

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL112519\
 Data File : VL034417.D
 Acq On : 25 Nov 2019 22:18
 Operator : SY/AP
 Sample : K5971-06
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 26 00:45:48 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

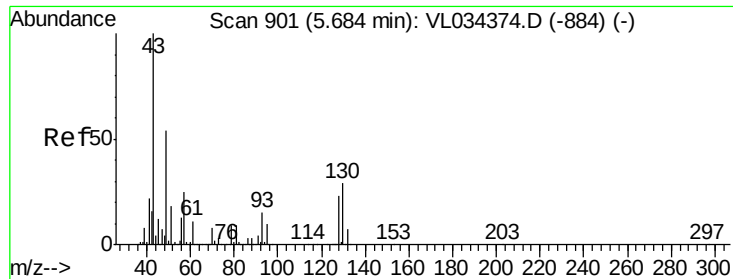
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	873349	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.20	114	1744120	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.13	117	1711001	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.47	95	1450616	10.08	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.80%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.02	85	64130	0.406 ppbv	92
3) Chlorodifluoromethane	2.96	51	75905	0.697 ppbv #	78
4) Chloromethane	3.12	50	29678	0.462 ppbv #	82
9) Propene	3.18	41	66210	1.369 ppbv	91
10) Heptane	8.15	43	40827	0.327 ppbv	99
11) Trichlorofluoromethane	3.94	101	22318	0.142 ppbv	86
12) 1,1,2-Trichlorotrifluoroet	4.47	101	4574	0.044 ppbv #	61
13) Ethanol	3.60	45	2824587	209.600 ppbv	95
15) Acetone	3.83	43	1272464	10.175 ppbv	100
17) tert-Butyl alcohol	3.96	59	150255	1.429 ppbv	98
19) Isopropyl Alcohol	3.97	45	3992053	49.801 ppbv #	99
20) Methylene Chloride	4.34	84	70455	1.589 ppbv	89
21) Allyl Chloride	4.18	41	27631	0.369 ppbv #	1
23) Vinyl Acetate	5.08	43	13830	0.085 ppbv #	87
25) Ethyl Acetate	5.69	43	163655	0.733 ppbv #	94
26) Hexane	5.69	57	103502	1.079 ppbv #	70
30) Cyclohexane	7.15	84	2877	0.040 ppbv #	1
31) cis-1,2-Dichloroethene	5.69	61	6299	0.064 ppbv #	37
34) 2-Butanone	5.25	43	42394	0.295 ppbv	96
36) Benzene	6.91	78	40263	0.231 ppbv #	89
39) 1,2-Dichloropropane	7.20	63	516743	7.693 ppbv #	23
44) 2,2,4-Trimethylpentane	7.89	57	13212	0.041 ppbv #	1
53) Toluene	9.84	91	541627	2.735 ppbv	99
59) m/p-Xylene	13.05	91	9557	0.042 ppbv #	33
60) o-Xylene	13.75	91	10952	0.048 ppbv #	33
76) 1,4-Dichlorobenzene	17.20	146	18024	0.118 ppbv	65

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

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ClientSampleId :

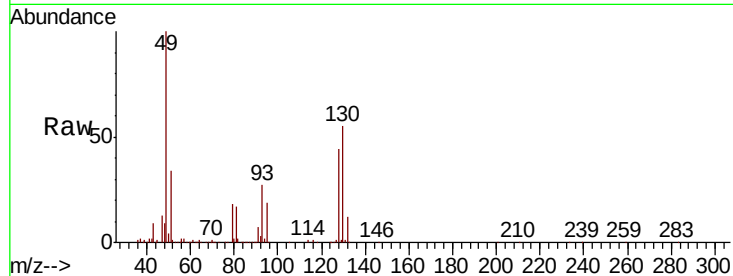
Tot Ion: 49 Resp: 873349

Ion Ratio Lower Upper

49 100

128 43.2 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

600000

400000

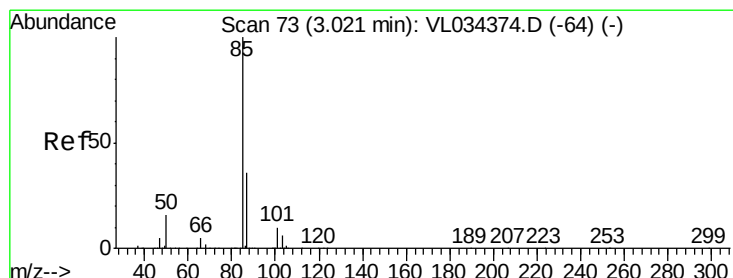
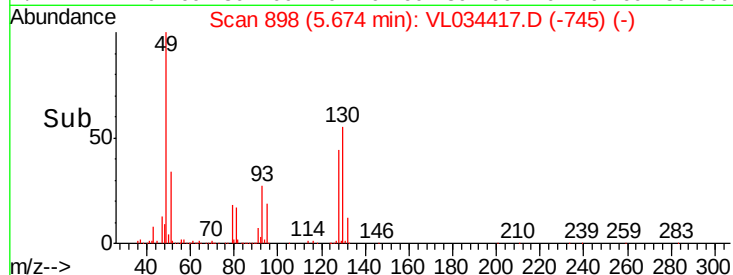
200000

0

5.67

5.60 5.65 5.70

Time-->



#2

Dichlorodifluoromethane

Concen: 0.406 ppbv

RT: 3.02 min Scan# 72

Delta R.T. -0.00 min

Lab File: VL034417.D

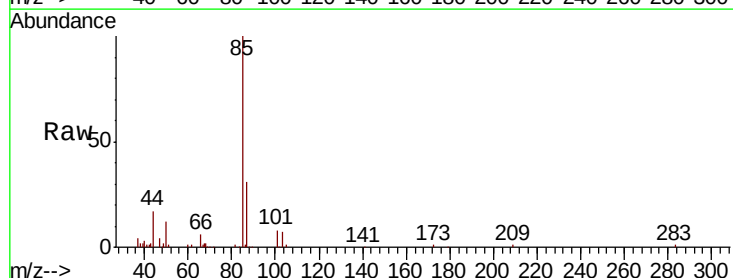
Acq: 25 Nov 2019 22:18

Tgt Ion: 85 Resp: 64130

Ion Ratio Lower Upper

85 100

87 30.8 28.5 42.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

60000

50000

40000

30000

20000

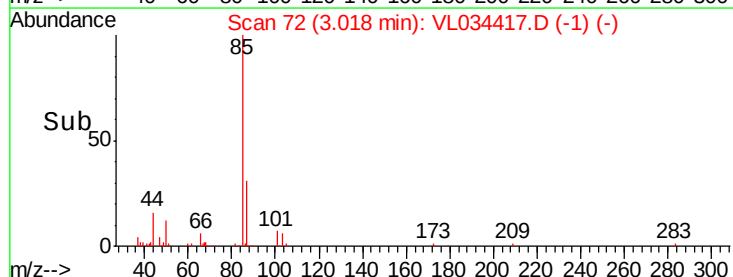
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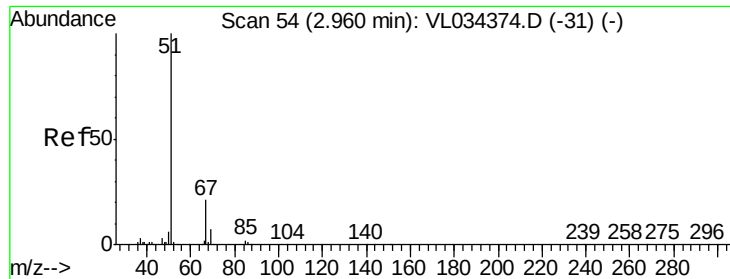
0

3.02

3.00 3.05

Time-->

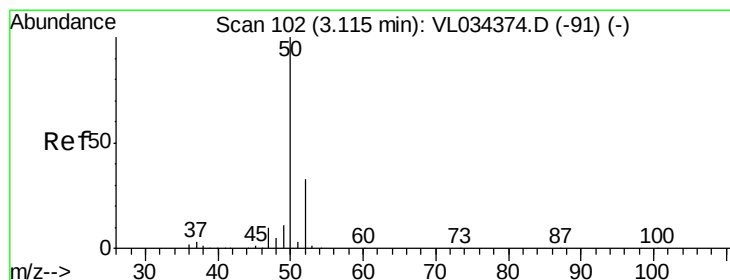
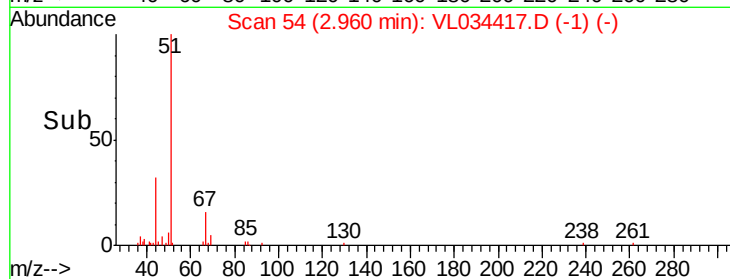
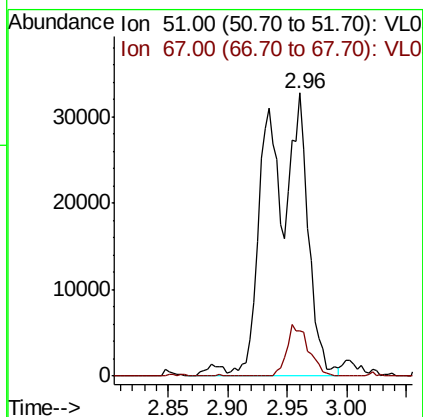
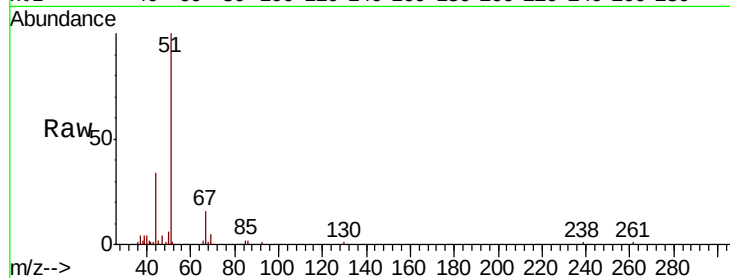




#3
Chlorodifluoromethane
Concen: 0.697 ppbv
RT: 2.96 min Scan# 54
Delta R.T. 0.00 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

