

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032719\
 Data File : VL033472.D
 Acq On : 27 Mar 2019 17:25
 Operator : SY/AP
 Sample : K2042-11
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 28 07:28:40 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 26 16:00:50 2019
 QLast Update : Tue Mar 26 16:00:50 2019
 Response via : Initial Calibration

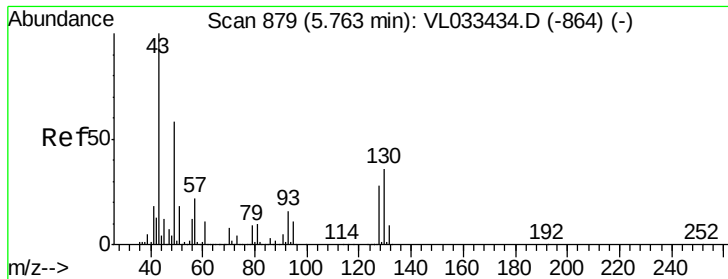
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.75	49	724922	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.28	114	1690624	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.23	117	1644721	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1302035	10.10	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.00%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.07	85	26554	0.251 ppbv	93
3) Chlorodifluoromethane	2.99	51	1858139	22.264 ppbv #	58
4) Chloromethane	3.17	50	23110	0.523 ppbv	91
9) Propene	3.23	41	50793	1.449 ppbv	84
10) Heptane	8.24	43	7185	0.077 ppbv #	74
11) Trichlorofluoromethane	4.00	101	37679	0.289 ppbv	93
12) 1,1,2-Trichlorotrifluoroet	4.54	101	3074	0.035 ppbv #	14
13) Ethanol	3.65	45	809535	89.259 ppbv	65
15) Acetone	3.89	43	1181125	13.551 ppbv	99
16) 1,3-Butadiene	3.34	39	10084	0.292 ppbv #	30
17) tert-Butyl alcohol	4.36	59	5571	0.348 ppbv #	73
19) Isopropyl Alcohol	4.03	45	181070	3.284 ppbv #	1
20) Methylene Chloride	4.40	84	881526	23.825 ppbv	96
21) Allyl Chloride	4.41	41	12870	0.234 ppbv #	39
23) Vinyl Acetate	5.14	43	17237	0.139 ppbv #	59
25) Ethyl Acetate	5.77	43	423380	2.618 ppbv #	79
26) Hexane	5.77	57	587620	8.172 ppbv #	40
30) Cyclohexane	7.24	84	3227	0.057 ppbv #	1
34) 2-Butanone	5.33	43	28664	0.282 ppbv	97
36) Benzene	6.99	78	30638	0.216 ppbv #	91
39) 1,2-Dichloropropane	7.28	63	450498	8.107 ppbv #	24
41) Tetrahydrofuran	5.77	42	223446	4.000 ppbv #	51
44) 2,2,4-Trimethylpentane	7.99	57	7872	0.032 ppbv #	1
53) Toluene	9.94	91	1870090	11.345 ppbv	100
58) Ethyl Benzene	13.11	91	25112	0.114 ppbv	92
59) m/p-Xylene	13.13	91	8016	0.041 ppbv #	100
60) o-Xylene	13.85	91	13239	0.070 ppbv	99
61) Styrene	13.68	104	5241	0.040 ppbv #	35
74) 1,2,4-Trimethylbenzene	16.91	105	6973	0.032 ppbv #	65

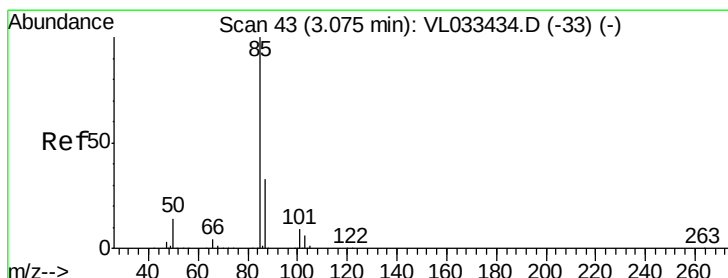
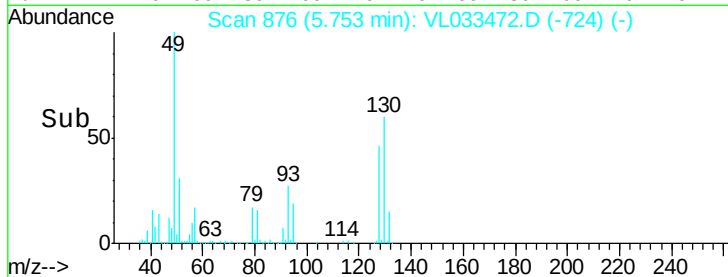
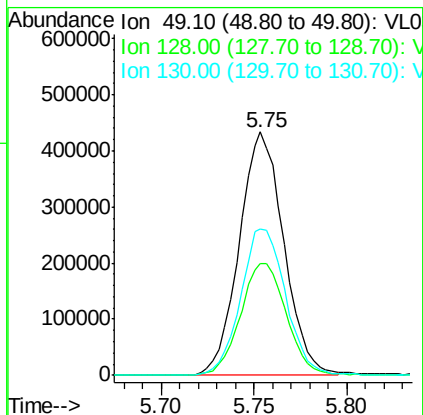
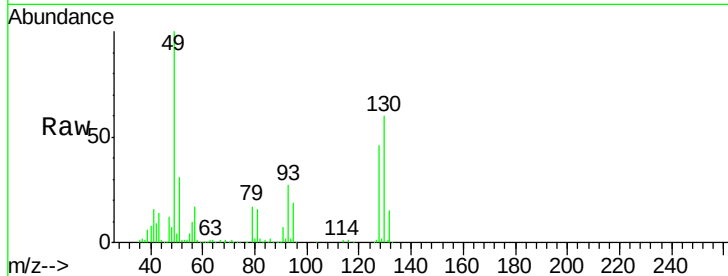
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.75 min Scan# 876
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

