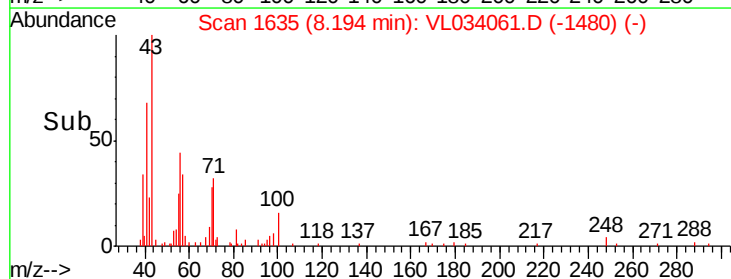
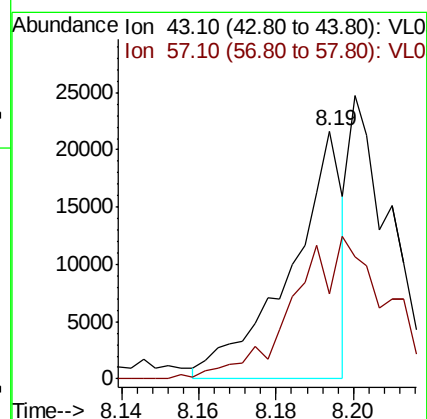
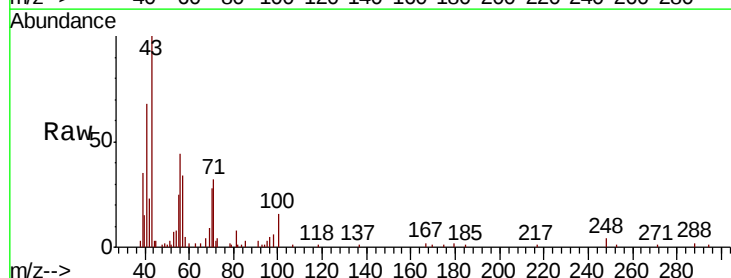
Acq: 30 Jul 2019 12:04

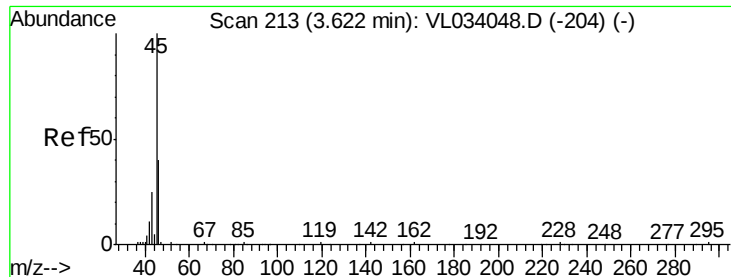
Tgt Ion: 43 Resp: 20295

Ion Ratio Lower Upper

43 100

57 0.0 44.8 67.2#

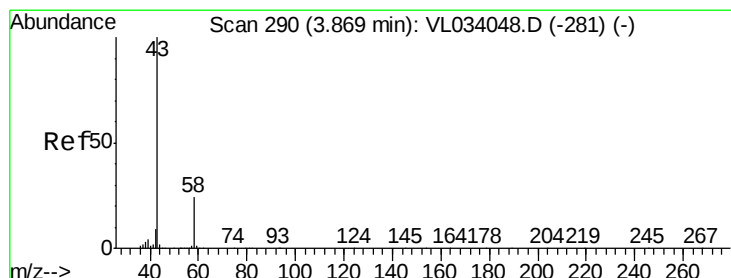
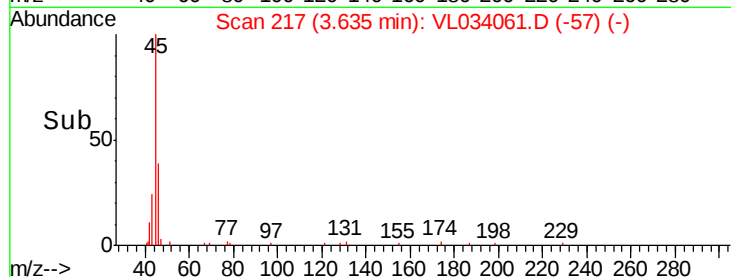
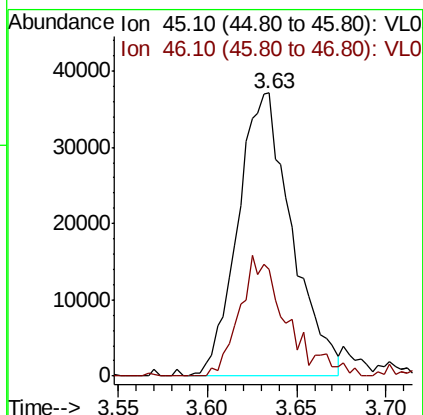
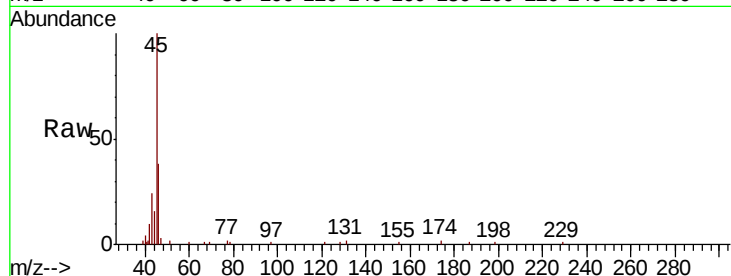




#13
Ethanol
Concen: 4.185 ppbv
RT: 3.63 min Scan# 217
Delta R.T. 0.01 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

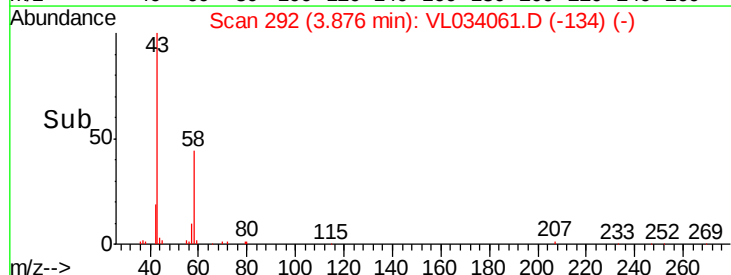
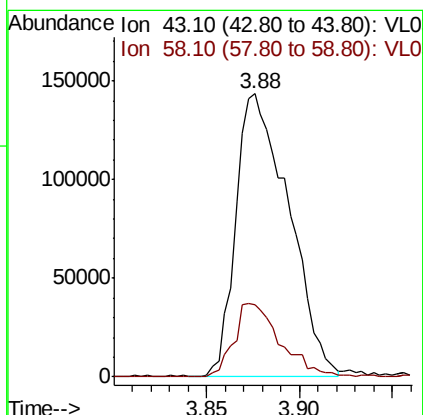
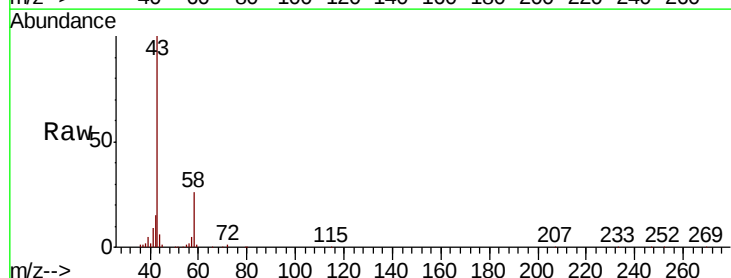
Instrument :
MSVOA_L
ClientSampleId :

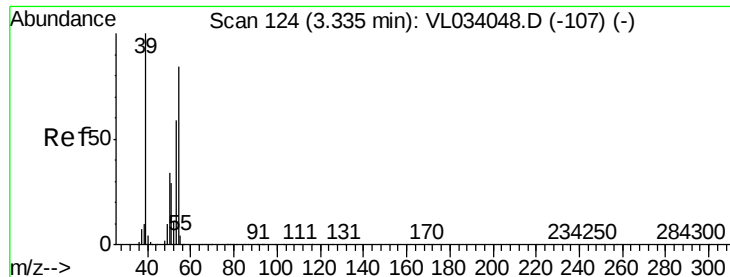
Tot Ion: 45 Resp: 78351
Ion Ratio Lower Upper
45 100
46 37.0 15.6 62.2



#15
Acetone
Concen: 1.648 ppbv
RT: 3.88 min Scan# 292
Delta R.T. 0.01 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

Tgt Ion: 43 Resp: 284479
Ion Ratio Lower Upper
43 100
58 22.9 21.6 32.4





#16

1,3-Butadiene

Concen: 0.781 ppbv

RT: 3.32 min Scan# 118

Delta R.T. -0.02 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

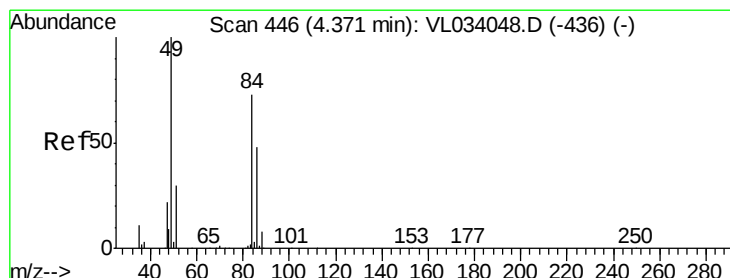
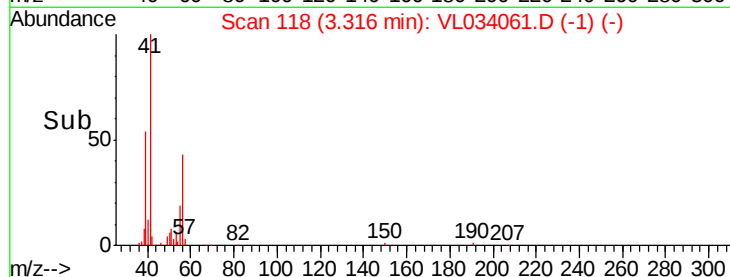
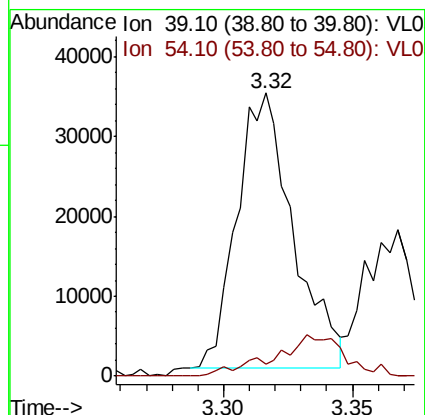
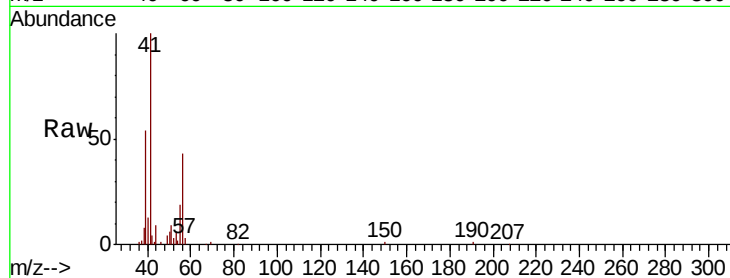
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 39 Resp: 52371