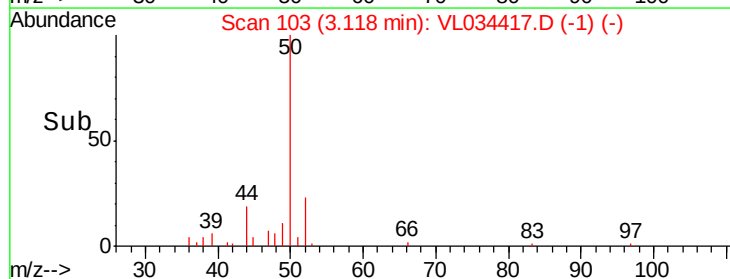
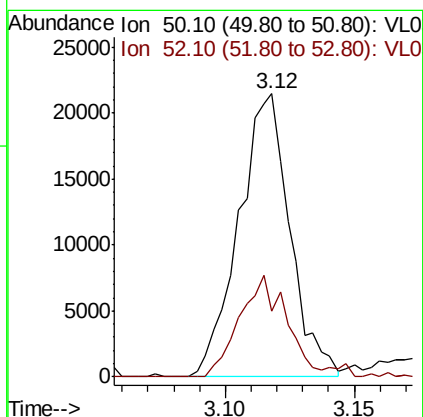
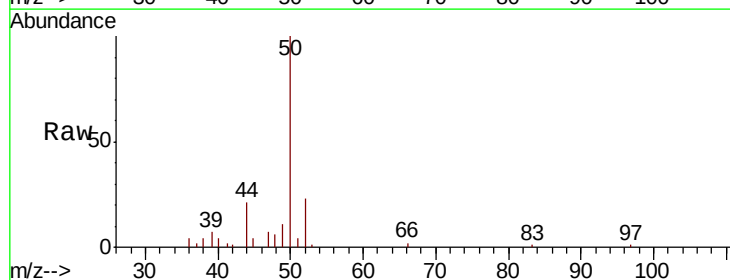
Instrument :
MSVOA_L
ClientSampleId :

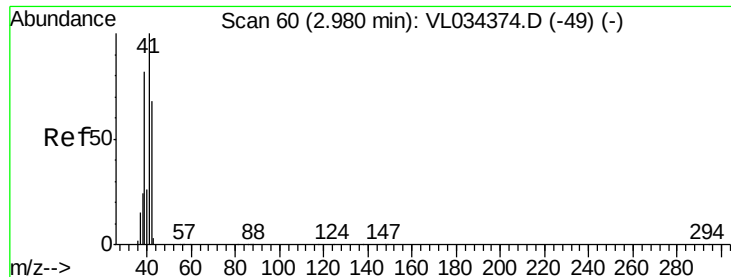
Tot Ion: 51 Resp: 75905
Ion Ratio Lower Upper
51 100
67 9.9 16.2 24.2#



#4
Chloromethane
Concen: 0.462 ppbv
RT: 3.12 min Scan# 103
Delta R.T. 0.00 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

Tgt Ion: 50 Resp: 29678
Ion Ratio Lower Upper
50 100
52 23.4 26.8 40.2#





#9

Propene

Concen: 1.369 ppbv

RT: 3.18 min Scan# 122

Delta R.T. 0.20 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

Instrument :

MSVOA_L

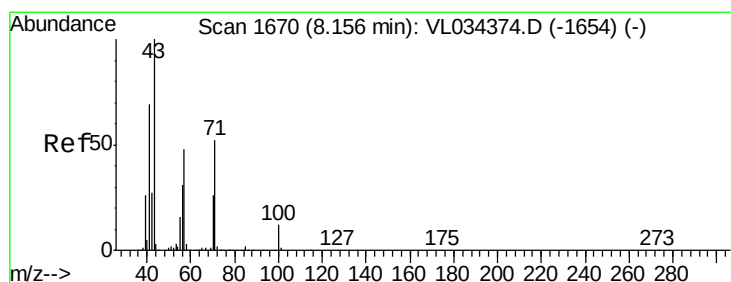
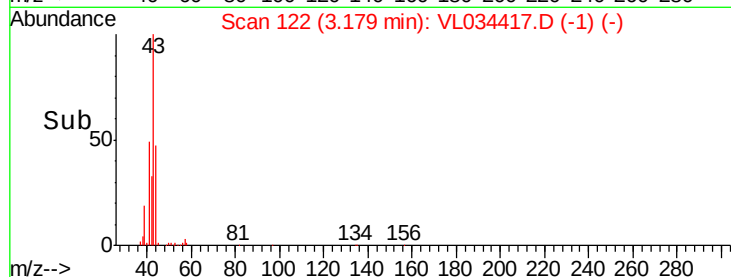
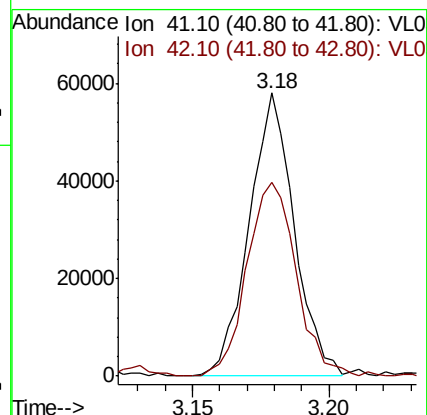
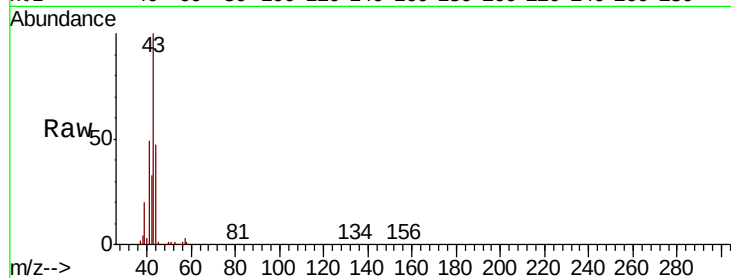
ClientSampleId :

Tot Ion: 41 Resp: 66210

Ion Ratio Lower Upper

41 100

42 75.6 54.6 82.0



#10

Heptane

Concen: 0.327 ppbv

RT: 8.15 min Scan# 1669

Delta R.T. -0.00 min

Lab File: VL034417.D

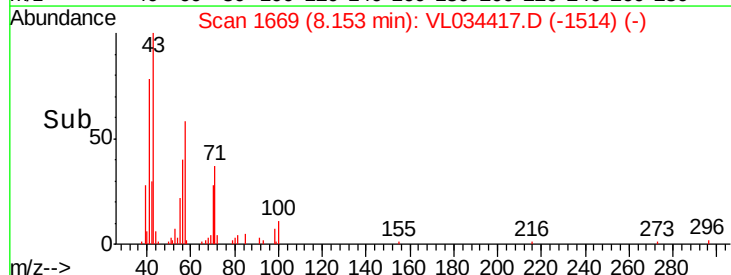
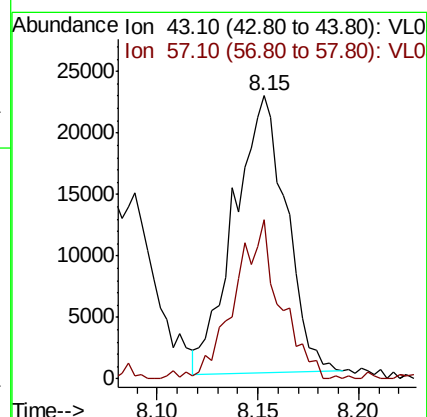
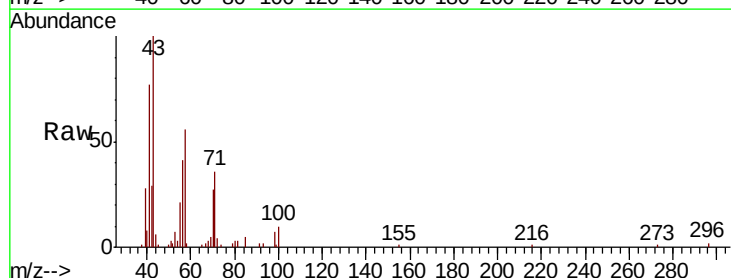
Acq: 25 Nov 2019 22:18

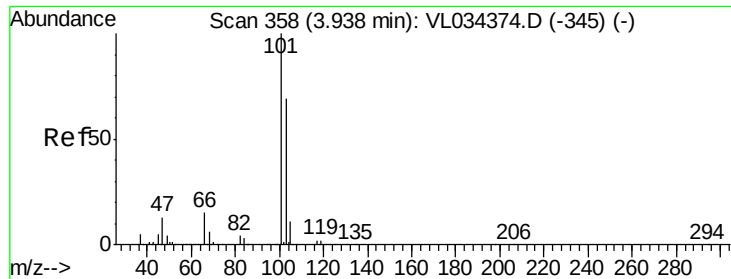
Tgt Ion: 43 Resp: 40827

Ion Ratio Lower Upper

43 100

57 49.9 40.2 60.2

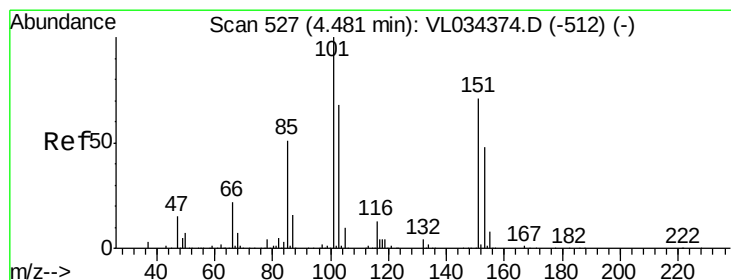
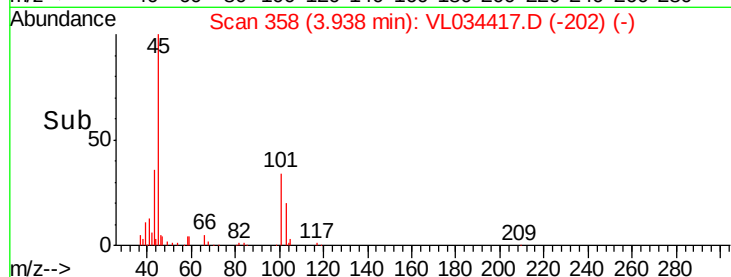
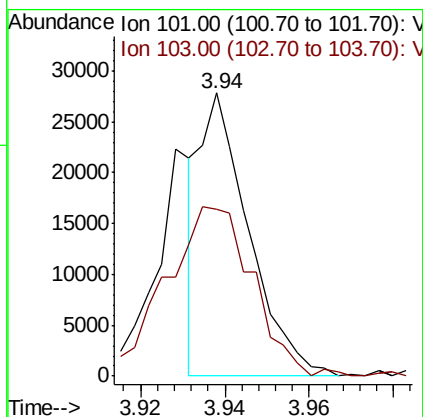
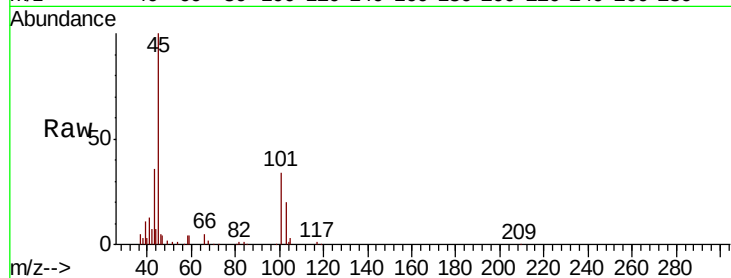