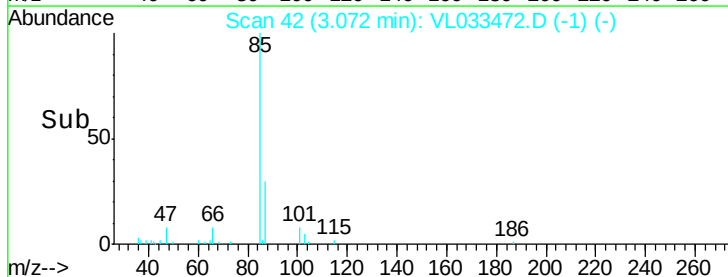
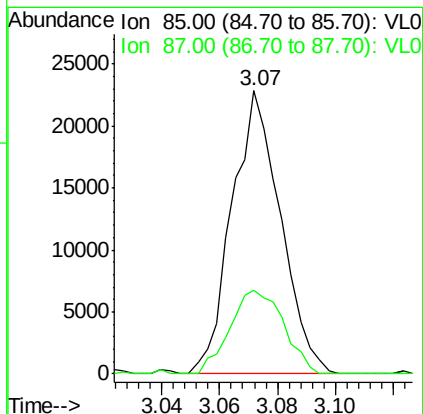
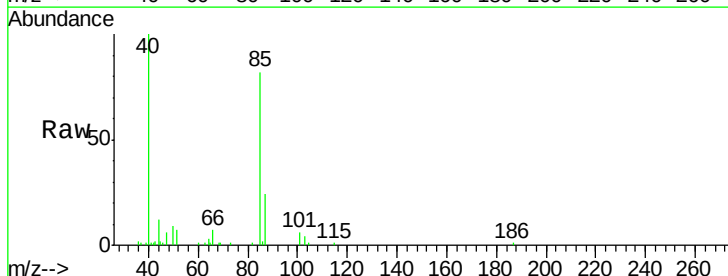
Instrument :
MSVOA_L
ClientSampleId :

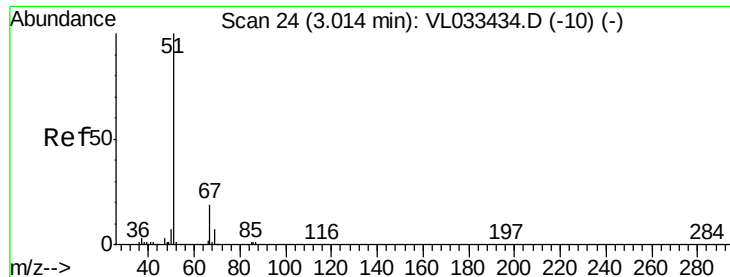
Tot Ion: 49 Resp: 724922
Ion Ratio Lower Upper
49 100
128 47.7 24.0 72.0
130 61.4 31.2 93.6



#2
Dichlorodifluoromethane
Concen: 0.251 ppbv
RT: 3.07 min Scan# 42
Delta R.T. -0.00 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

Tgt Ion: 85 Resp: 26554
Ion Ratio Lower Upper
85 100
87 29.6 26.7 40.1





#3

Chlorodifluoromethane

Concen: 22.264 ppbv

RT: 2.99 min Scan# 15

Delta R.T. -0.03 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Instrument :

MSVOA_L

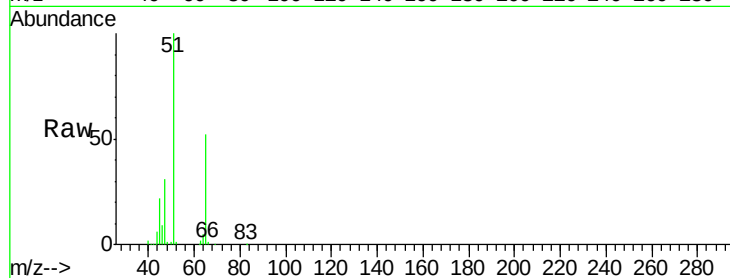
ClientSampleId :

Tot Ion: 51 Resp: 1858139

Ion Ratio Lower Upper

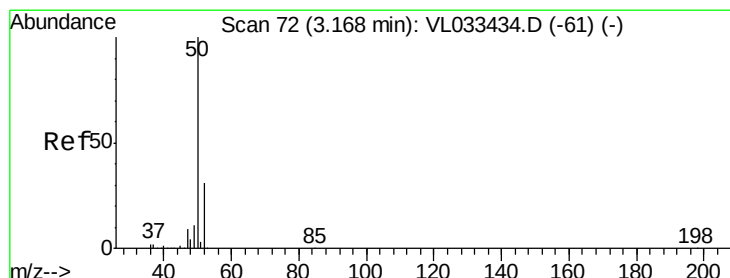
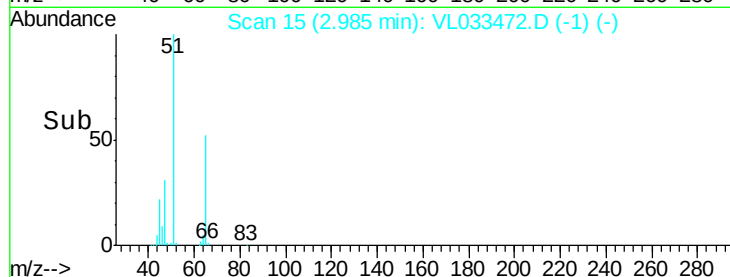
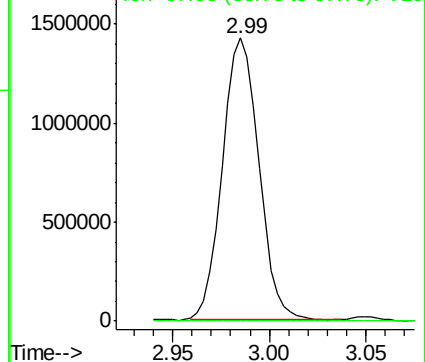
51 100