Ion Ratio Lower Upper

39 100

54 18.7 68.9 103.3#



#20

Methylene Chloride

Concen: 0.701 ppbv

RT: 4.37 min Scan# 446

Delta R.T. 0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Tgt Ion: 84 Resp: 46290

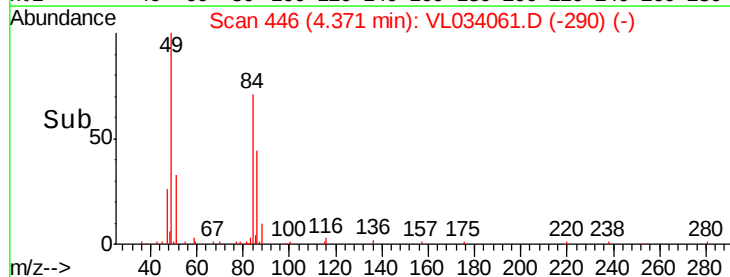
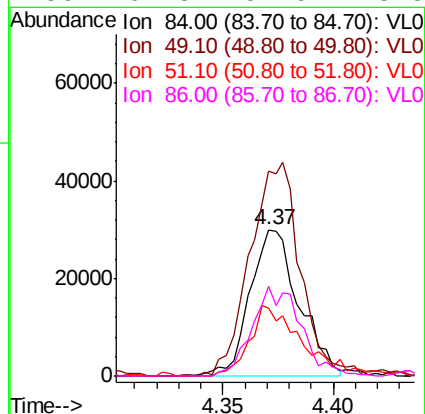
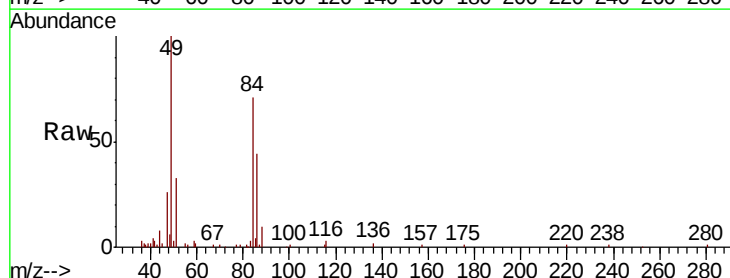
Ion Ratio Lower Upper

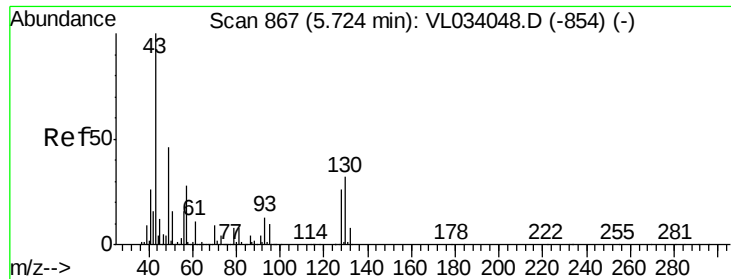
84 100

49 138.0 109.6 164.4

51 46.7 33.4 50.2

86 61.8 52.6 78.8

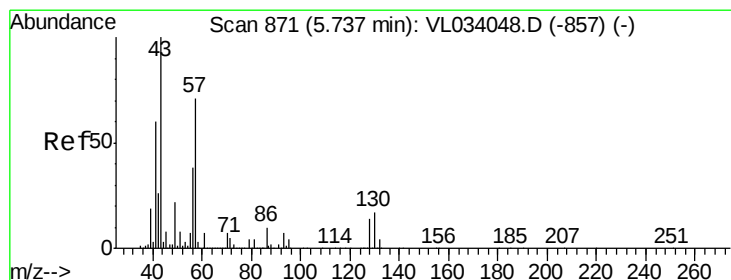
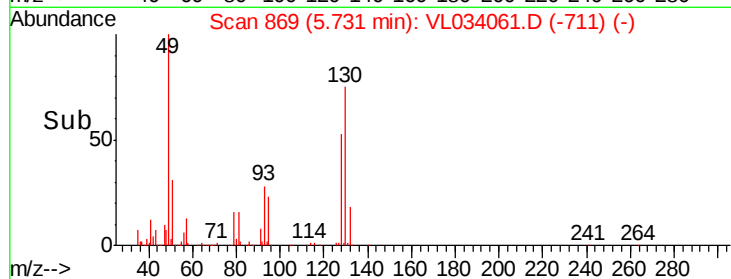
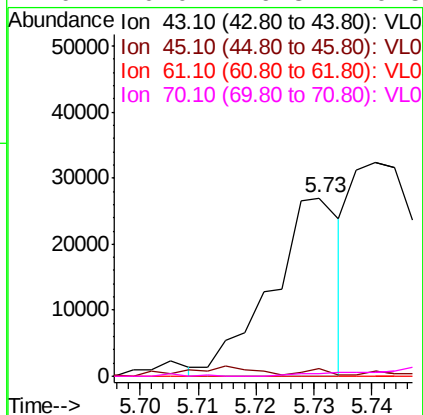
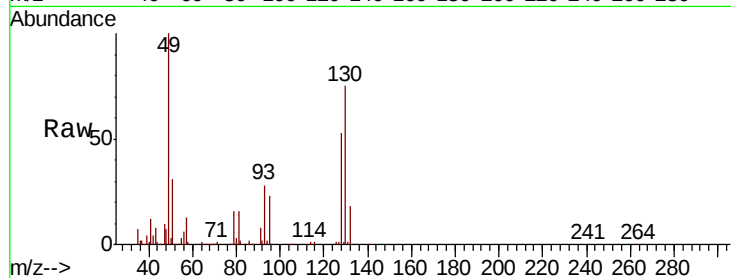




#25
Ethyl Acetate
Concen: 0.088 ppbv
RT: 5.73 min Scan# 869
Delta R.T. 0.01 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

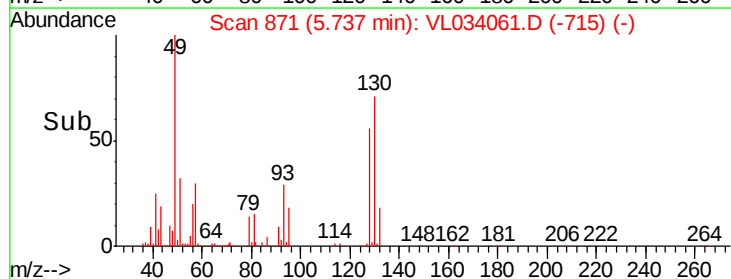
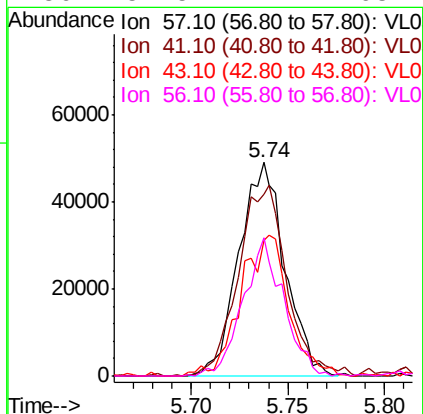
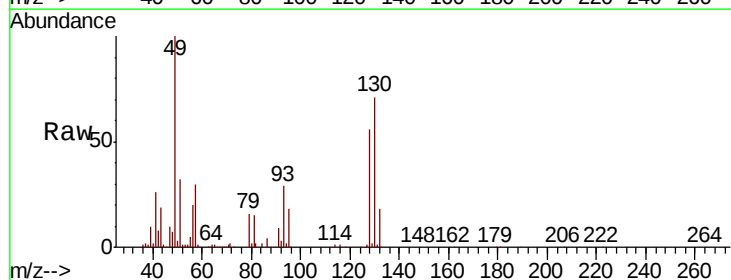
Instrument :
MSVOA_L
ClientSampleId :

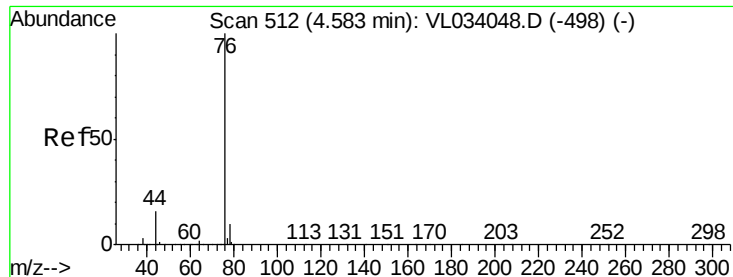
Tot Ion:	43	Resp:	22526
Ion	Ratio	Lower	Upper
43	100		
45	0.0	8.1	12.1#
61	0.0	8.1	12.1#
70	0.0	6.3	9.5#



#26
Hexane
Concen: 0.699 ppbv
RT: 5.74 min Scan# 871
Delta R.T. 0.00 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

Tgt Ion:	57	Resp:	81093
Ion	Ratio	Lower	Upper
57	100		
41	93.9	69.0	103.6
43	69.0	176.6	264.8#
56	57.5	42.2	63.4





#27

Carbon Disulfide

Concen: 0.366 ppbv

RT: 4.59 min Scan# 513

Delta R.T. 0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

ClientSampleId :