#11
 Trichlorofluoromethane
 Concen: 0.142 ppbv
 RT: 3.94 min Scan# 358
 Delta R.T. 0.00 min
 Lab File: VL034417.D
 Acq: 25 Nov 2019 22:18

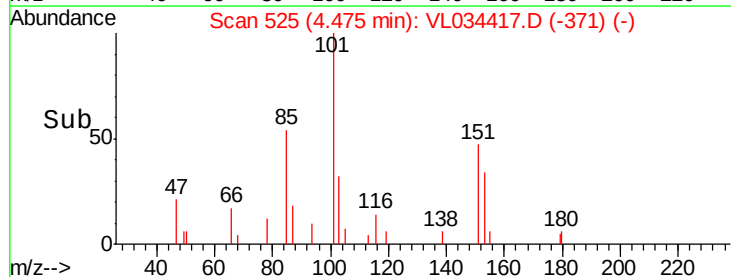
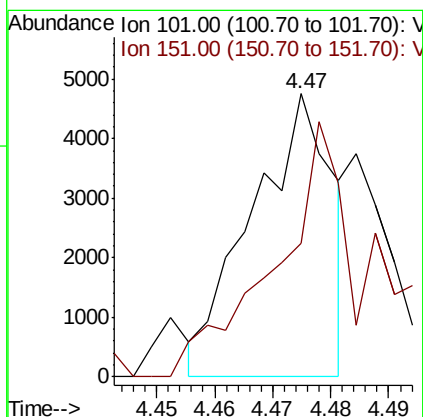
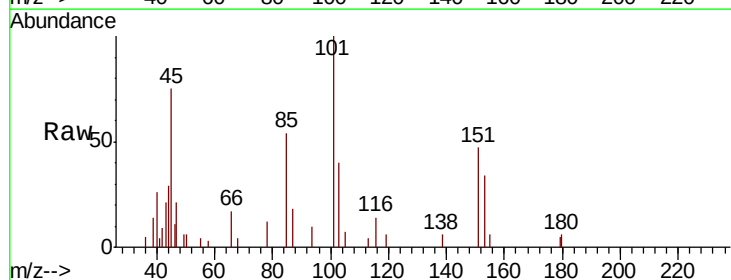
Instrument :
 MSVOA_L
 ClientSampleId :

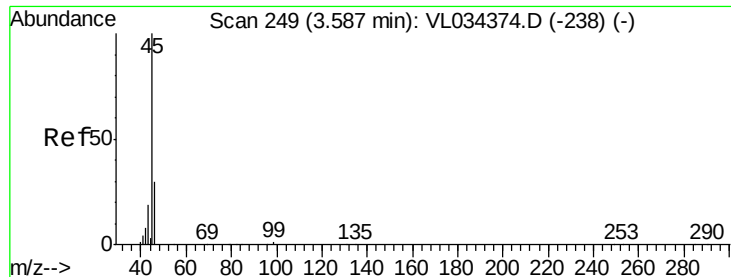
Tot Ion:101 Resp: 22318
 Ion Ratio Lower Upper
 101 100
 103 57.5 55.4 83.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.044 ppbv
 RT: 4.47 min Scan# 525
 Delta R.T. -0.01 min
 Lab File: VL034417.D
 Acq: 25 Nov 2019 22:18

Tgt Ion:101 Resp: 4574
 Ion Ratio Lower Upper
 101 100
 151 104.7 57.4 86.2#





#13

Ethanol

Concen: 209.600 ppbv

RT: 3.60 min Scan# 252

Delta R.T. 0.01 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

Instrument :

MSVOA_L

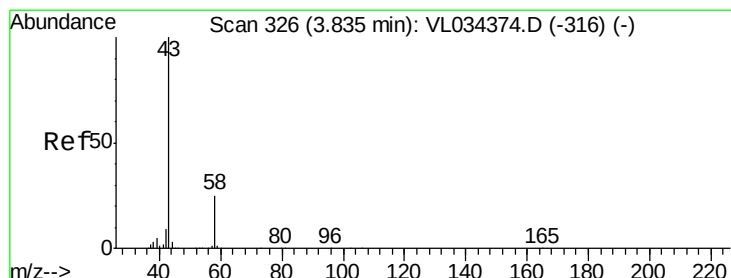
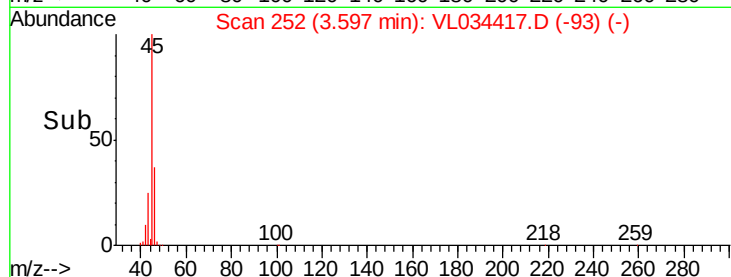
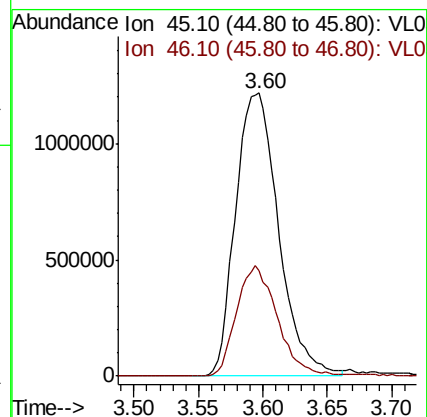
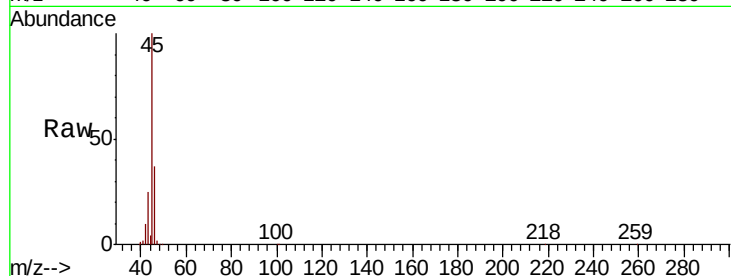
ClientSampled :

Tot Ion: 45 Resp: 2824587

Ion Ratio Lower Upper

45 100

46 37.6 13.8 55.4



#15

Acetone

Concen: 10.175 ppbv

RT: 3.83 min Scan# 325

Delta R.T. -0.00 min

Lab File: VL034417.D

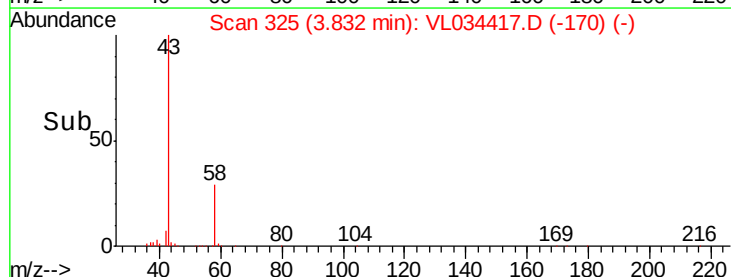
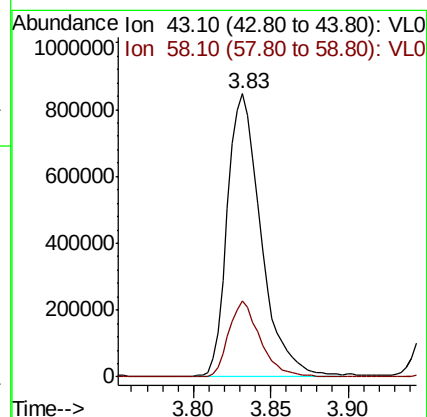
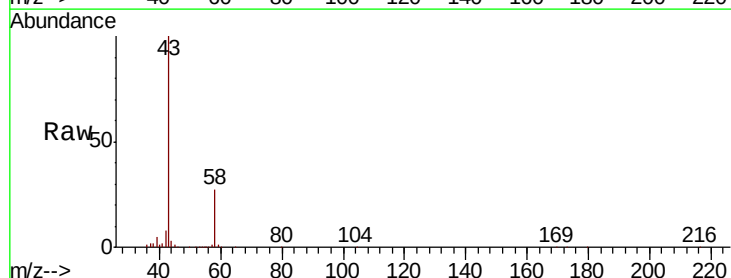
Acq: 25 Nov 2019 22:18

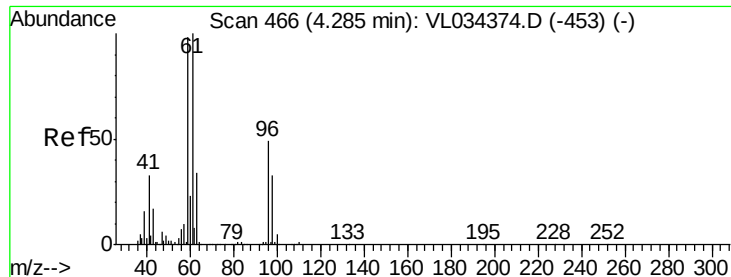
Tgt Ion: 43 Resp: 1272464

Ion Ratio Lower Upper

43 100

58 25.3 20.2 30.4



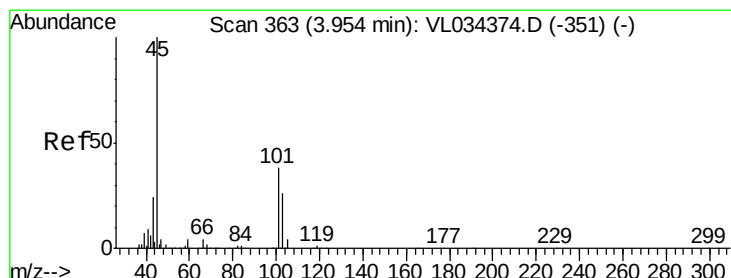
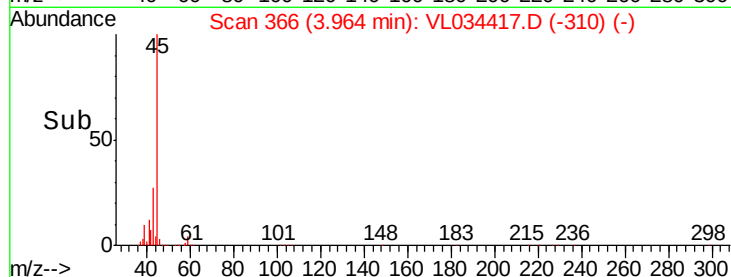
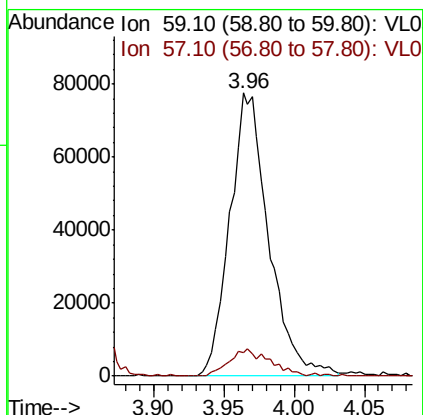
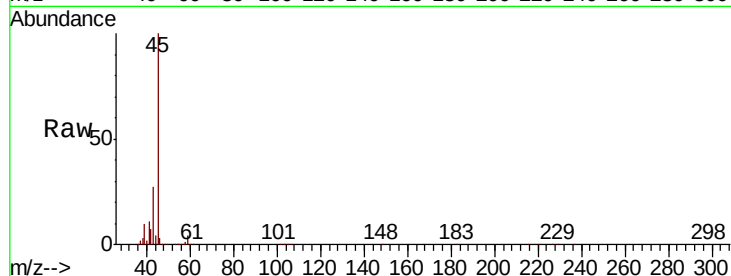