67 0.3 15.7 23.5#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.523 ppbv

RT: 3.17 min Scan# 72

Delta R.T. -0.00 min

Lab File: VL033472.D

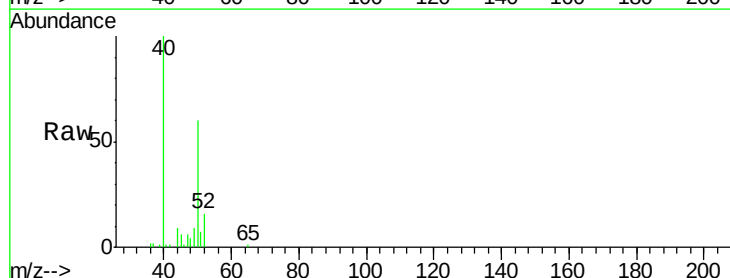
Acq: 27 Mar 2019 17:25

Tgt Ion: 50 Resp: 23110

Ion Ratio Lower Upper

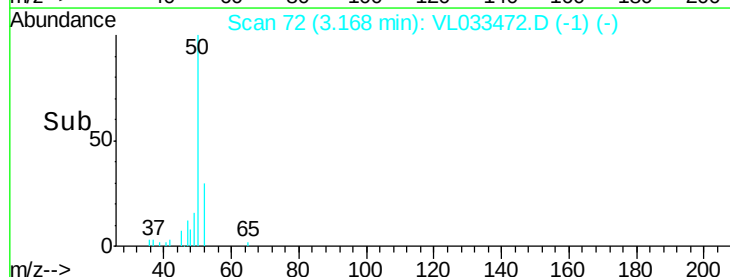
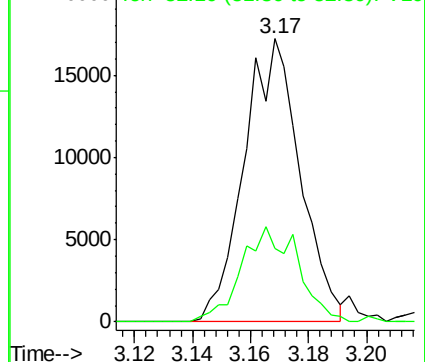
50 100

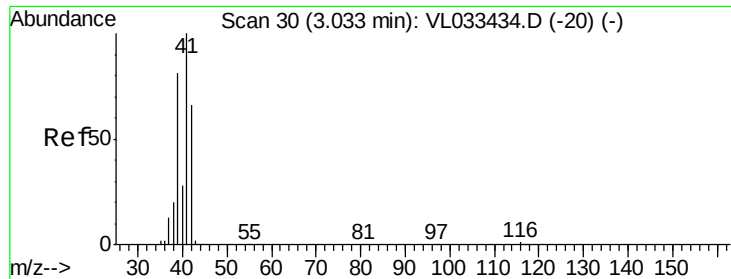
52 26.1 25.0 37.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.449 ppbv

RT: 3.23 min Scan# 92

Delta R.T. 0.20 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Instrument :

MSVOA_L

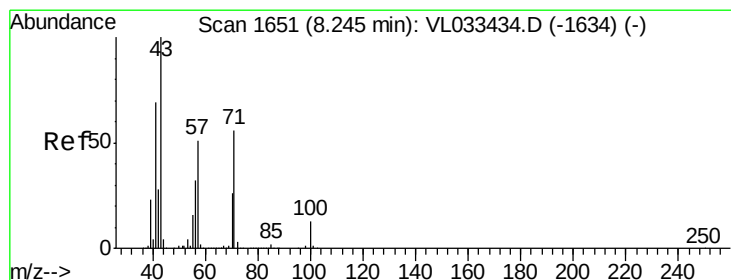
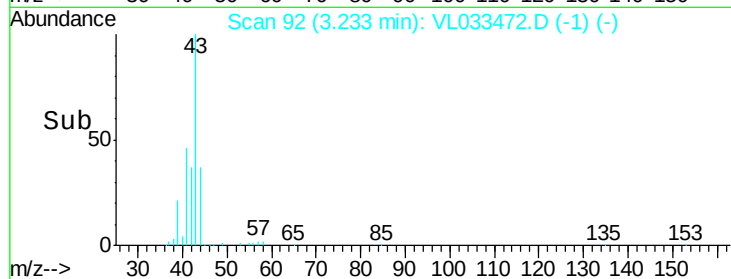
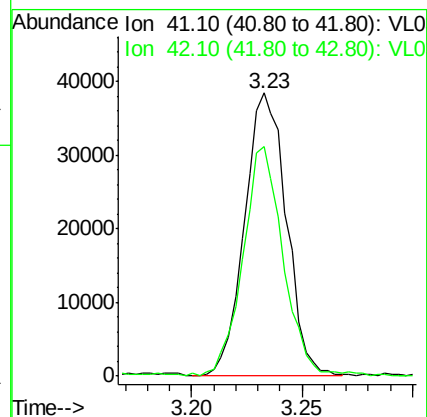
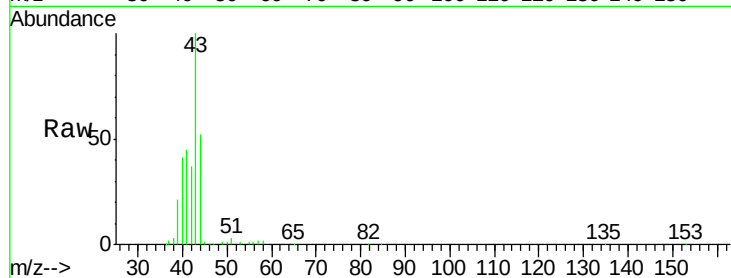
ClientSampleId :

Tot Ion: 41 Resp: 50793

Ion Ratio Lower Upper

41 100

42 80.1 53.9 80.9



#10

Heptane

Concen: 0.077 ppbv

RT: 8.24 min Scan# 1649

Delta R.T. -0.01 min

Lab File: VL033472.D

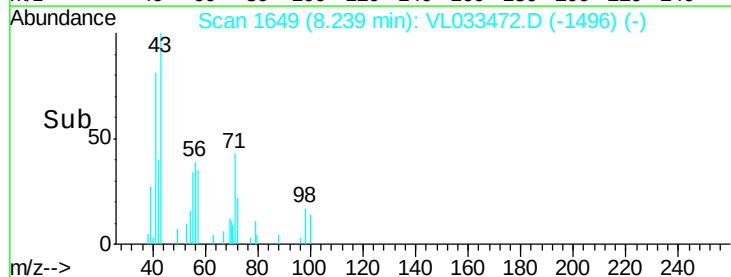
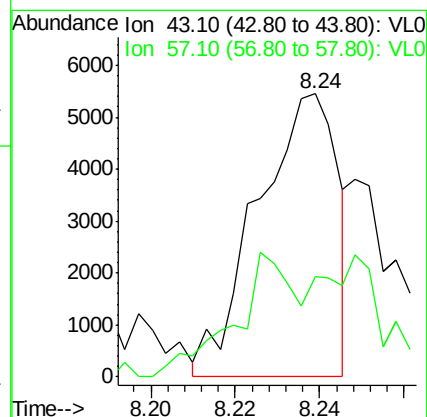
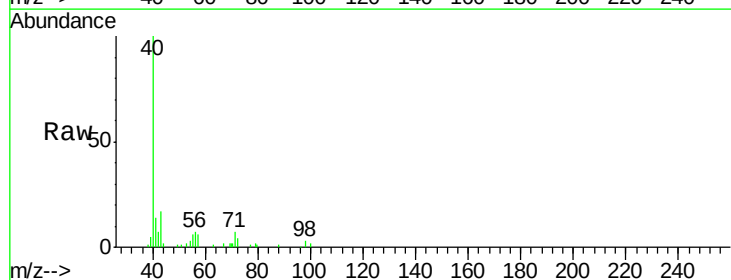
Acq: 27 Mar 2019 17:25