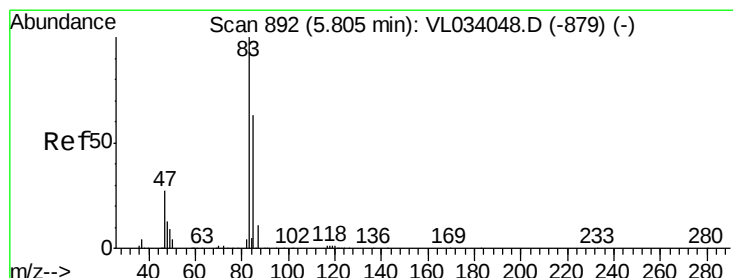
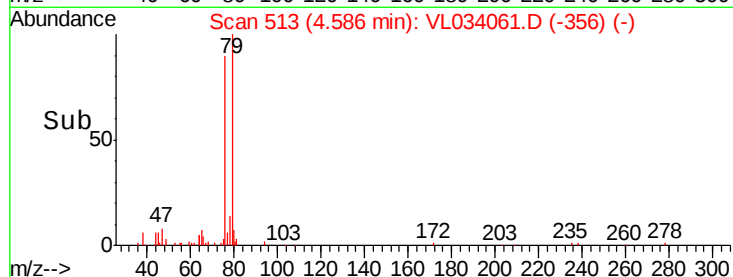
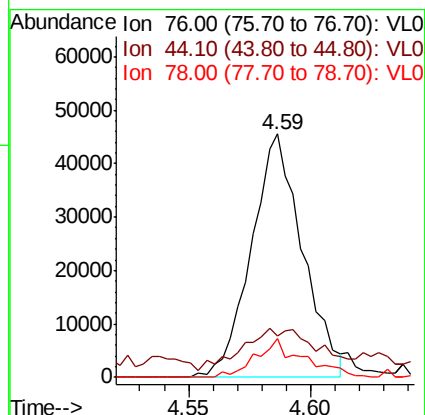
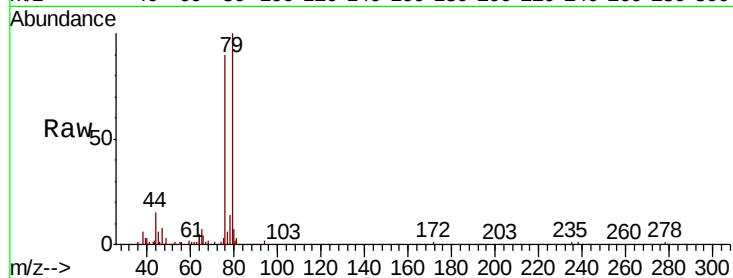
Tot Ion: 76 Resp: 66108

Ion Ratio Lower Upper

76 100

44 31.8 13.0 19.4#

78 15.8 7.7 11.5#



#29

Chloroform

Concen: 0.038 ppbv

RT: 5.80 min Scan# 890

Delta R.T. -0.01 min

Lab File: VL034061.D

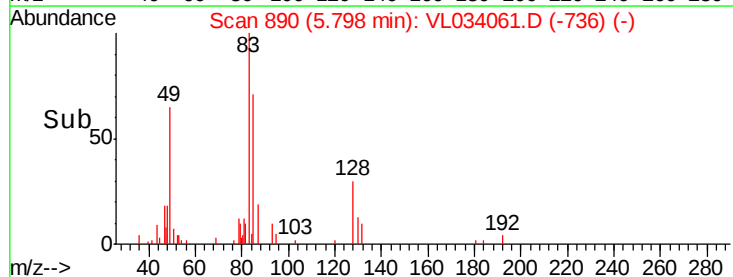
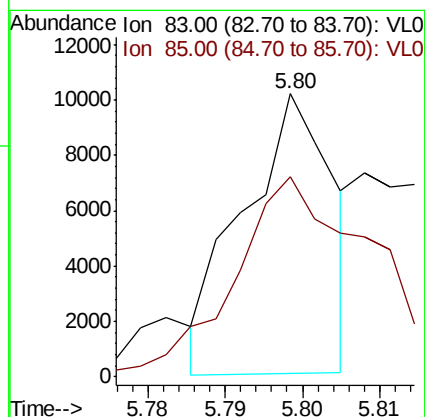
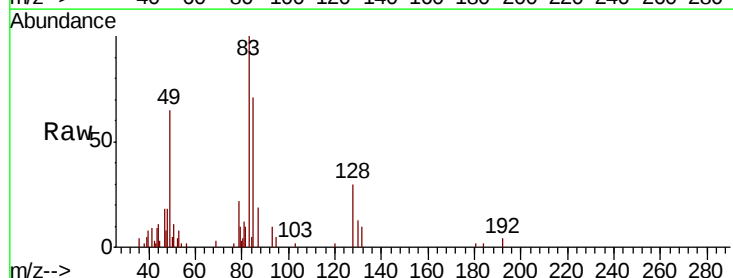
Acq: 30 Jul 2019 12:04

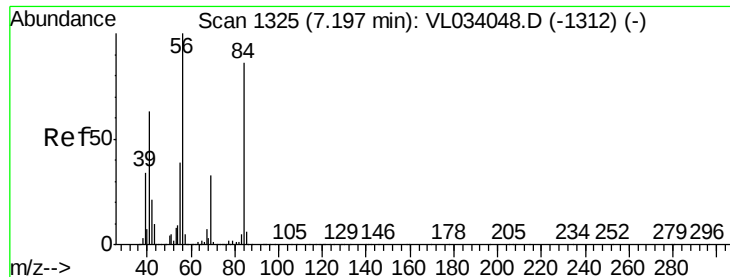
Tgt Ion: 83 Resp: 8127

Ion Ratio Lower Upper

83 100

85 64.5 50.2 75.4

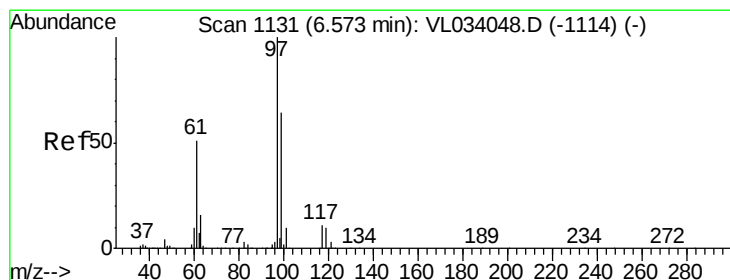
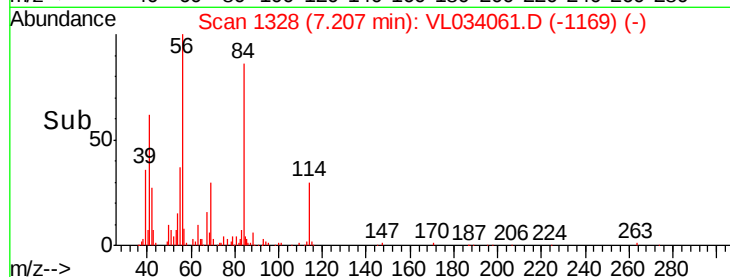
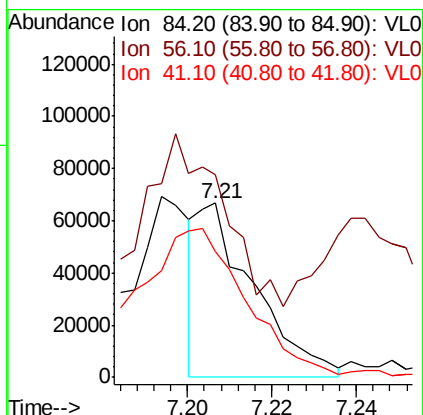
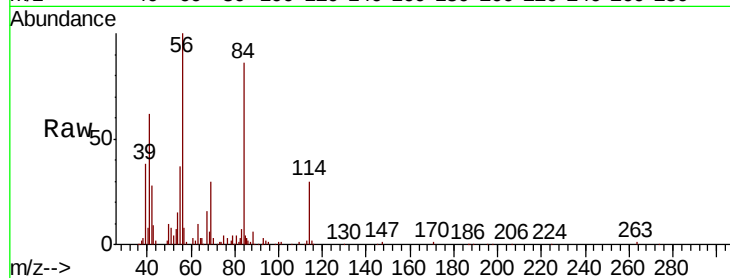




#30
Cvclohexane
Concen: 0.521 ppbv
RT: 7.21 min Scan# 1328
Delta R.T. 0.01 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

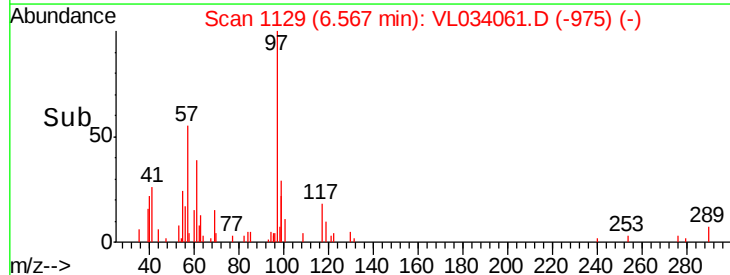
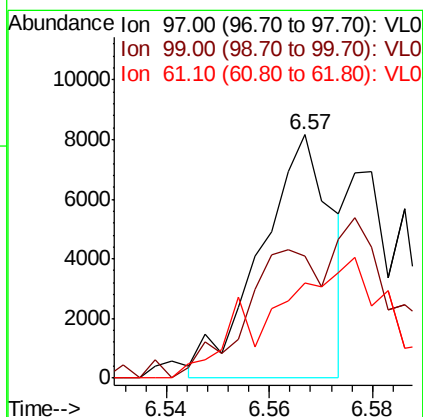
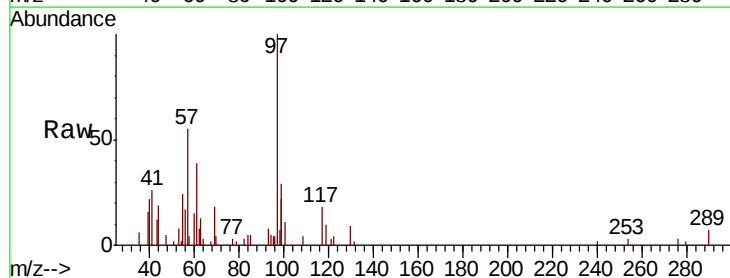
Instrument :
MSVOA_L
ClientSampleId :

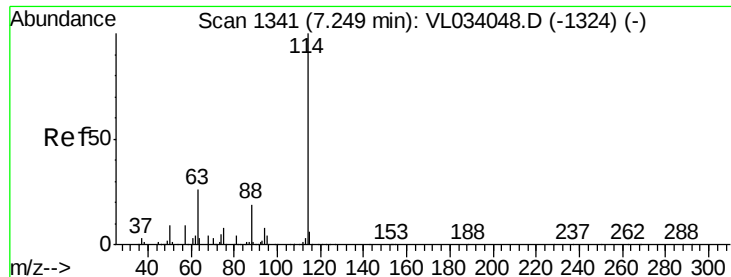
Tot Ion: 84 Resp: 61437
Ion Ratio Lower Upper
84 100
56 0.0 101.7 152.5#
41 183.0 59.4 89.0#



#32
1,1,1-Trichloroethane
Concen: 0.035 ppbv
RT: 6.57 min Scan# 1129
Delta R.T. -0.01 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

Tgt Ion: 97 Resp: 7769
Ion Ratio Lower Upper
97 100
99 0.0 51.0 76.6#
61 0.0 39.5 59.3#