#17

tert-Butyl alcohol
 Concen: 1.429 ppbv
 RT: 3.96 min Scan# 366
 Delta R.T. -0.32 min
 Lab File: VL034417.D
 Acq: 25 Nov 2019 22:18

Instrument :
 MSVOA_L
 ClientSampleId :

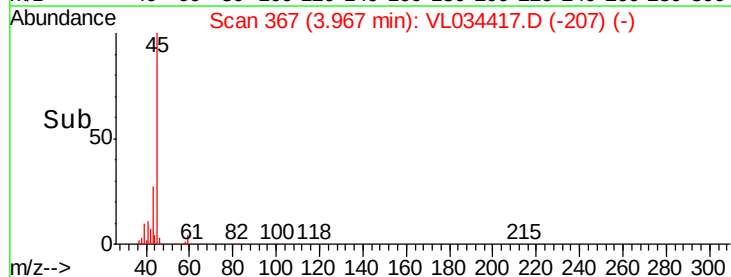
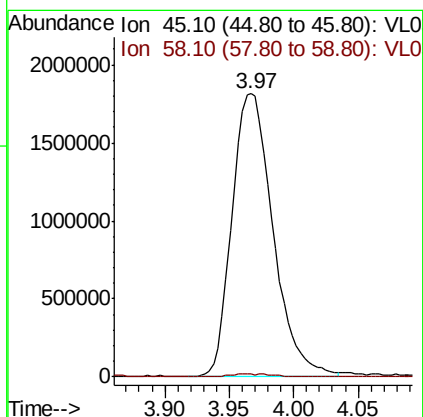
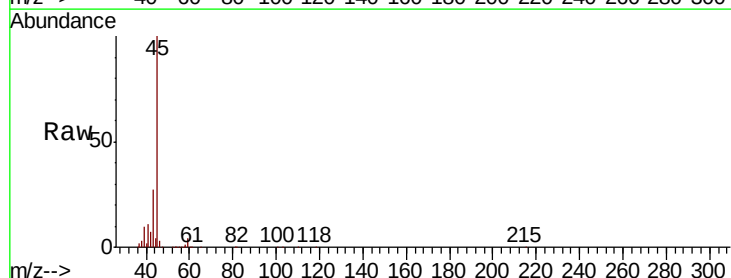
Tot Ion: 59 Resp: 150255
 Ion Ratio Lower Upper
 59 100
 57 10.4 8.8 13.2

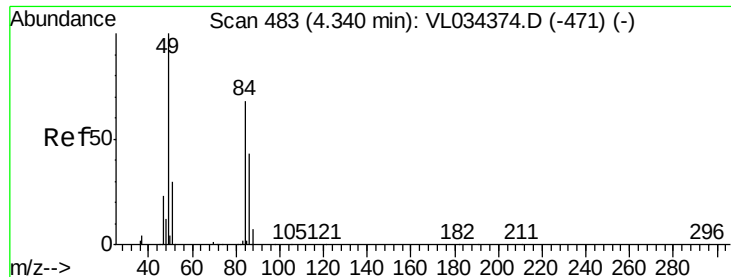


#19

Isopropyl Alcohol
 Concen: 49.801 ppbv
 RT: 3.97 min Scan# 367
 Delta R.T. 0.01 min
 Lab File: VL034417.D
 Acq: 25 Nov 2019 22:18

Tgt Ion: 45 Resp: 3992053
 Ion Ratio Lower Upper
 45 100
 58 1.2 1.3 1.9#

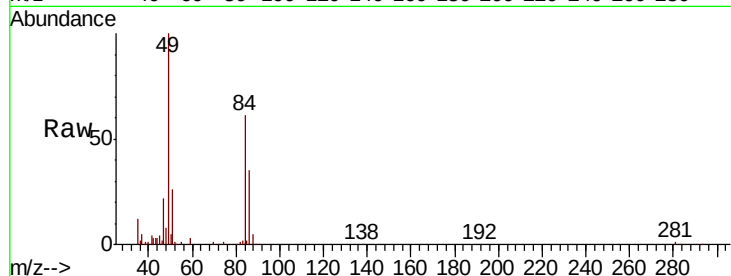




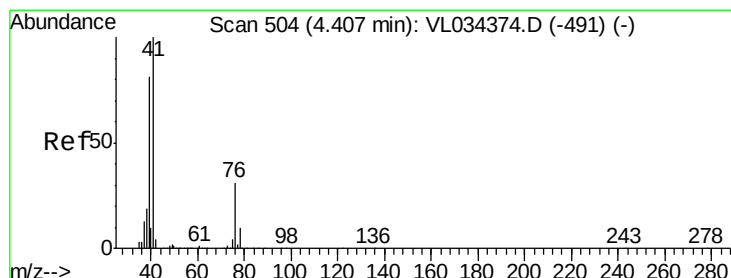
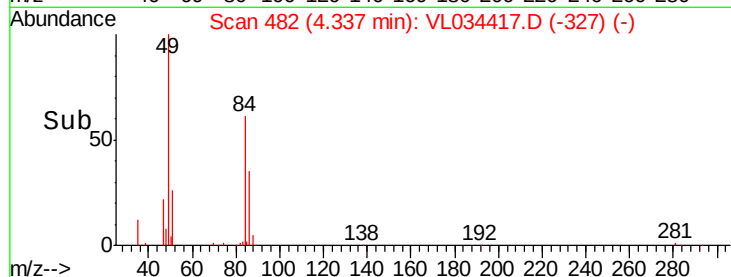
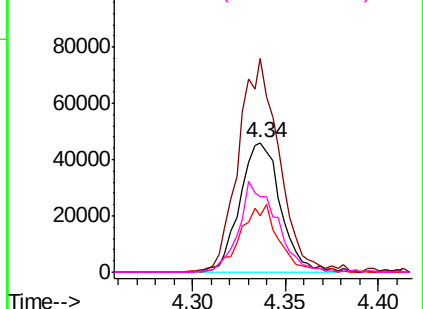
#20
Methylene Chloride
Concen: 1.589 ppbv
RT: 4.34 min Scan# 482
Delta R.T. -0.00 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

Instrument :
MSVOA_L
ClientSampled :

Tot Ion:	84	Resp:	70455
Ion	Ratio	Lower	Upper
84	100		
49	165.0	116.8	175.2
51	43.6	35.6	53.4
86	58.6	50.7	76.1

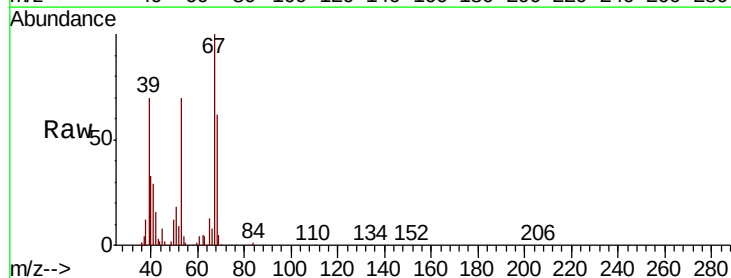


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

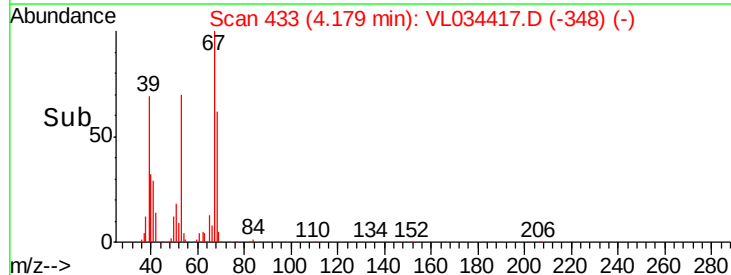
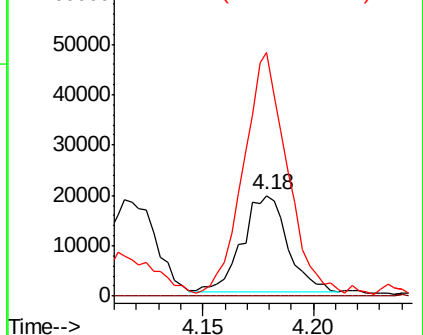


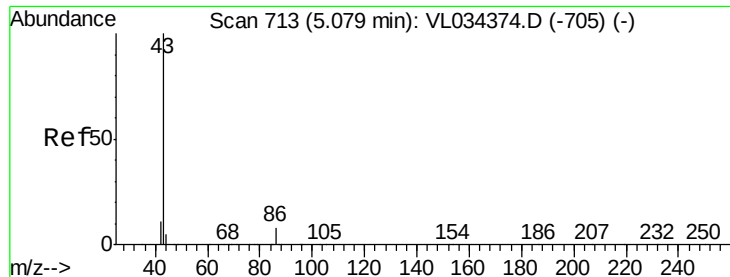
#21
Allyl Chloride
Concen: 0.369 ppbv
RT: 4.18 min Scan# 433
Delta R.T. -0.23 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

Tgt Ion:	41	Resp:	27631
Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.2	36.2#
39	240.0	66.9	100.3#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0