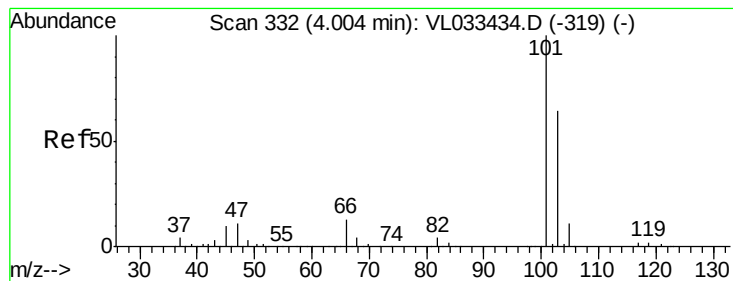
Tgt Ion: 43 Resp: 7185

Ion Ratio Lower Upper

43 100

57 68.6 40.6 60.8#





#11

Trichlorofluoromethane

Concen: 0.289 ppbv

RT: 4.00 min Scan# 331

Delta R.T. -0.00 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

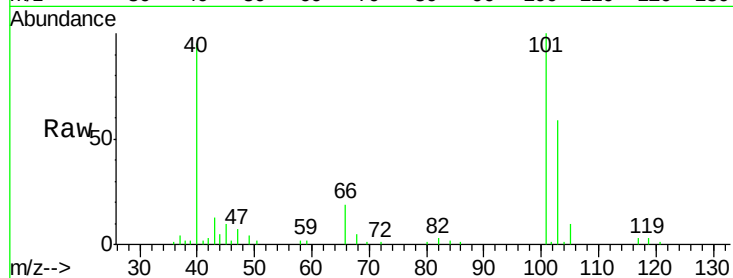
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:101 Resp: 37679

Ion Ratio Lower Upper

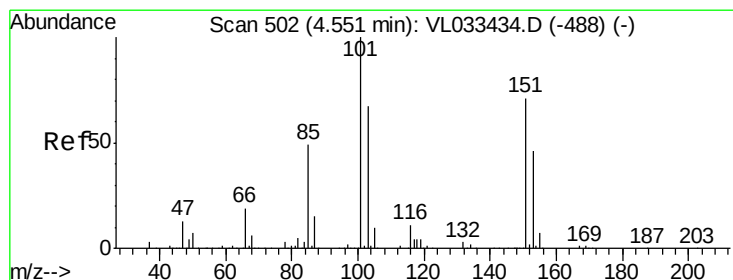
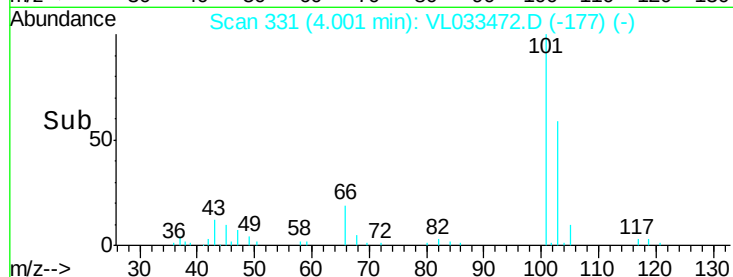
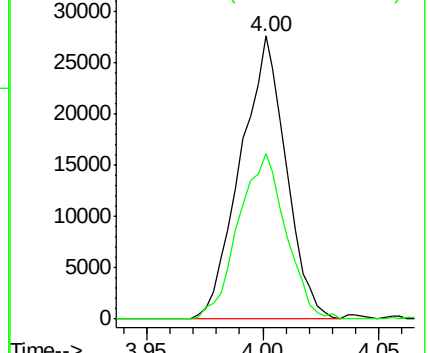
101 100

103 58.5 51.3 76.9



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.035 ppbv

RT: 4.54 min Scan# 499

Delta R.T. -0.01 min

Lab File: VL033472.D

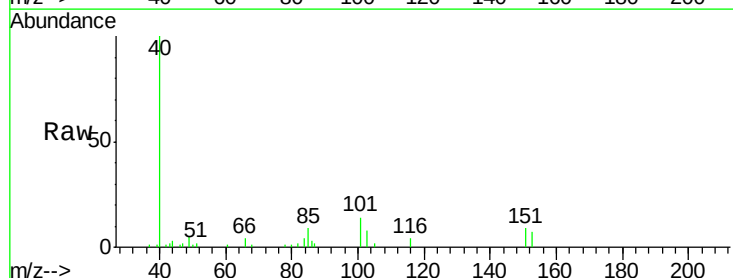
Acq: 27 Mar 2019 17:25

Tgt Ion:101 Resp: 3074

Ion Ratio Lower Upper

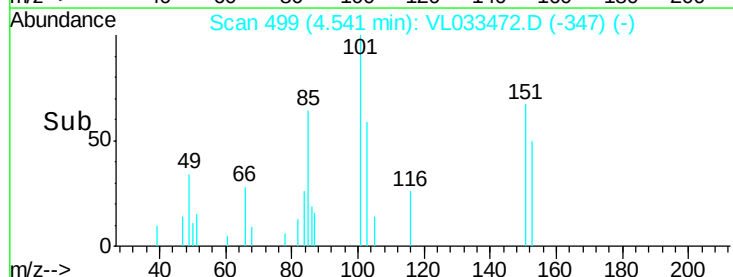
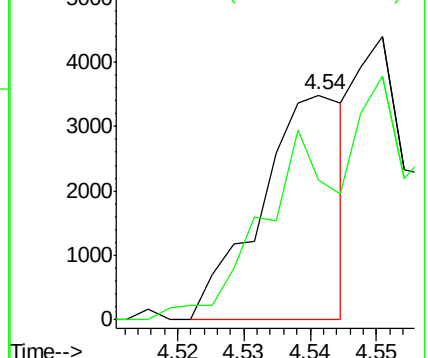
101 100

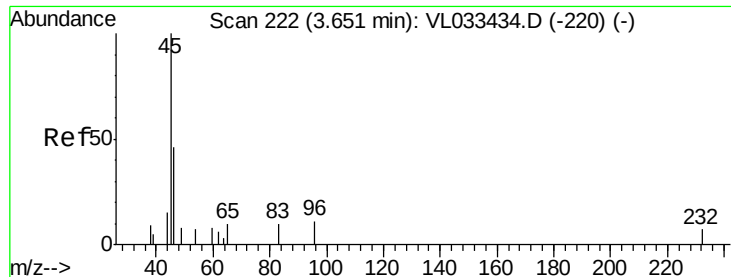
151 0.0 57.7 86.5#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