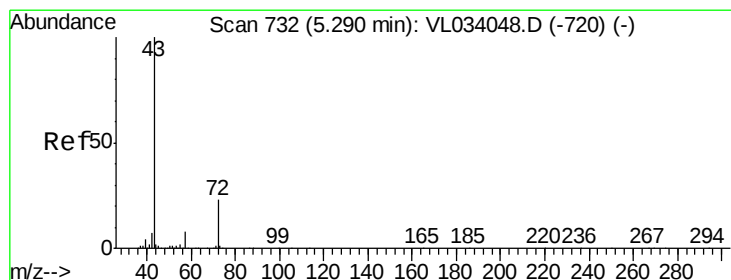
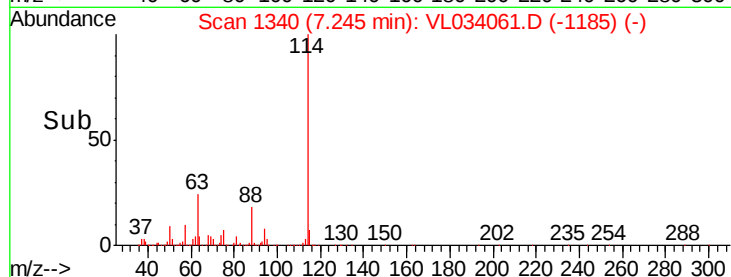
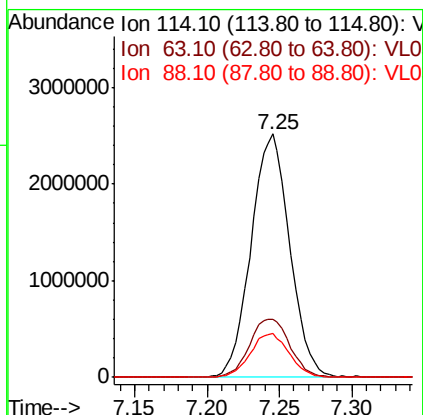
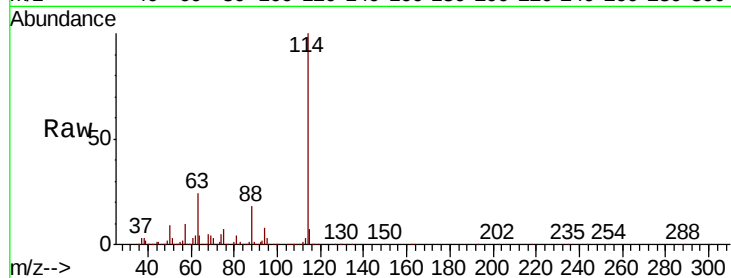




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.25 min Scan# 1340
 Delta R.T. -0.00 min
 Lab File: VL034061.D
 Acq: 30 Jul 2019 12:04

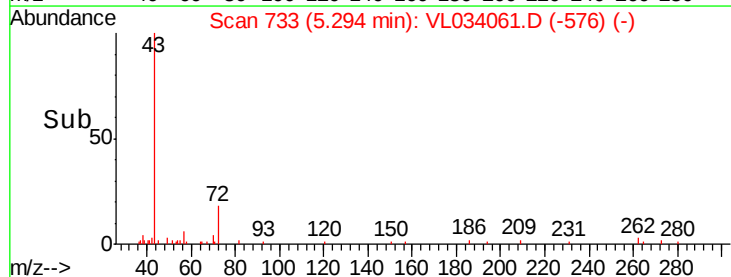
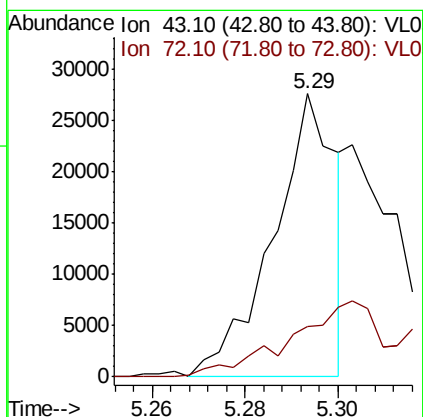
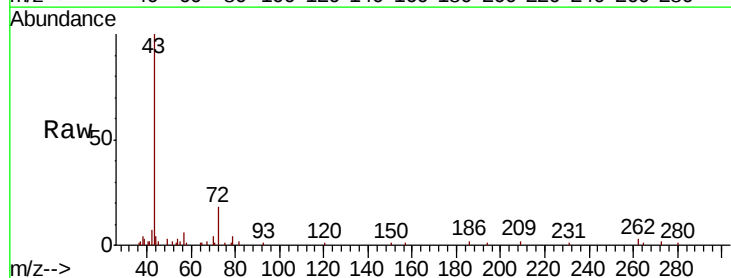
Instrument :
 MSVOA_L
 ClientSampleId :

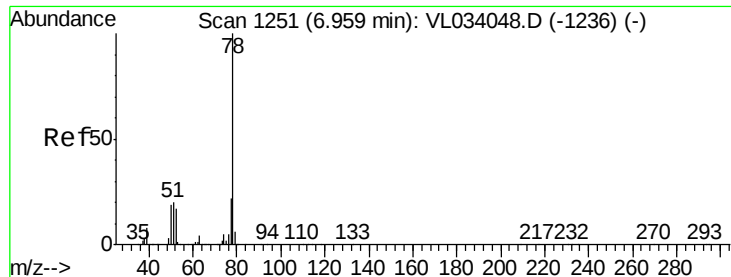
Tot Ion:114 Resp: 4664012
 Ion Ratio Lower Upper
 114 100
 63 25.2 21.0 31.6
 88 18.2 14.7 22.1



#34
 2-Butanone
 Concen: 0.134 ppbv
 RT: 5.29 min Scan# 733
 Delta R.T. 0.00 min
 Lab File: VL034061.D
 Acq: 30 Jul 2019 12:04

Tgt Ion: 43 Resp: 25677
 Ion Ratio Lower Upper
 43 100
 72 0.0 20.2 30.4#





#36

Benzene

Concen: 0.388 ppbv

RT: 6.96 min Scan# 1251

Delta R.T. 0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

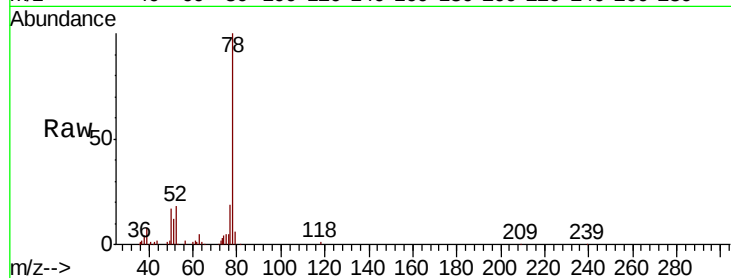
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 78 Resp: 120581

Ion	Ratio	Lower	Upper
78	100		
77	18.8	17.9	26.9
50	16.4	14.9	22.3

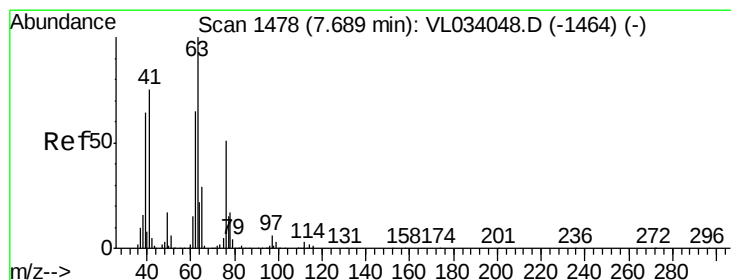
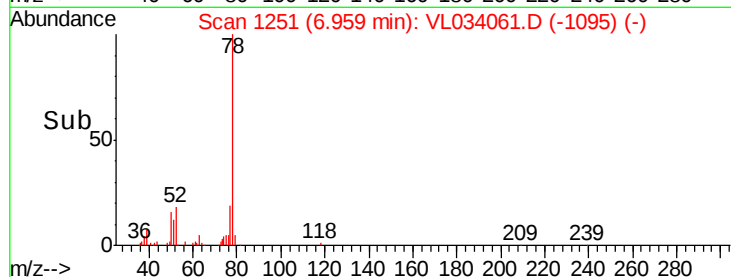
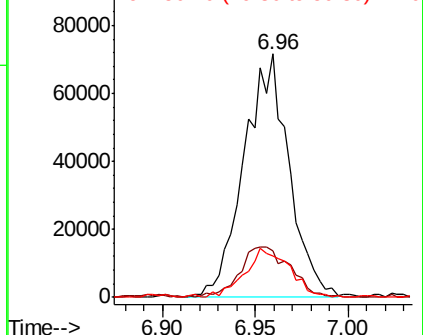


Abundance

Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 9.143 ppbv

RT: 7.24 min Scan# 1339

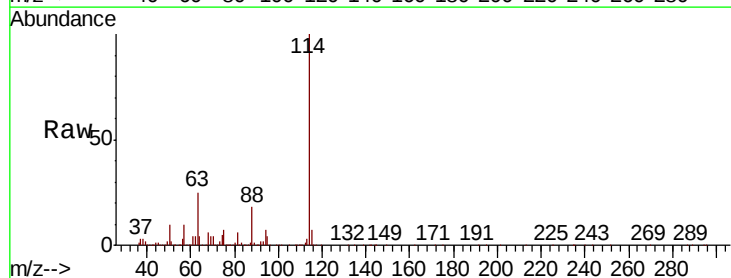
Delta R.T. -0.45 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Tgt Ion: 63 Resp: 1151958

Ion	Ratio	Lower	Upper
63	100		
41	0.0	59.8	89.8#
62	16.9	52.2	78.2#

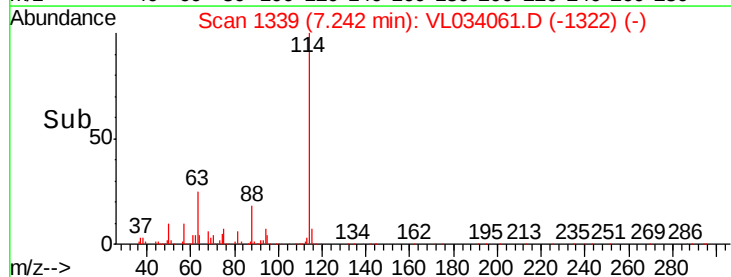
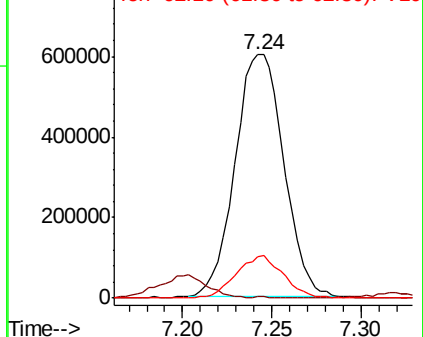