#23

Vinyl Acetate

Concen: 0.085 ppbv

RT: 5.08 min Scan# 712

Delta R.T. -0.00 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 13830

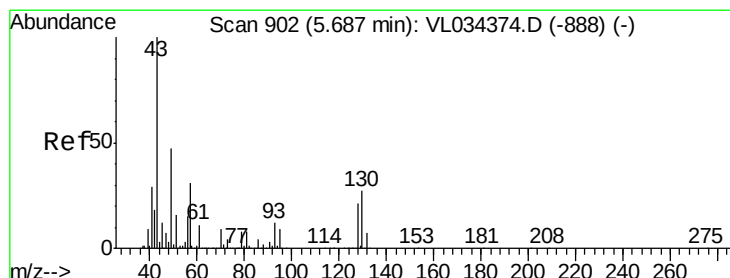
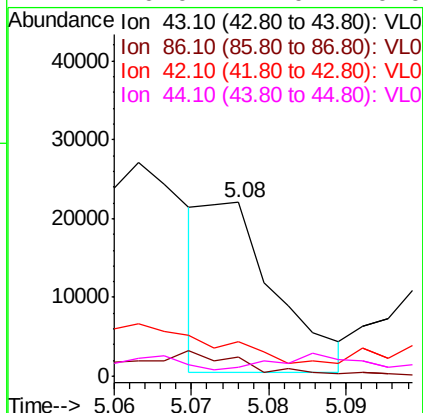
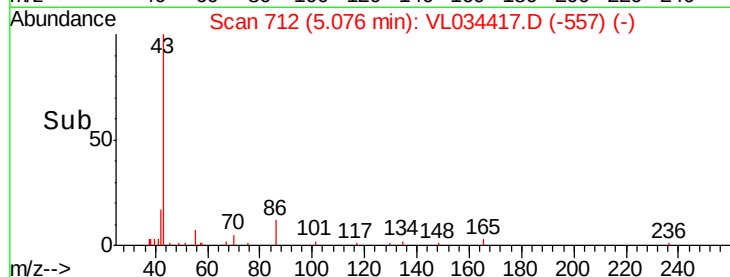
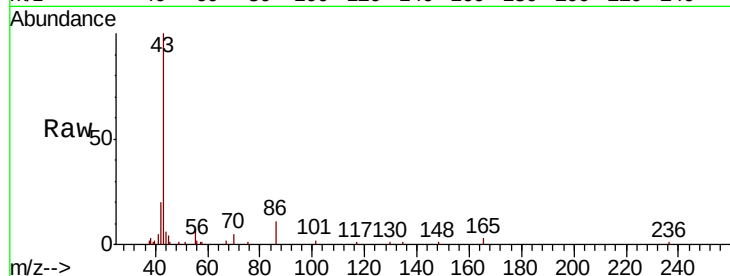
Ion Ratio Lower Upper

43 100

86 12.6 5.8 8.6#

42 15.3 8.9 13.3#

44 0.0 4.0 6.0#



#25

Ethyl Acetate

Concen: 0.733 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.00 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

Tgt Ion: 43 Resp: 163655

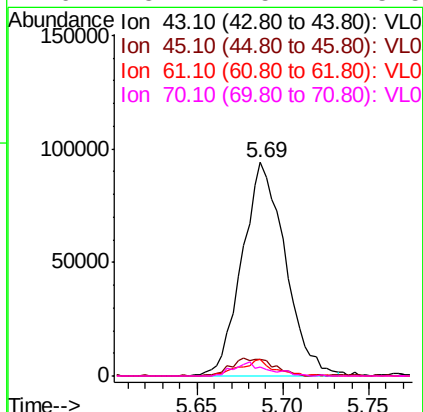
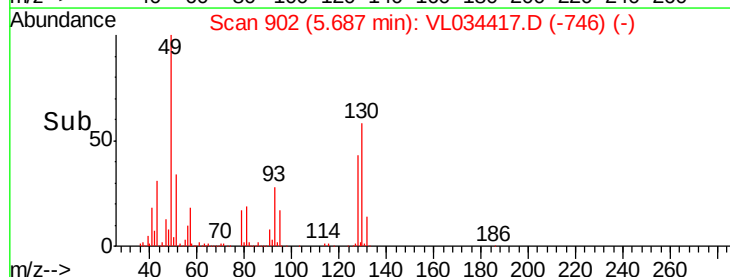
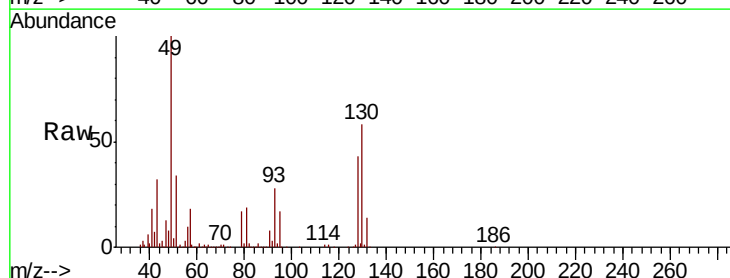
Ion Ratio Lower Upper

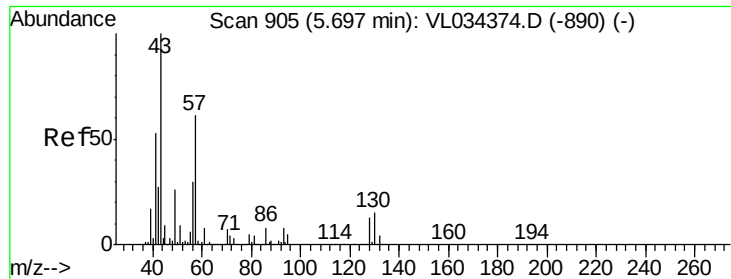
43 100

45 9.1 8.2 12.4

61 6.3 7.5 11.3#

70 5.2 5.7 8.5#

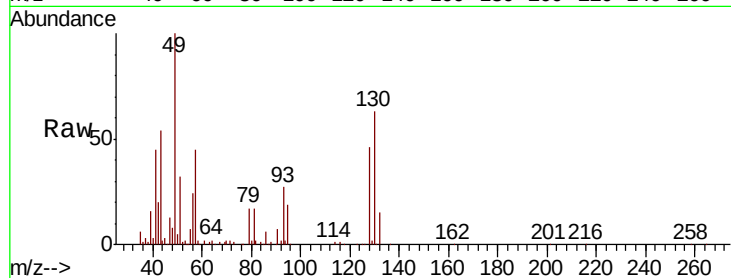




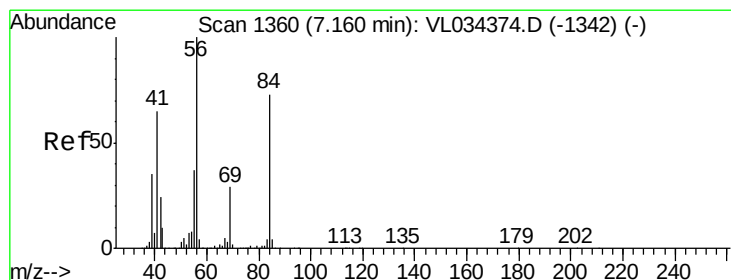
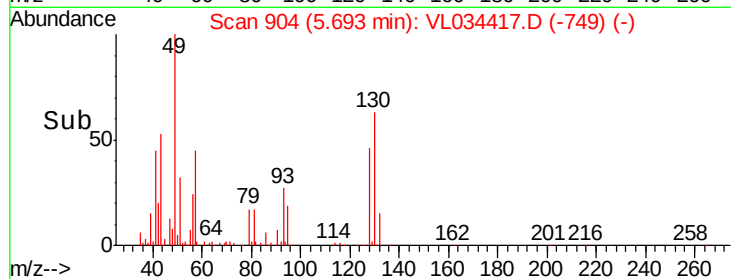
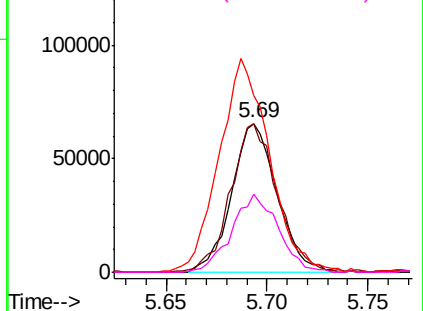
#26
Hexane
Concen: 1.079 ppbv
RT: 5.69 min Scan# 904
Delta R.T. -0.00 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 57 Resp: 103502
Ion Ratio Lower Upper
57 100
41 103.0 75.0 112.4
43 159.1 186.6 279.8#
56 54.1 41.5 62.3

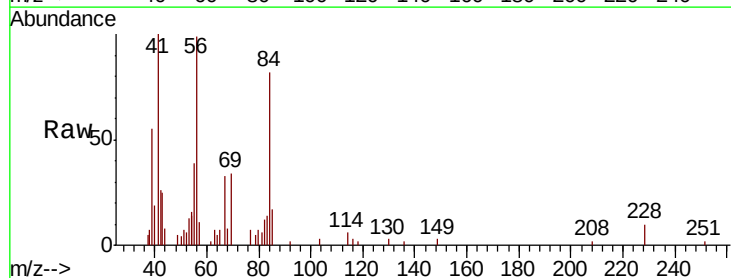


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

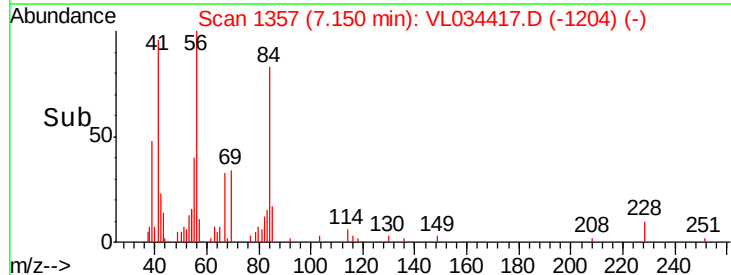
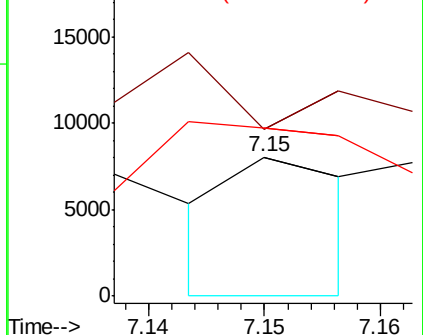


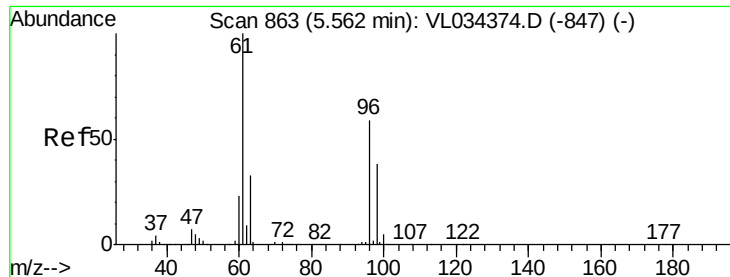
#30
Cyclohexane
Concen: 0.040 ppbv
RT: 7.15 min Scan# 1357
Delta R.T. -0.01 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