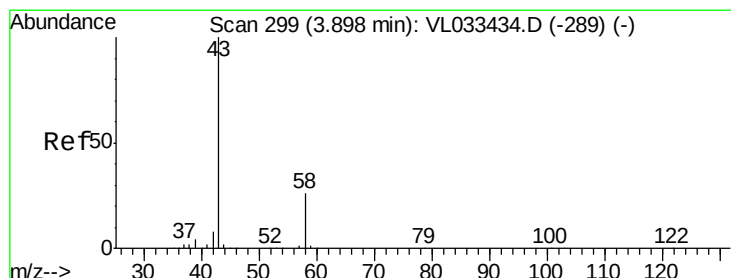
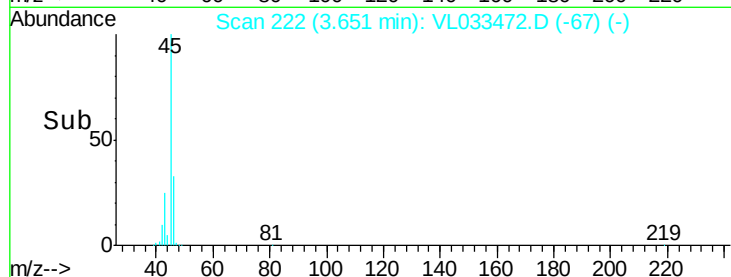
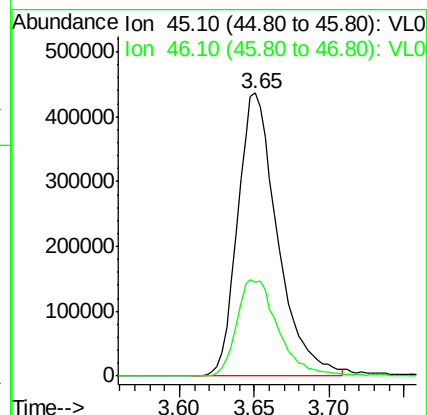
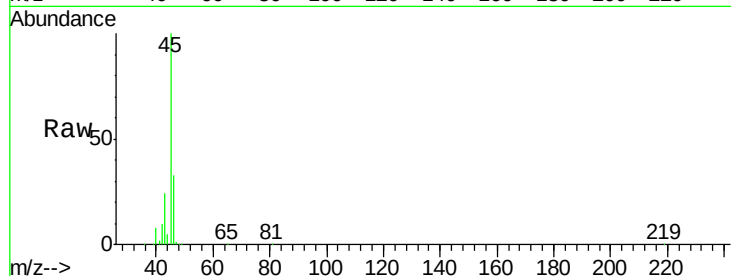




#13
Ethanol
Concen: 89.259 ppbv
RT: 3.65 min Scan# 222
Delta R.T. -0.00 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

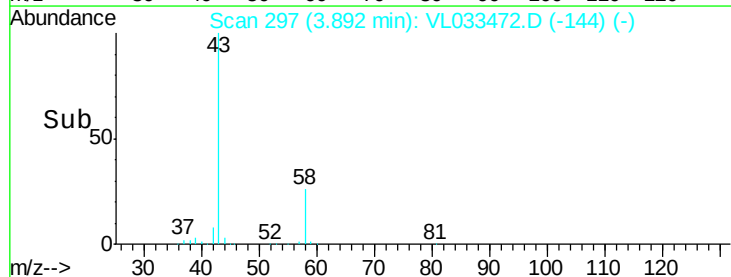
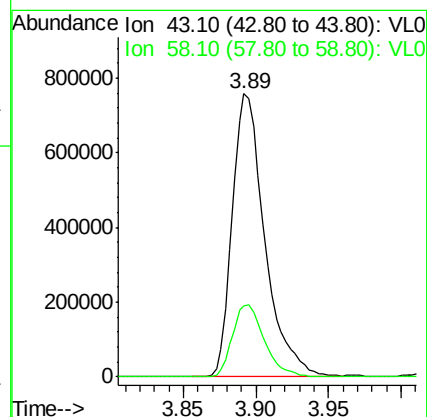
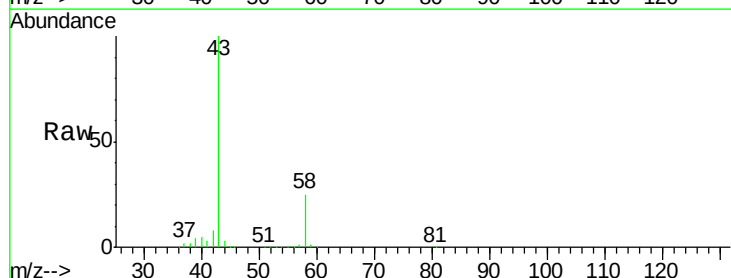
Instrument :
MSVOA_L
ClientSampled :

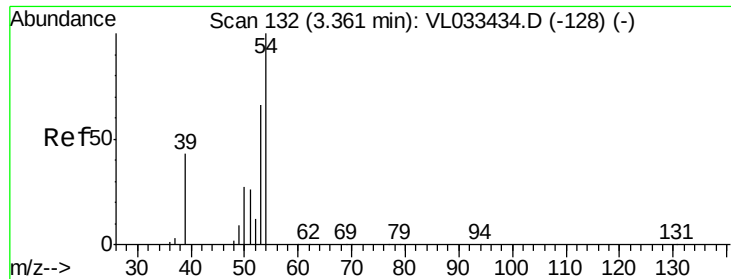
Tot Ion: 45 Resp: 809535
Ion Ratio Lower Upper
45 100
46 36.0 25.4 101.8



#15
Acetone
Concen: 13.551 ppbv
RT: 3.89 min Scan# 297
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