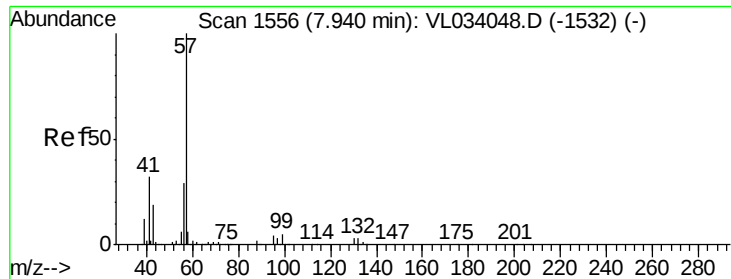
Abundance

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

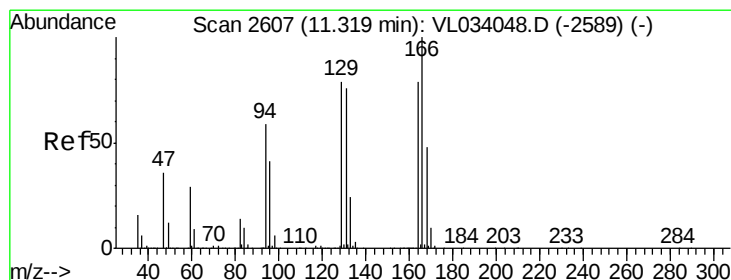
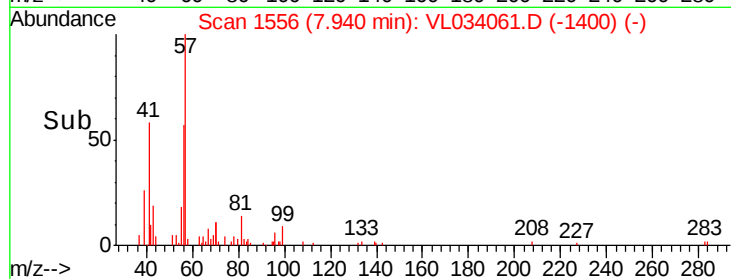
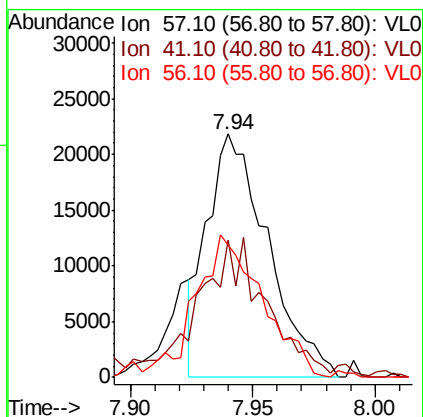
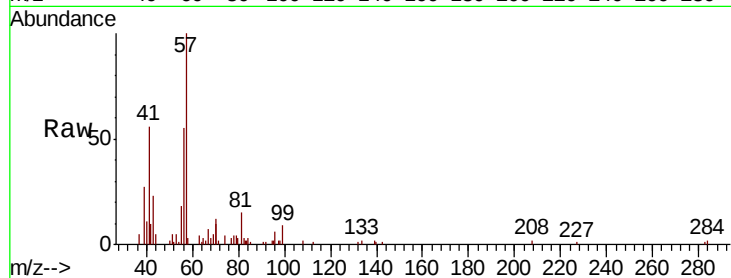




#44
 2,2,4-Trimethylpentane
 Concen: 0.074 ppbv
 RT: 7.94 min Scan# 1556
 Delta R.T. 0.00 min
 Lab File: VL034061.D
 Acq: 30 Jul 2019 12:04

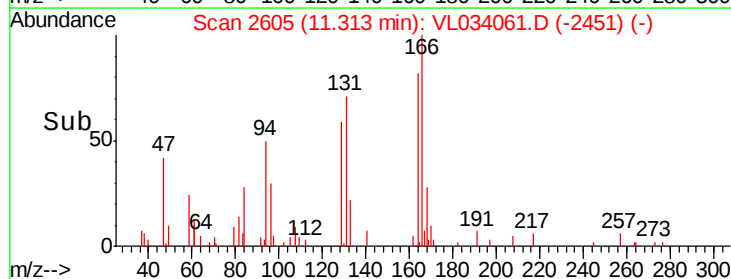
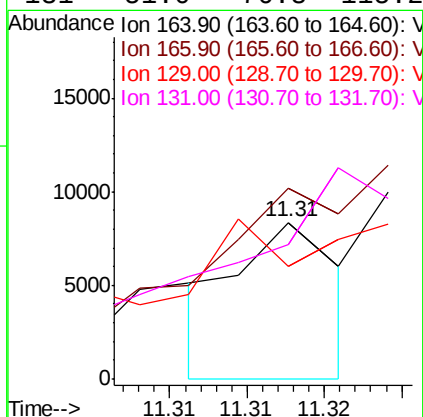
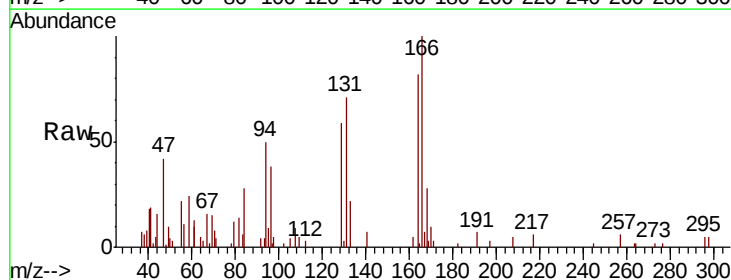
Instrument :
 MSVOA_L
 ClientSampled :

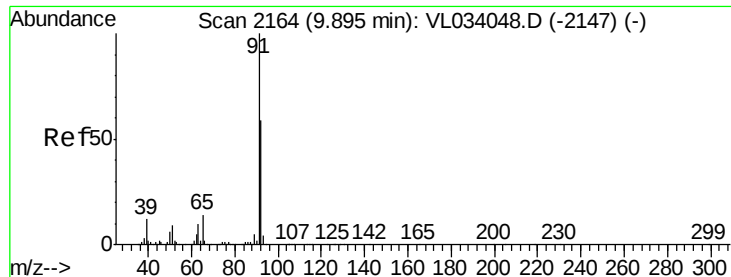
Tot Ion: 57 Resp: 38000
 Ion Ratio Lower Upper
 57 100
 41 66.4 26.2 39.2#
 56 64.1 24.2 36.2#



#52
 Tetrachloroethene
 Concen: 0.032 ppbv
 RT: 11.31 min Scan# 2605
 Delta R.T. -0.01 min
 Lab File: VL034061.D
 Acq: 30 Jul 2019 12:04

Tgt Ion:164 Resp: 3839
 Ion Ratio Lower Upper
 164 100
 166 154.5 101.6 152.4#
 129 44.4 80.7 121.1#
 131 51.0 76.8 115.2#





#53

Toluene

Concen: 6.523 ppbv

RT: 9.89 min Scan# 2163

Delta R.T. -0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

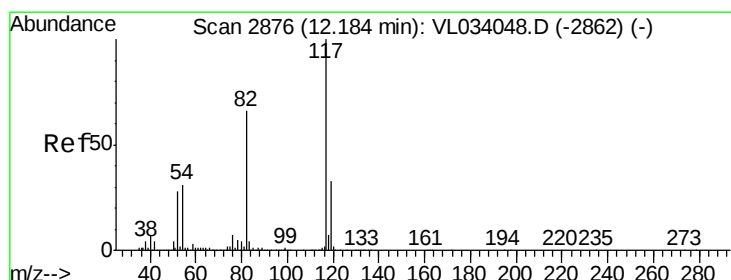
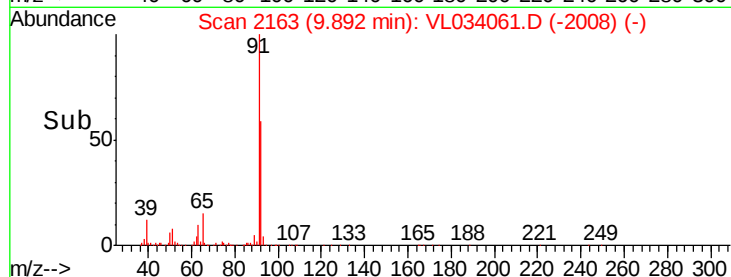
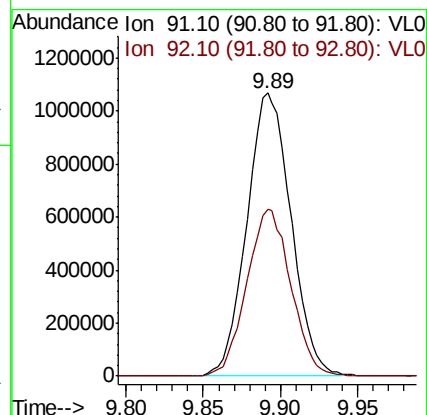
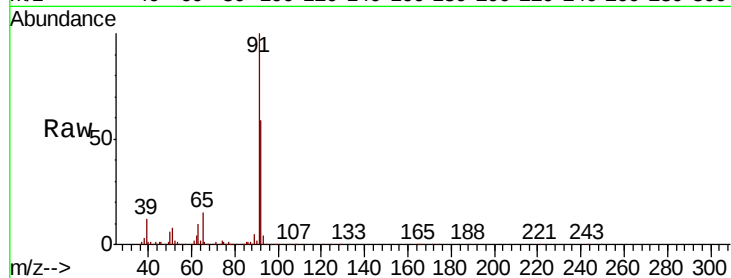
ClientSampleId :

Tot Ion: 91 Resp: 2113170

Ion Ratio Lower Upper

91 100

92 59.1 47.4 71.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.18 min Scan# 2876