Tgt Ion: 84 Resp: 2877
Ion Ratio Lower Upper
84 100
56 0.0 112.6 169.0#
41 693.4 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





#31

cis-1,2-Dichloroethene

Concen: 0.064 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.13 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

Instrument :
MSVOA_L
ClientSampleId :

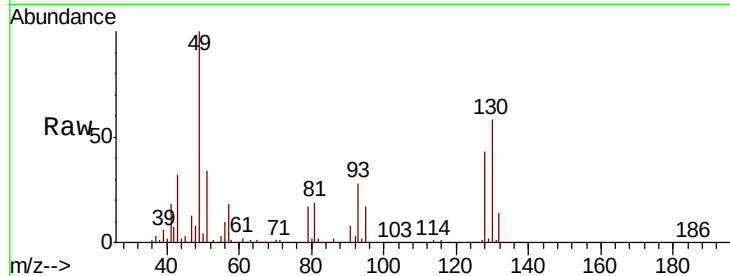
Tot Ion: 61 Resp: 6299

Ion Ratio Lower Upper

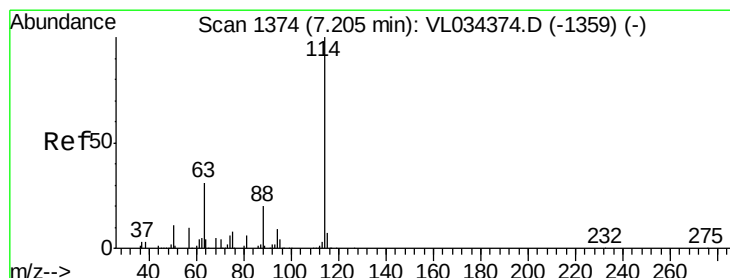
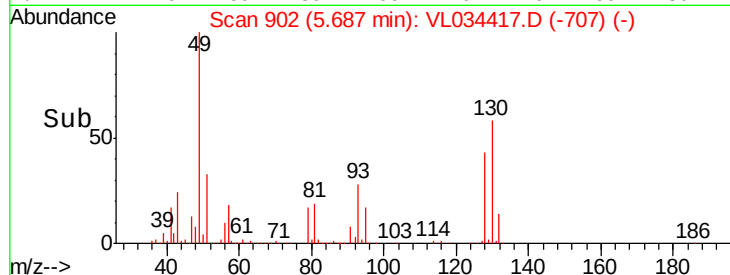
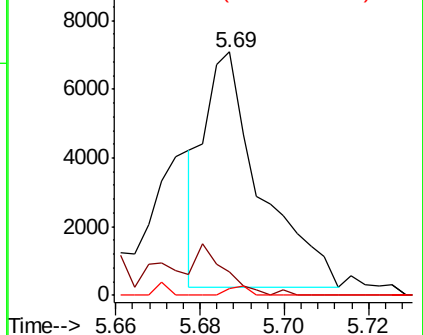
61 100

96 10.0 47.4 71.2#

98 2.8 30.6 45.8#



Abundance Ion 61.10 (60.80 to 61.80): VL0
Ion 96.00 (95.70 to 96.70): VL0
Ion 98.00 (97.70 to 98.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.20 min Scan# 1372

Delta R.T. -0.01 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

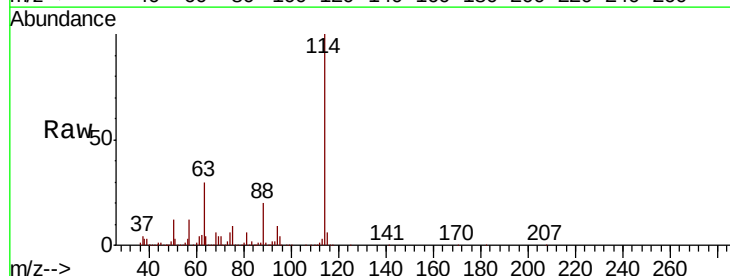
Tgt Ion: 114 Resp: 1744120

Ion Ratio Lower Upper

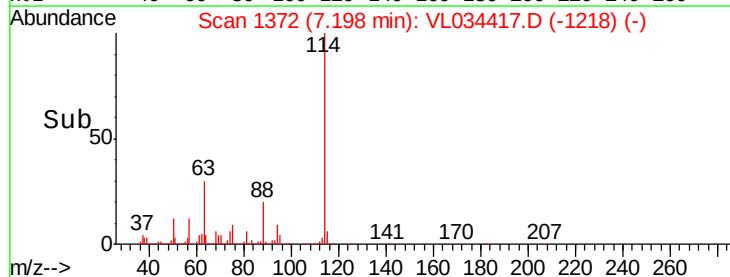
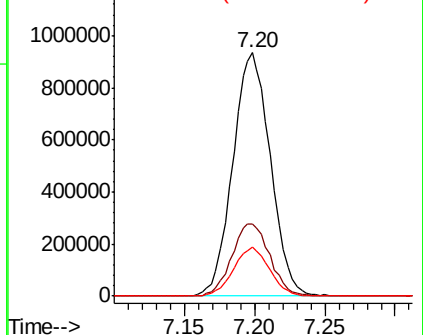
114 100

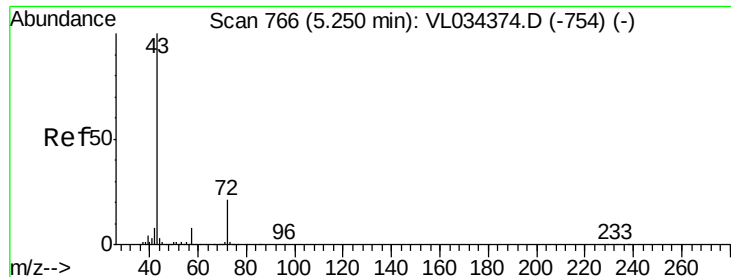
63 30.0 24.2 36.4

88 19.4 15.9 23.9



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

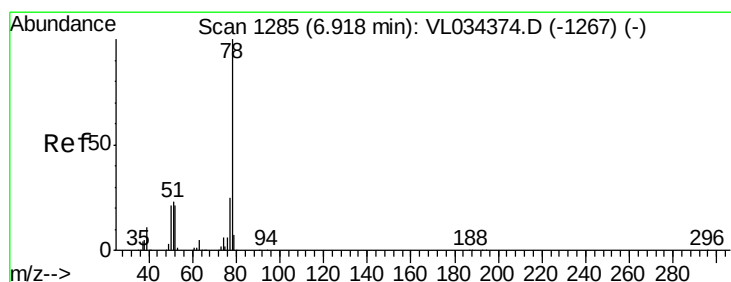
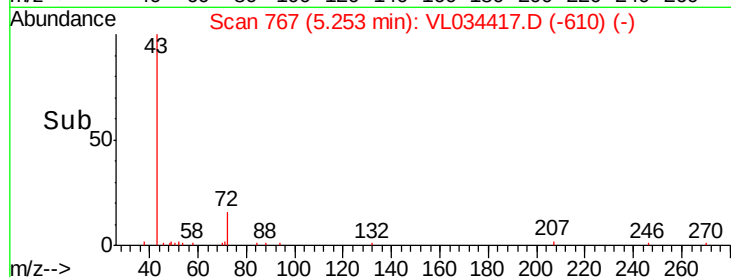
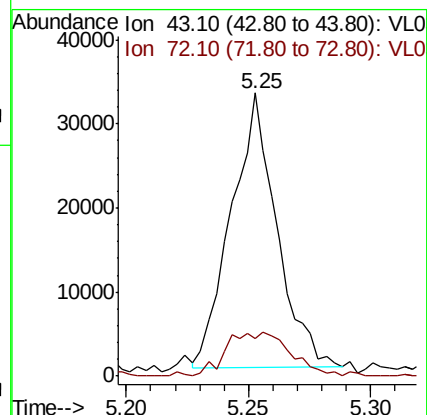
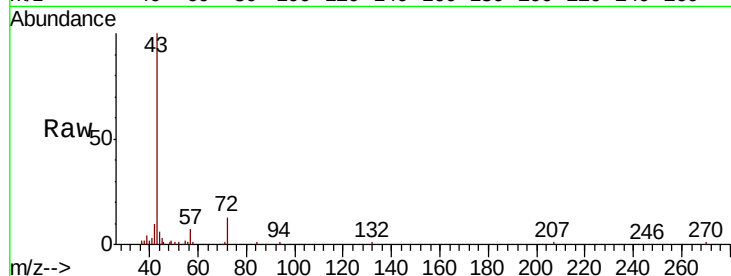




#34
2-Butanone
Concen: 0.295 ppbv
RT: 5.25 min Scan# 767
Delta R.T. 0.00 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

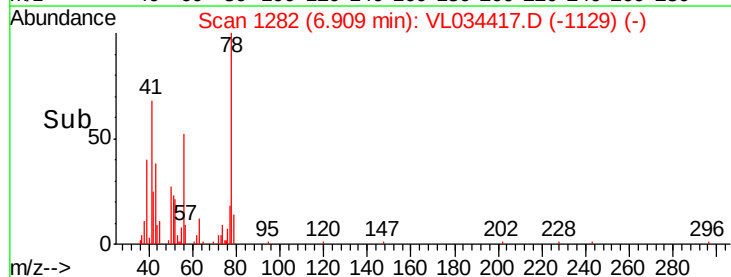
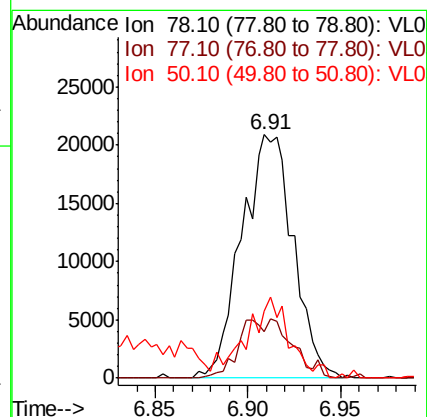
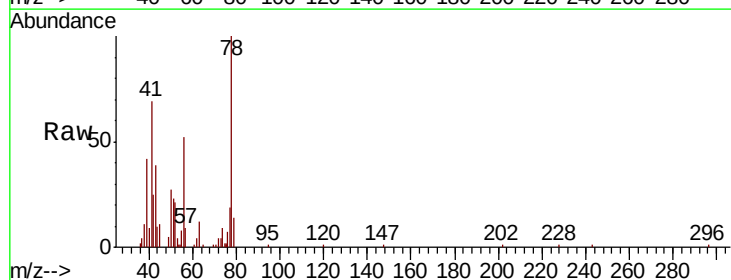
Instrument :
MSVOA_L
ClientSampleId :