Tgt Ion: 43 Resp: 1181125
Ion Ratio Lower Upper
43 100
58 25.1 20.5 30.7

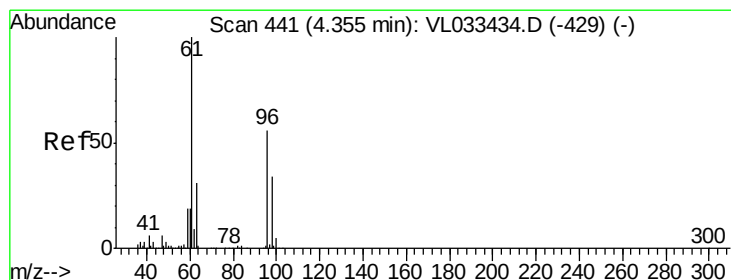
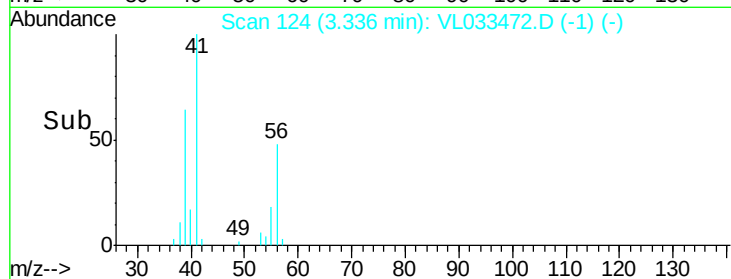
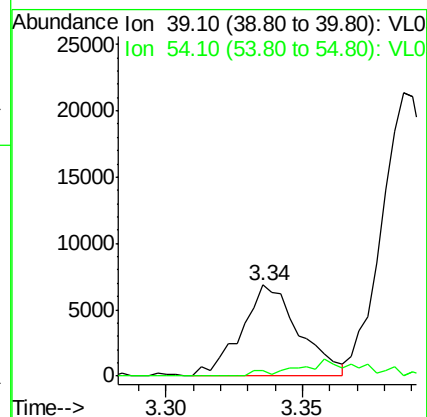
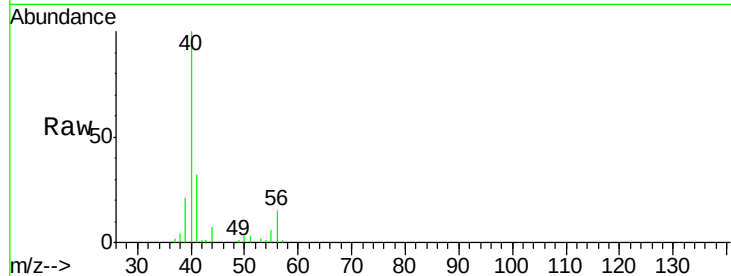




#16
 1,3-Butadiene
 Concen: 0.292 ppbv
 RT: 3.34 min Scan# 124
 Delta R.T. -0.03 min
 Lab File: VL033472.D
 Acq: 27 Mar 2019 17:25

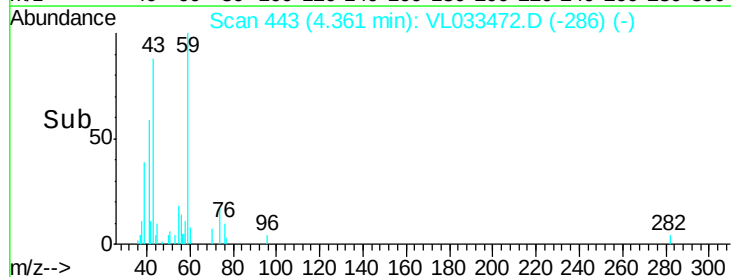
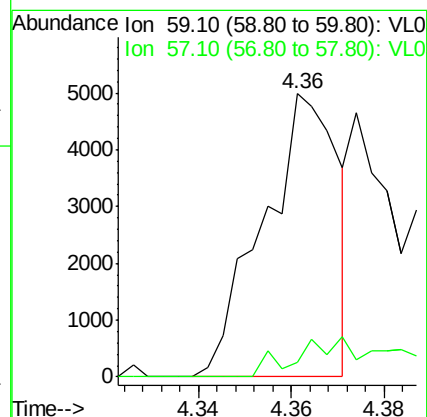
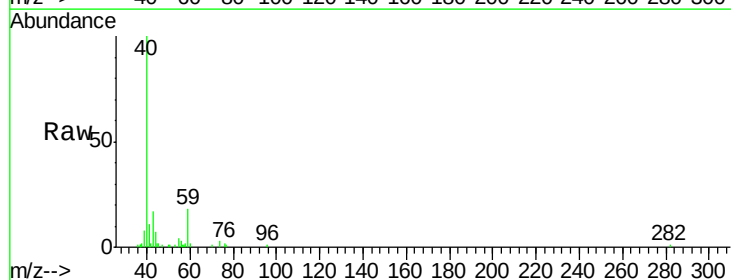
Instrument :
 MSVOA_L
 ClientSampled :

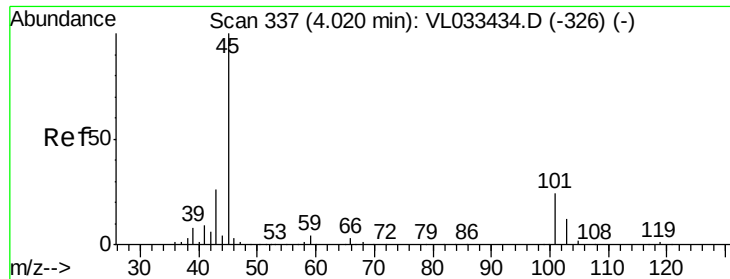
Tot Ion: 39 Resp: 10084
 Ion Ratio Lower Upper
 39 100
 54 22.5 69.4 104.2#



#17
 tert-Butyl alcohol
 Concen: 0.348 ppbv
 RT: 4.36 min Scan# 443
 Delta R.T. 0.01 min
 Lab File: VL033472.D
 Acq: 27 Mar 2019 17:25

Tgt Ion: 59 Resp: 5571
 Ion Ratio Lower Upper
 59 100
 57 0.0 7.8 11.8#





#19

Isopropyl Alcohol

Concen: 3.284 ppbv

RT: 4.03 min Scan# 339

Delta R.T. 0.01 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Instrument :

MSVOA_L

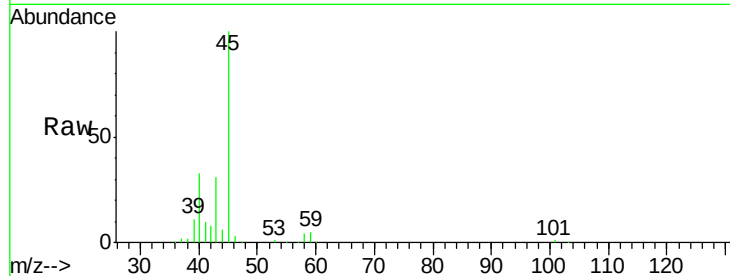
ClientSampleId :