Delta R.T. 0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

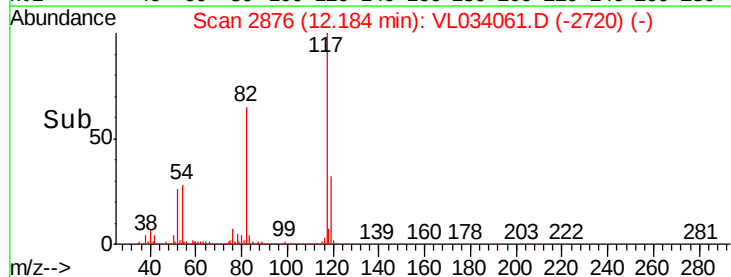
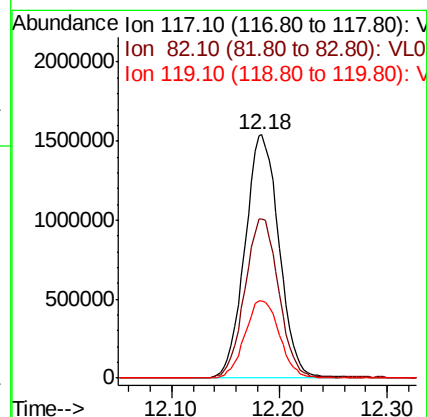
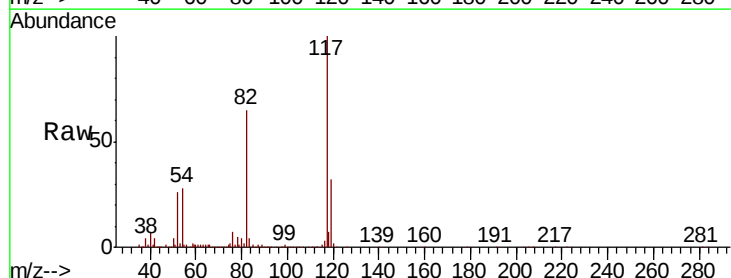
Tgt Ion: 117 Resp: 3387696

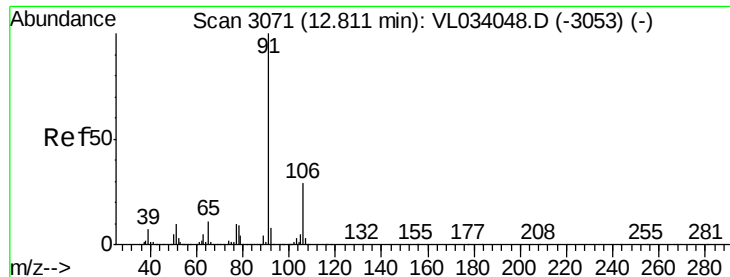
Ion Ratio Lower Upper

117 100

82 65.2 49.8 74.8

119 32.6 43.0 64.6#





#58

Ethyl Benzene

Concen: 0.932 ppbv

RT: 12.81 min Scan# 3071

Delta R.T. 0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

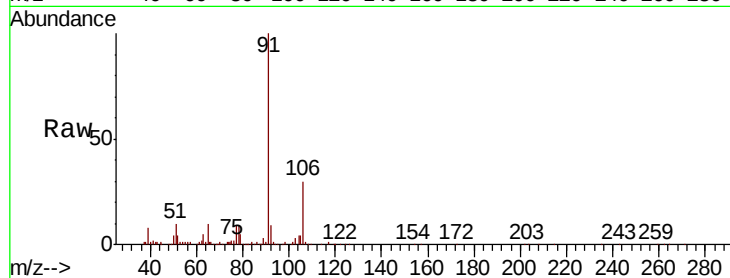
ClientSampleId :

Tot Ion: 91 Resp: 373474

Ion Ratio Lower Upper

91 100

106 29.6 23.5 35.3



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

12.81

200000

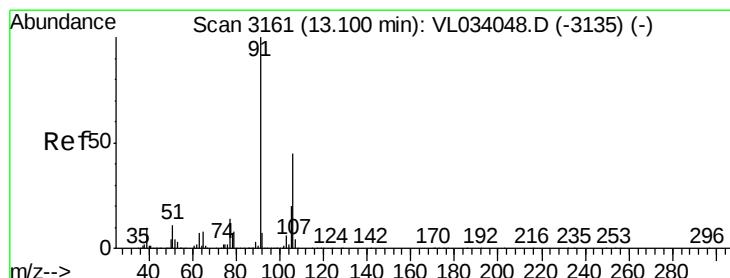
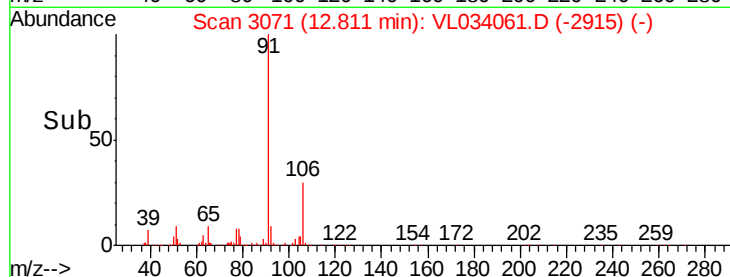
150000

100000

50000

0

Time-->



#59

m/p-Xylene

Concen: 3.537 ppbv

RT: 13.07 min Scan# 3150

Delta R.T. -0.04 min

Lab File: VL034061.D

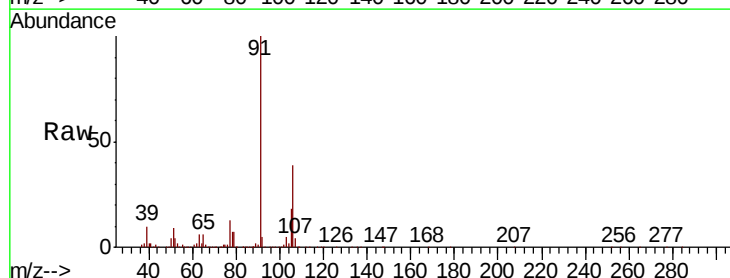
Acq: 30 Jul 2019 12:04

Tgt Ion: 91 Resp: 1289095

Ion Ratio Lower Upper

91 100

106 43.7 35.1 52.7



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

13.07

500000

400000

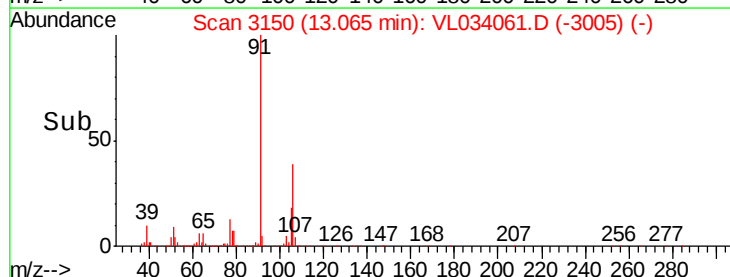
300000

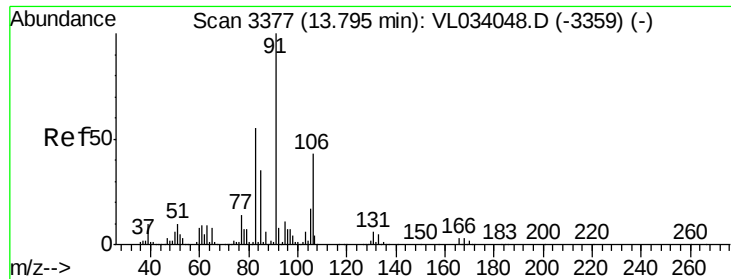
200000

100000

0

Time-->

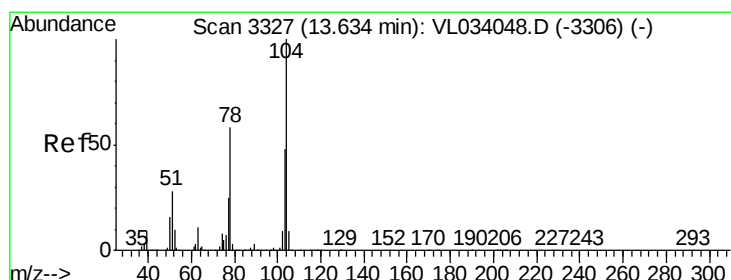
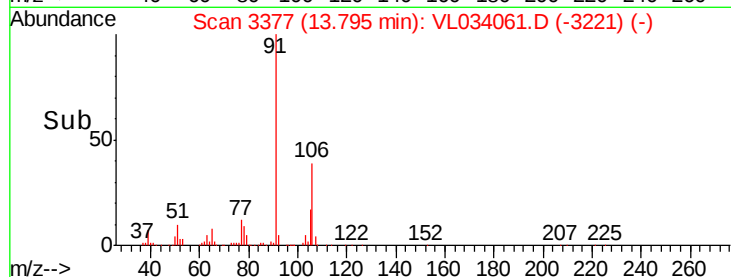
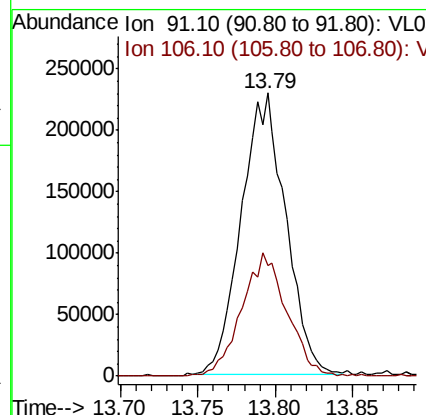
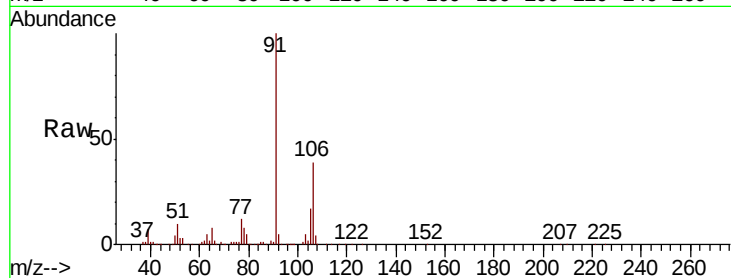




#60
o-Xylene
Concen: 1.260 ppbv
RT: 13.79 min Scan# 3377
Delta R.T. 0.00 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