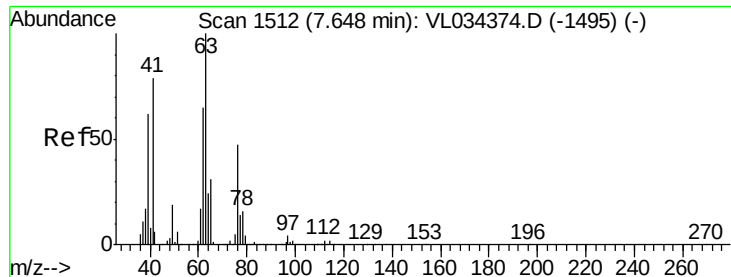
Tot Ion: 43 Resp: 42394
Ion Ratio Lower Upper
43 100
72 23.4 17.0 25.6



#36
Benzene
Concen: 0.231 ppbv
RT: 6.91 min Scan# 1282
Delta R.T. -0.01 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

Tgt Ion: 78 Resp: 40263
Ion Ratio Lower Upper
78 100
77 18.9 20.2 30.4#
50 26.0 17.1 25.7#





#39

1,2-Dichloropropane

Concen: 7.693 ppbv

RT: 7.20 min Scan# 1372

Delta R.T. -0.45 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

Instrument :

MSVOA_L

ClientSampleId :

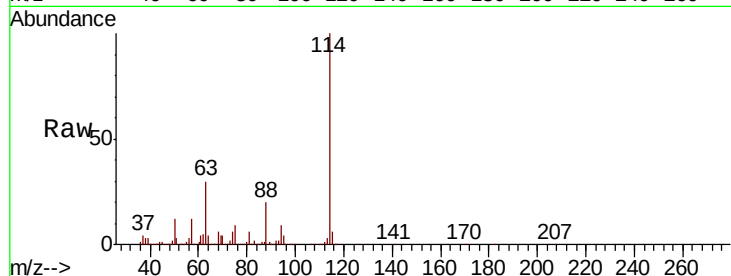
Tot Ion: 63 Resp: 516743

Ion Ratio Lower Upper

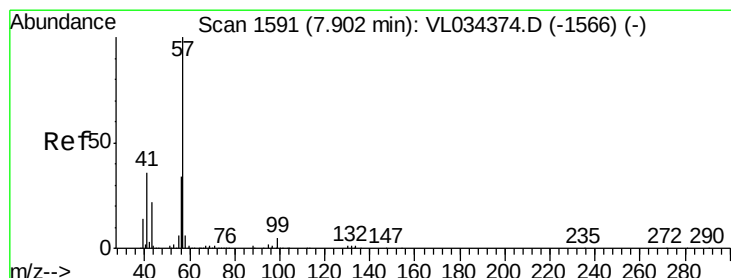
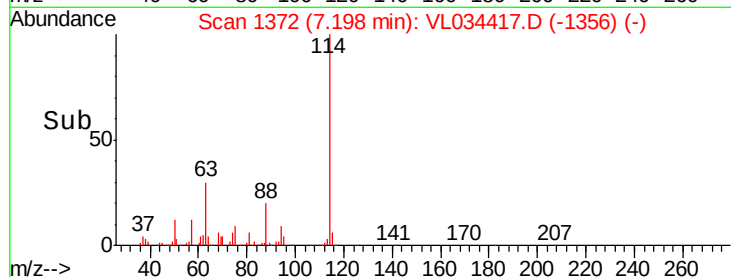
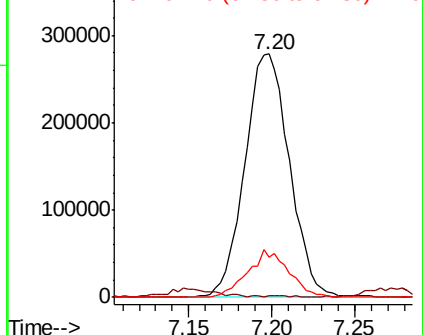
63 100

41 0.3 63.1 94.7#

62 16.3 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: 0.041 ppbv

RT: 7.89 min Scan# 1586

Delta R.T. -0.02 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

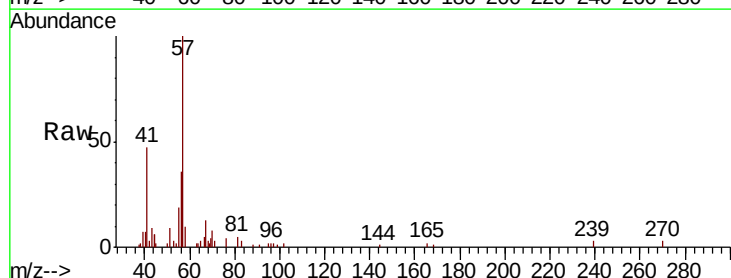
Tgt Ion: 57 Resp: 13212

Ion Ratio Lower Upper

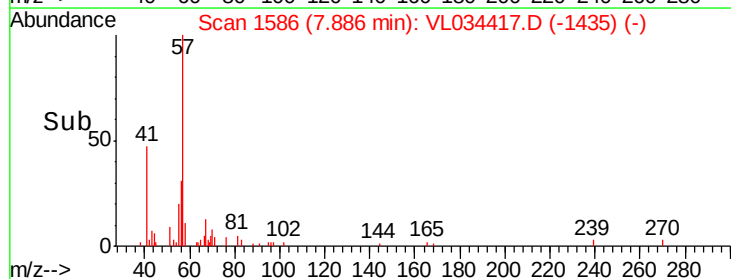
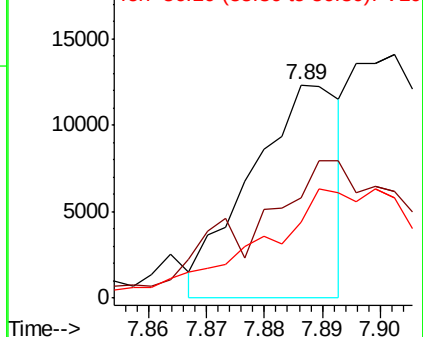
57 100

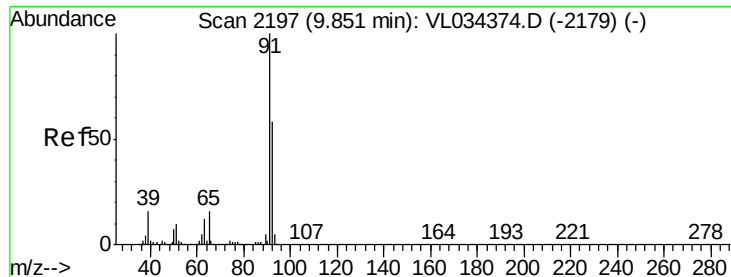
41 150.3 28.6 42.8#

56 117.0 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





#53

Toluene

Concen: 2.735 ppbv

RT: 9.84 min Scan# 2195

Delta R.T. -0.01 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

Instrument :

MSVOA_L

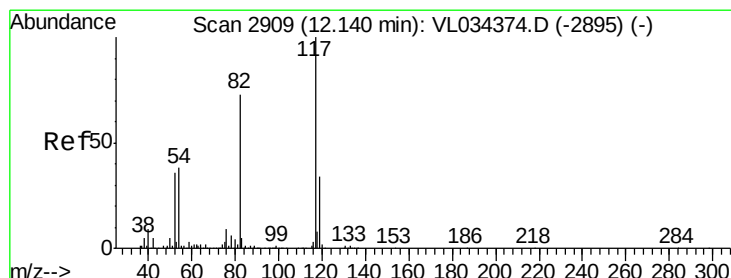
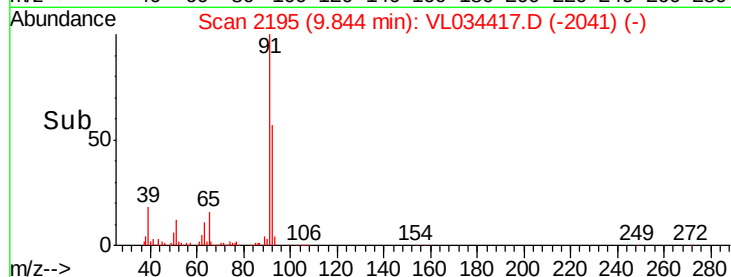
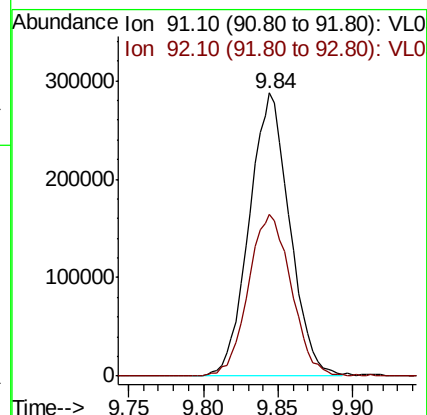
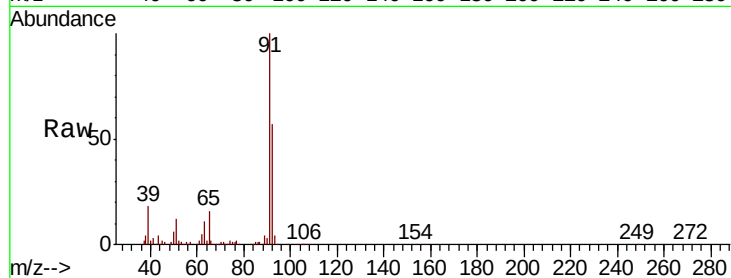
ClientSampleId :

Tot Ion: 91 Resp: 541627

Ion Ratio Lower Upper

91 100

92 60.6 47.9 71.9



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.13 min Scan# 2907

Delta R.T. -0.01 min

Lab File: VL034417.D

Acq: 25 Nov 2019 22:18

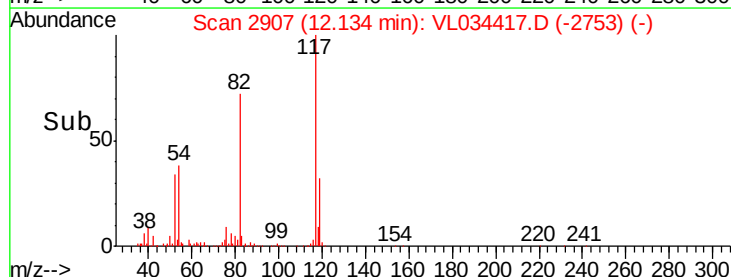
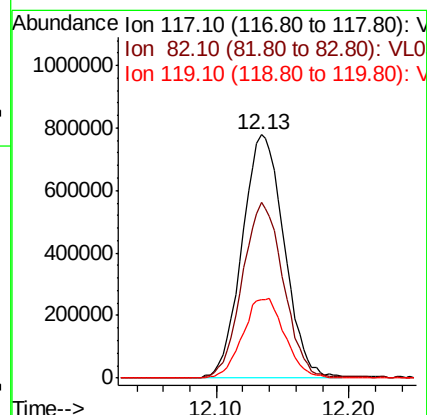
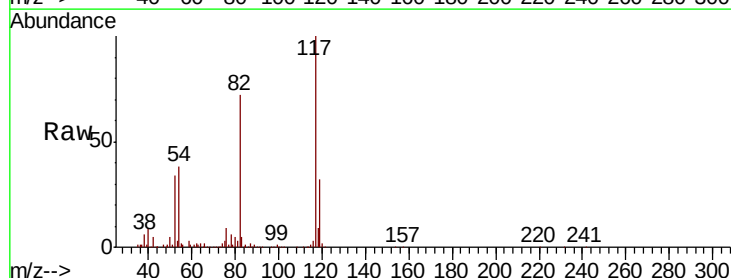
Tgt Ion: 117 Resp: 1711001