Tot Ion: 45 Resp: 181070

Ion Ratio Lower Upper

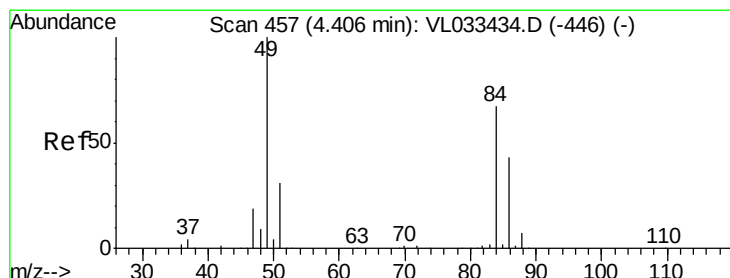
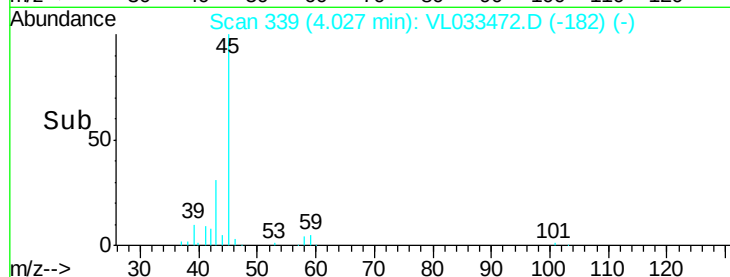
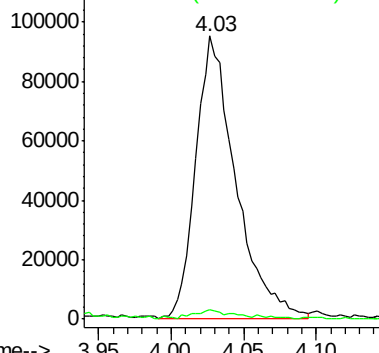
45 100

58 163.6 1.4 2.2#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 23.825 ppbv

RT: 4.40 min Scan# 456

Delta R.T. -0.00 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Tgt Ion: 84 Resp: 881526

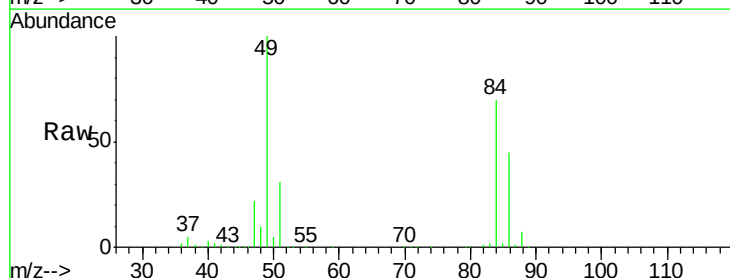
Ion Ratio Lower Upper

84 100

49 142.1 120.0 180.0

51 44.0 36.7 55.1

86 64.6 51.9 77.9

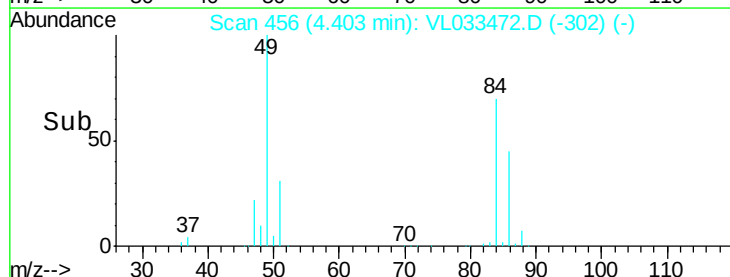
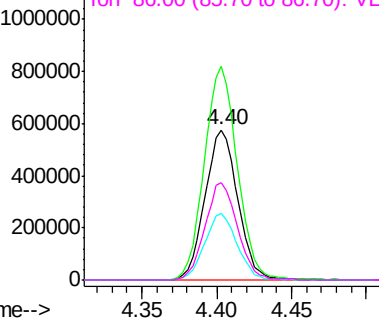


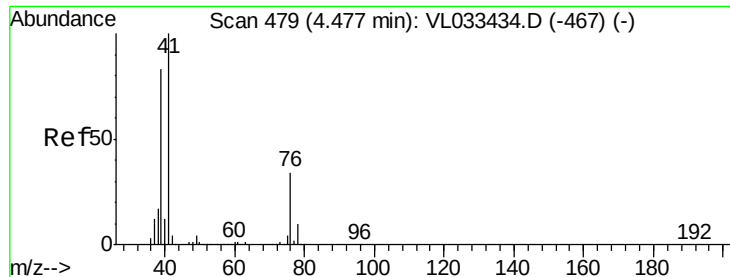
Abundance Ion 84.00 (83.70 to 84.70): VL0

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

Allvl Chloride

Concen: 0.234 ppbv

RT: 4.41 min Scan# 457

Delta R.T. -0.07 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Instrument :

MSVOA_L

ClientSampleId :