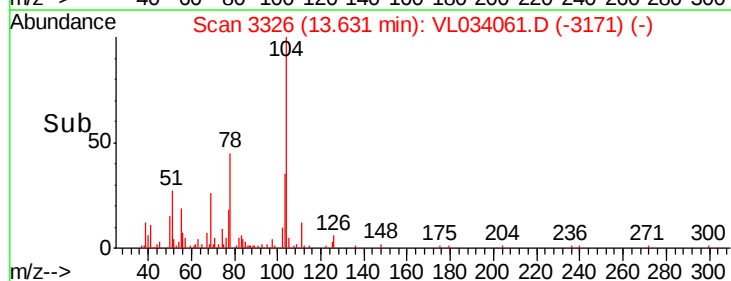
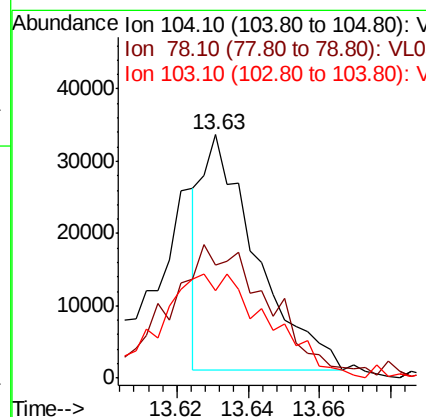
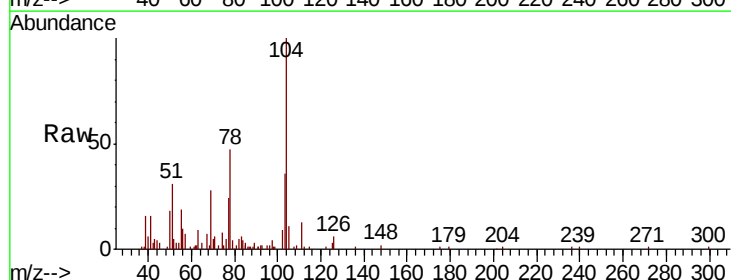
Instrument :
MSVOA_L
ClientSampled :

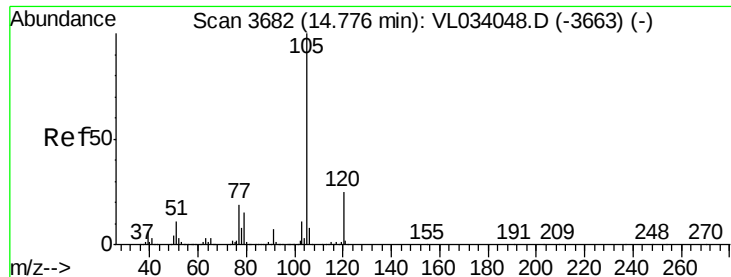
Tot Ion: 91 Resp: 456329
Ion Ratio Lower Upper
91 100
106 44.7 21.2 63.6



#61
Styrene
Concen: 0.143 ppbv
RT: 13.63 min Scan# 3326
Delta R.T. -0.00 min
Lab File: VL034061.D
Acq: 30 Jul 2019 12:04

Tgt Ion: 104 Resp: 34304
Ion Ratio Lower Upper
104 100
78 113.3 44.3 66.5#
103 92.8 38.8 58.2#





#62

Isopropylbenzene

Concen: 0.093 ppbv

RT: 14.77 min Scan# 3681

Delta R.T. -0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

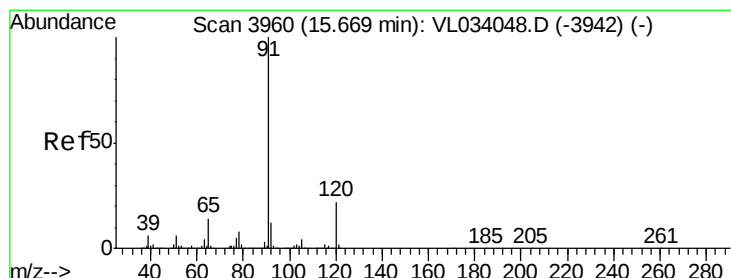
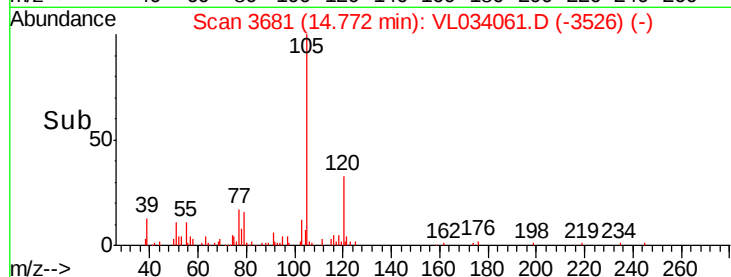
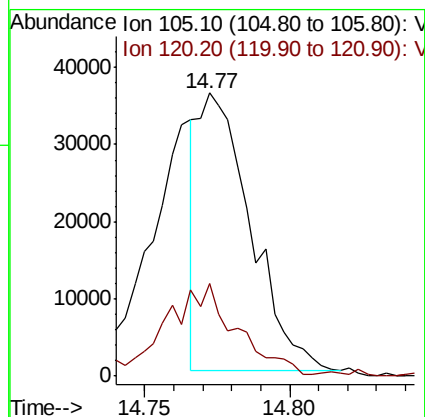
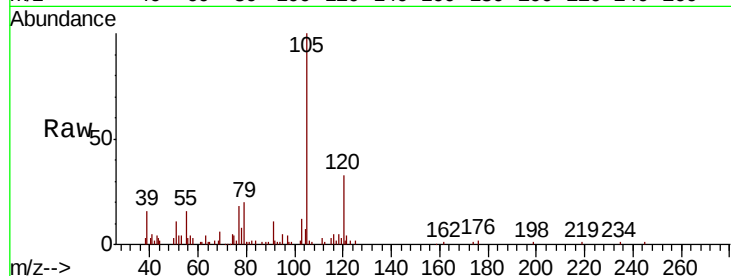
ClientSampleId :

Tot Ion:105 Resp: 45179

Ion Ratio Lower Upper

105 100

120 47.8 20.2 30.2#



#64

n-propylbenzene

Concen: 0.274 ppbv

RT: 15.67 min Scan# 3959

Delta R.T. -0.00 min

Lab File: VL034061.D

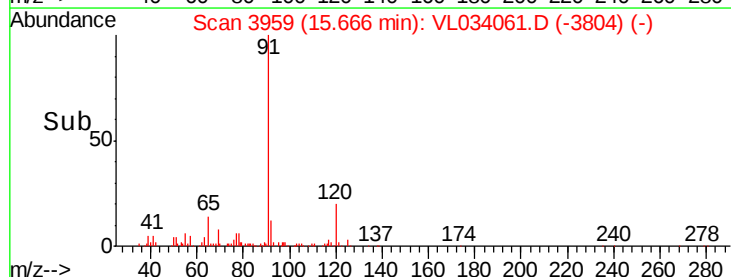
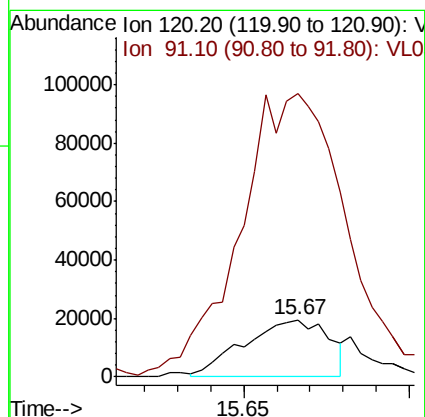
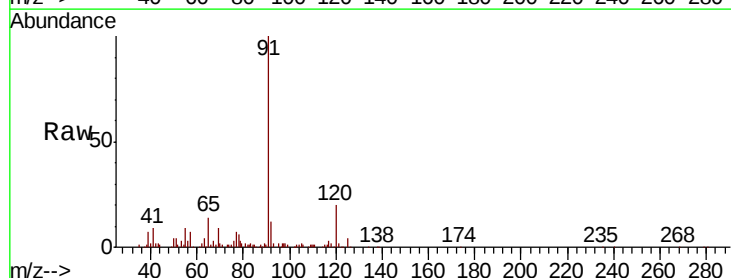
Acq: 30 Jul 2019 12:04

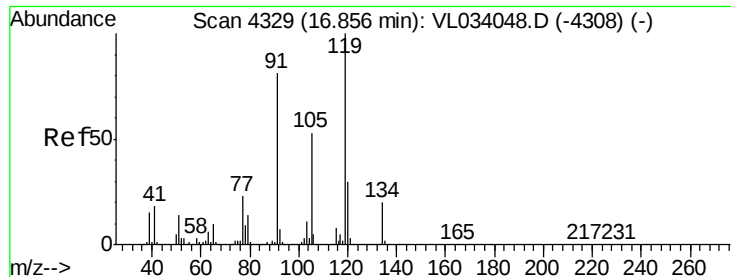
Tgt Ion:120 Resp: 34395

Ion Ratio Lower Upper

120 100

91 631.0 386.2 579.2#





#65

tert-Butylbenzene

Concen: 0.071 ppbv

RT: 16.88 min Scan# 4335

Delta R.T. 0.02 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

ClientSampleId :

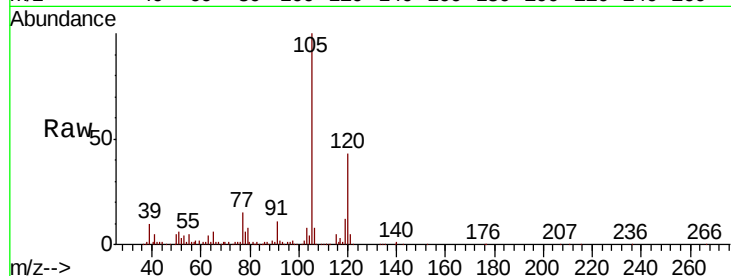
Tot Ion: 119 Resp: 31724

Ion Ratio Lower Upper

119 100

91 266.3 66.9 100.3#

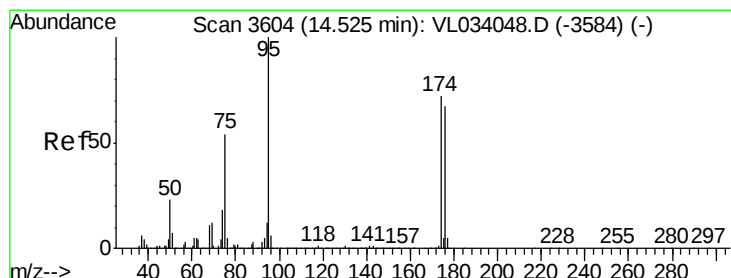
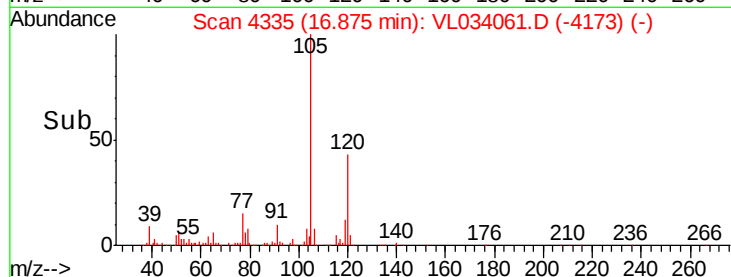
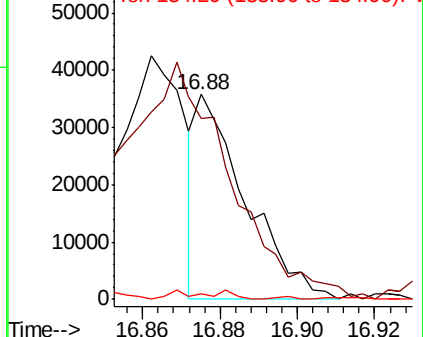
134 6.8 15.5 23.3#



Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.229 ppbv

RT: 14.52 min Scan# 3602

Delta R.T. -0.01 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

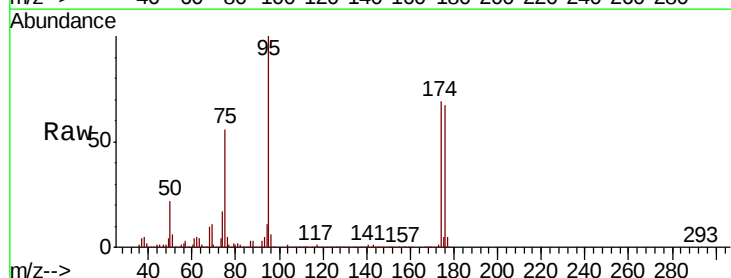
Tgt Ion: 95 Resp: 2739176

Ion Ratio Lower Upper

95 100

174 70.7 57.6 86.4

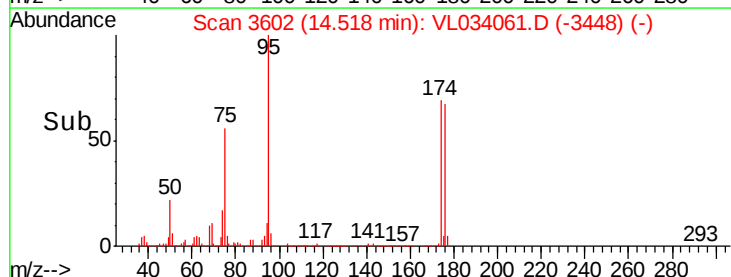
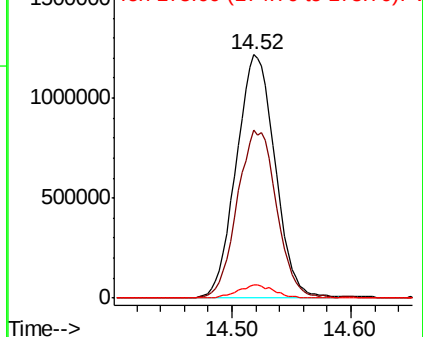
175 5.2 4.1 6.1

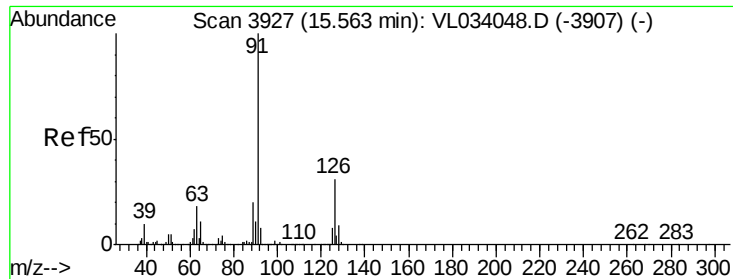


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#71

2-Chlorotoluene

Concen: 0.045 ppbv

RT: 15.41 min Scan# 3878

Delta R.T. -0.16 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

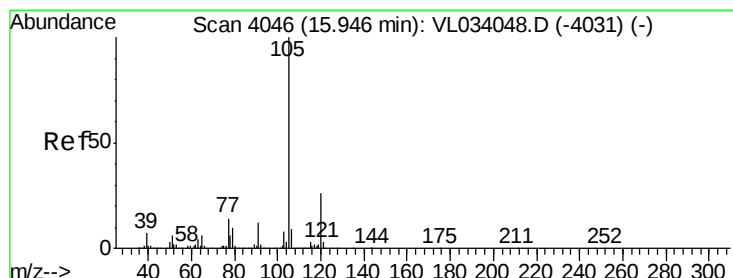
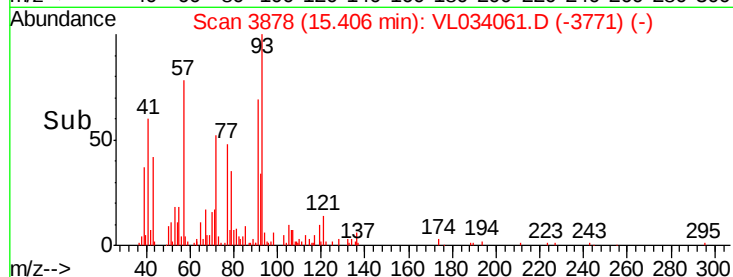
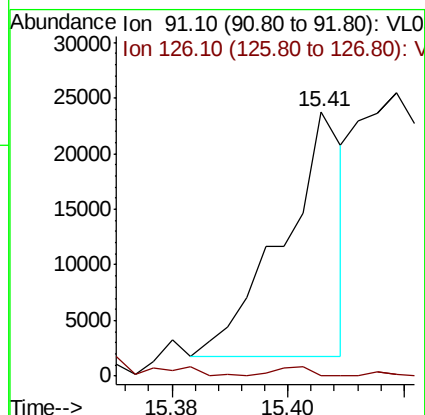
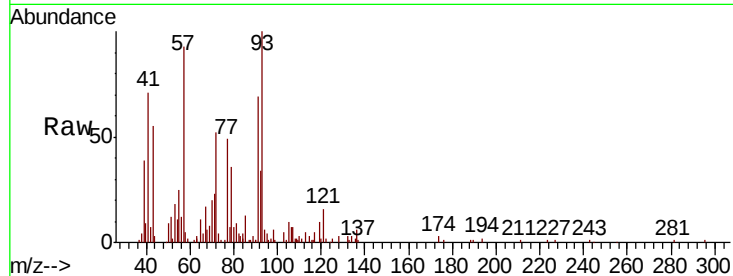
ClientSampleId :

Tot Ion: 91 Resp: 15952

Ion Ratio Lower Upper

91 100

126 17.2 12.0 48.2



#72

4-Ethyltoluene

Concen: 0.619 ppbv

RT: 15.95 min Scan# 4046

Delta R.T. 0.00 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Tgt Ion: 105 Resp: 253597

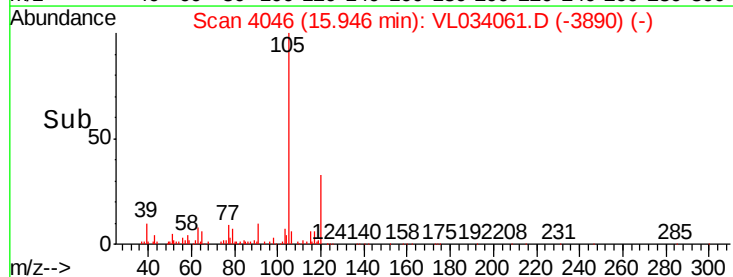
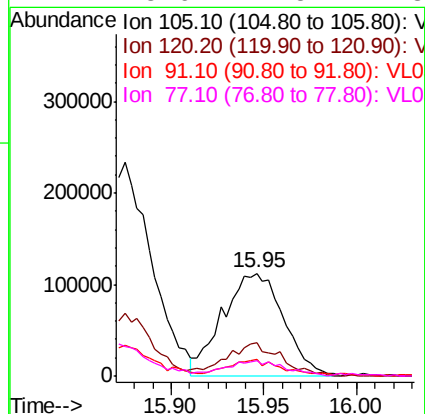
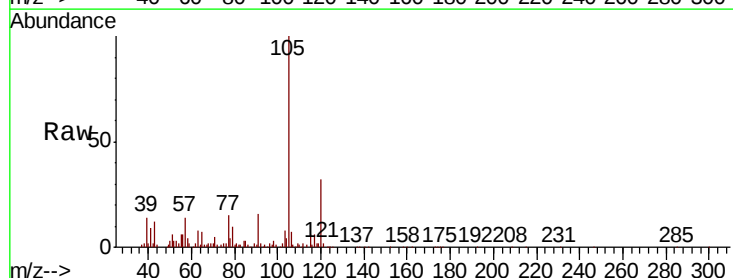
Ion Ratio Lower Upper

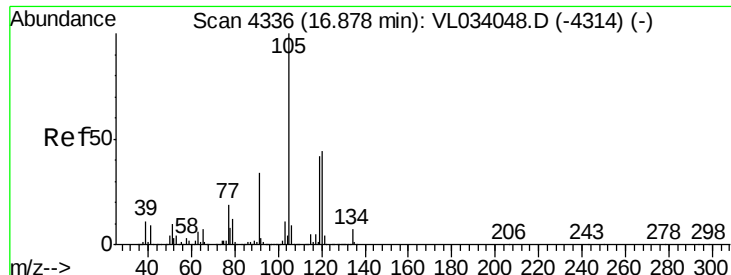
105 100

120 30.1 23.0 34.4

91 14.4 10.6 16.0

77 15.6 11.5 17.3





#74

1,2,4-Trimethylbenzene

Concen: 1.667 ppbv

RT: 16.87 min Scan# 4333

Delta R.T. -0.01 min

Lab File: VL034061.D

Acq: 30 Jul 2019 12:04

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 763278

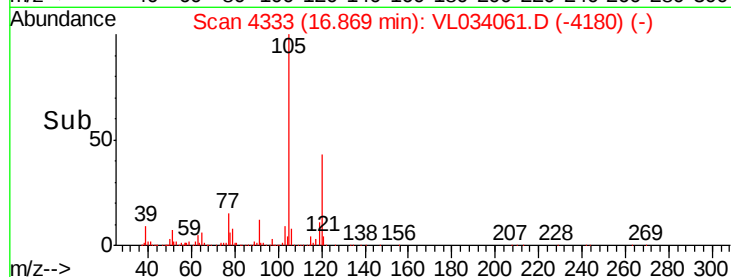
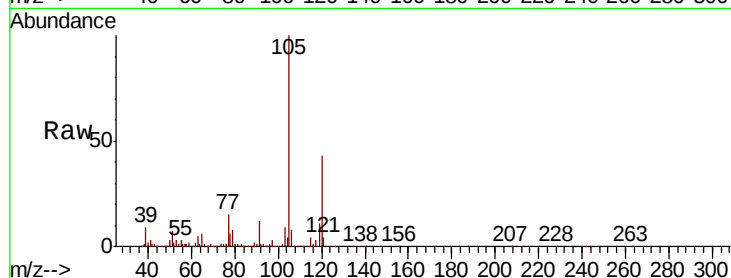
Ion Ratio Lower Upper

105 100

120 43.0 35.6 53.4

91 11.8 28.0 42.0#

77 14.7 15.2 22.8#



Abundance

Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