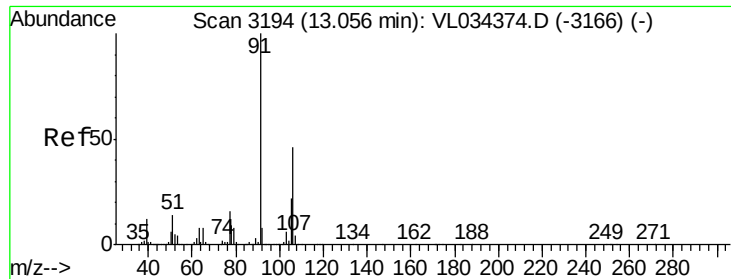
Ion Ratio Lower Upper

117 100

82 71.9 57.5 86.3

119 32.9 25.4 38.2

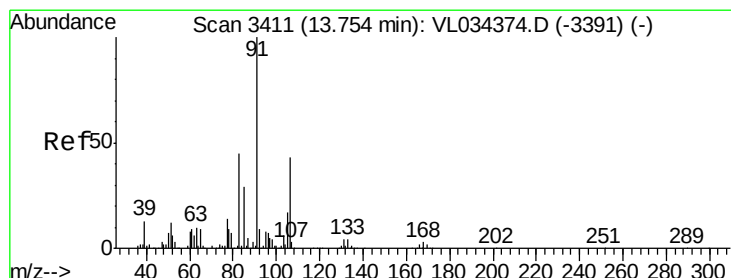
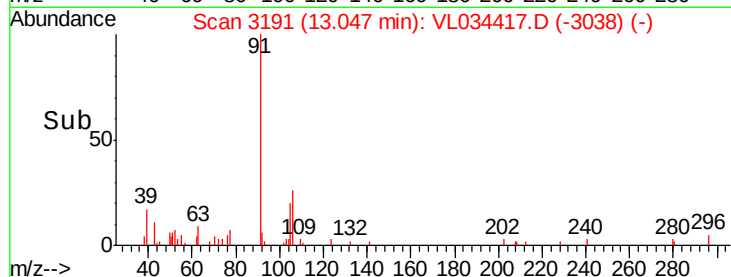
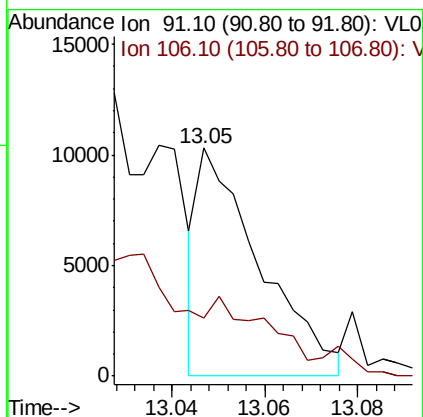
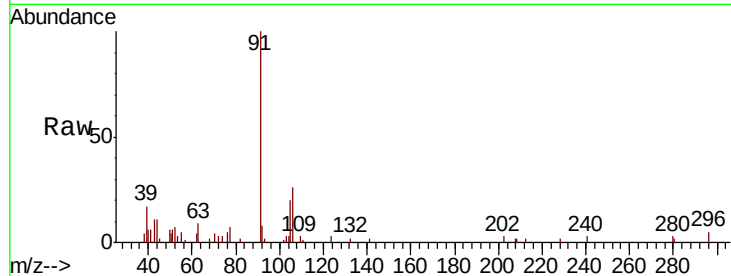




#59
m/p-Xylene
Concen: 0.042 ppbv
RT: 13.05 min Scan# 3191
Delta R.T. -0.01 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

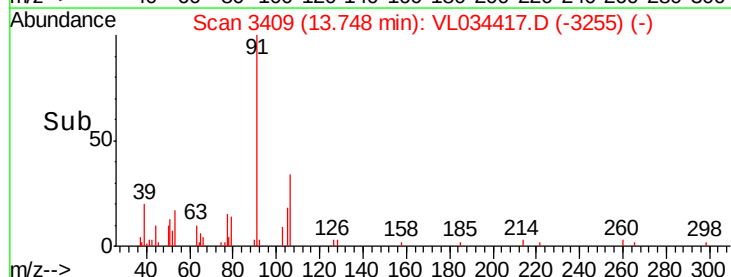
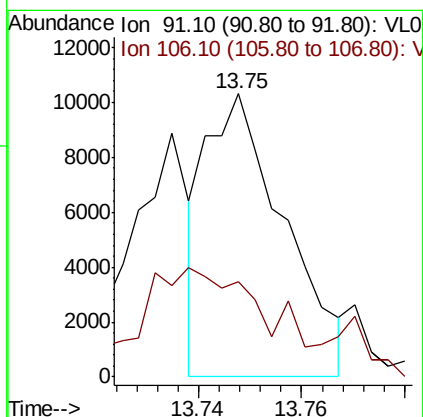
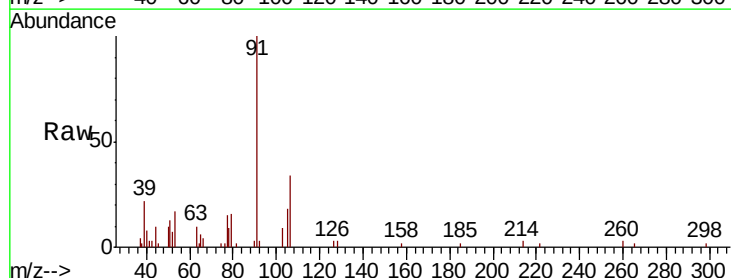
Instrument :
MSVOA_L
ClientSampled :

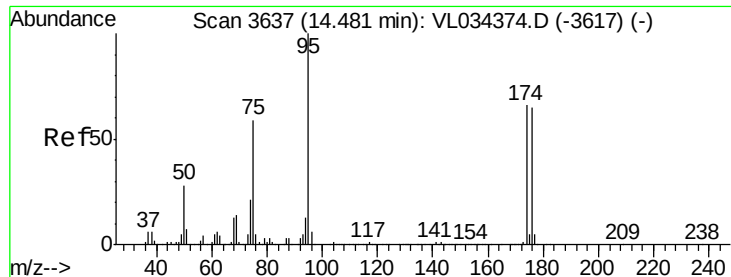
Tot Ion: 91 Resp: 9557
Ion Ratio Lower Upper
91 100
106 0.0 34.6 51.8#



#60
o-Xylene
Concen: 0.048 ppbv
RT: 13.75 min Scan# 3409
Delta R.T. -0.01 min
Lab File: VL034417.D
Acq: 25 Nov 2019 22:18

Tgt Ion: 91 Resp: 10952
Ion Ratio Lower Upper
91 100
106 0.0 21.3 64.0#

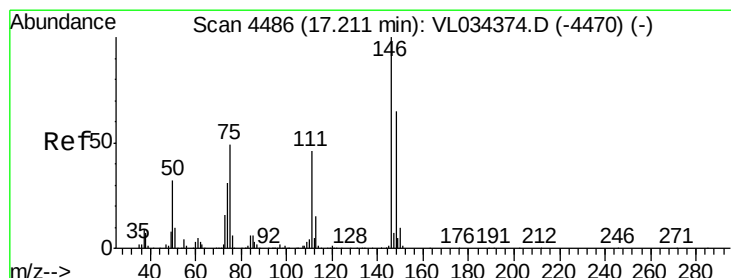
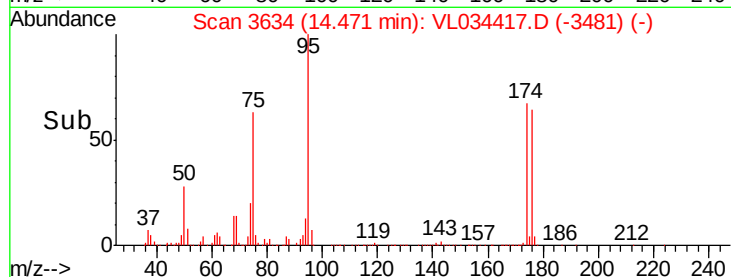
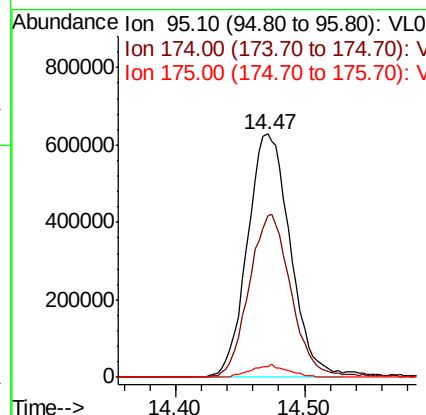
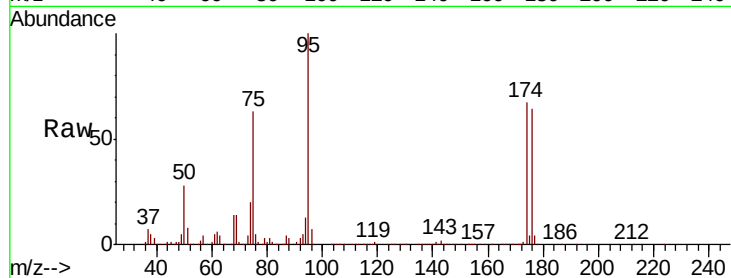




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.078 ppbv
 RT: 14.47 min Scan# 3634
 Delta R.T. -0.01 min
 Lab File: VL034417.D
 Acq: 25 Nov 2019 22:18

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion: 95 Resp: 1450616
 Ion Ratio Lower Upper
 95 100
 174 66.0 52.2 78.2
 175 4.7 3.8 5.8



#76
 1,4-Dichlorobenzene
 Concen: 0.118 ppbv
 RT: 17.20 min Scan# 4482
 Delta R.T. -0.01 min
 Lab File: VL034417.D
 Acq: 25 Nov 2019 22:18

Tgt Ion: 146 Resp: 18024
 Ion Ratio Lower Upper
 146 100
 111 71.2 24.1 72.3
 148 93.4 32.9 98.6