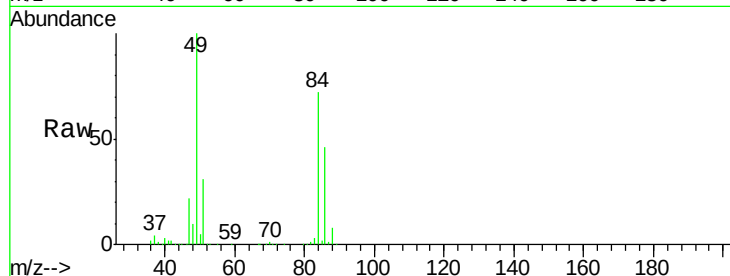
Tot Ion: 41 Resp: 12870

Ion Ratio Lower Upper

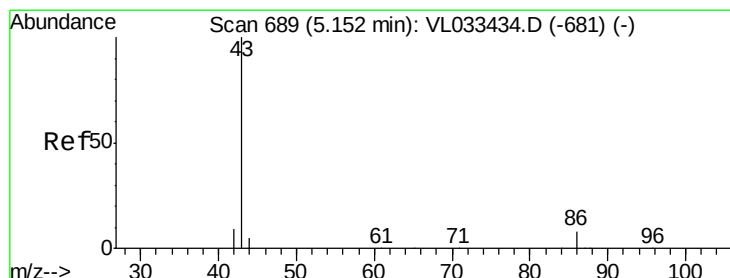
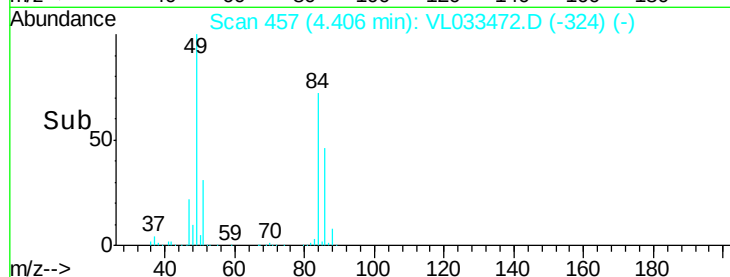
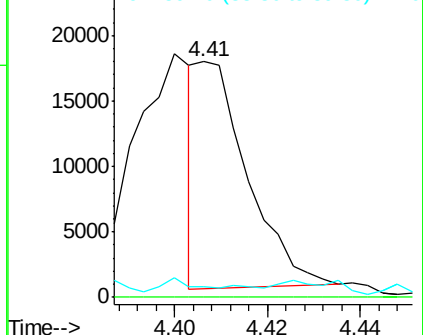
41 100

76 0.0 25.4 38.2#

39 25.5 65.3 97.9#



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: 0.139 ppbv

RT: 5.14 min Scan# 685

Delta R.T. -0.01 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Tgt Ion: 43 Resp: 17237

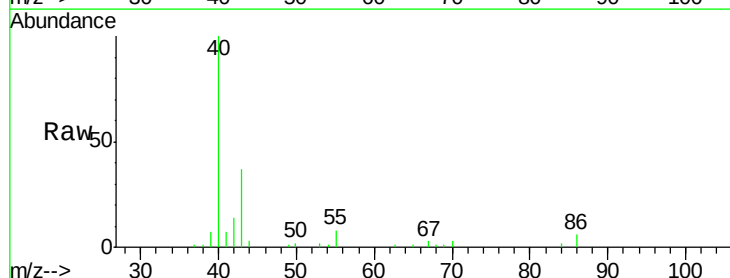
Ion Ratio Lower Upper

43 100

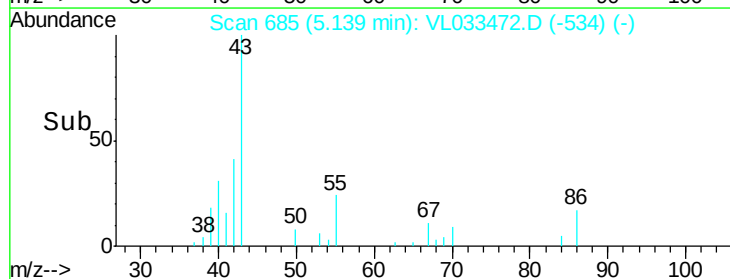
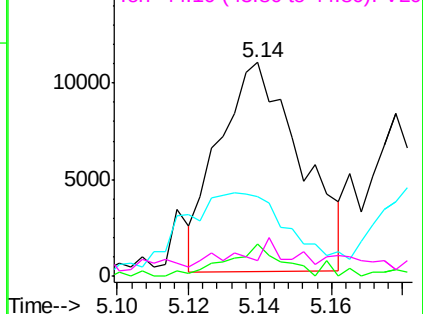
86 19.6 5.6 8.4#

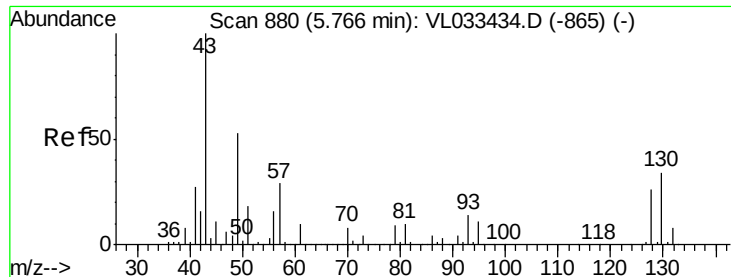
42 33.5 8.0 12.0#

44 4.0 3.9 5.9



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

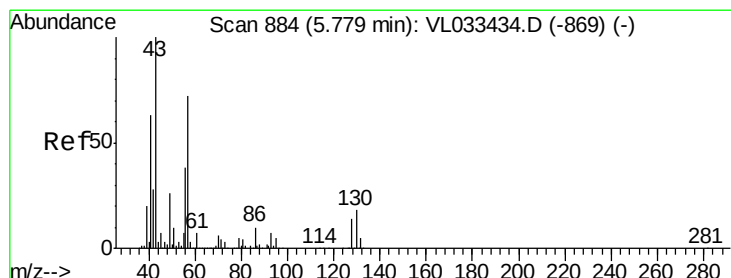
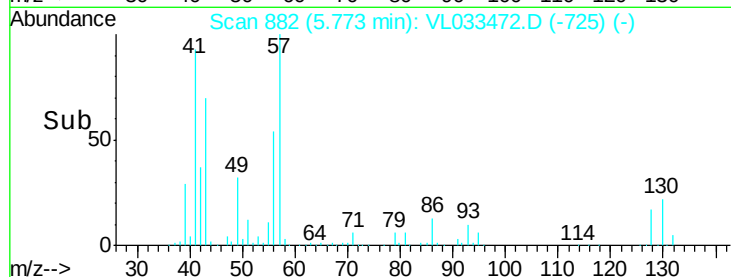
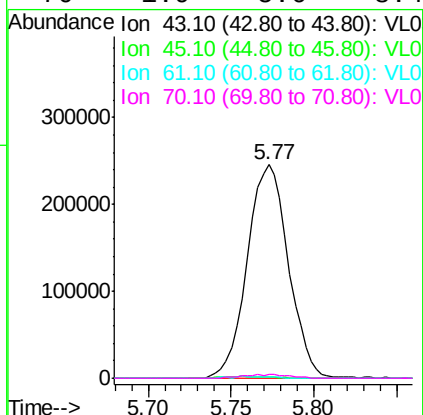
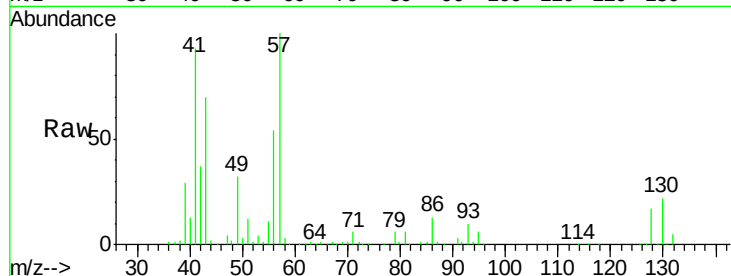




#25
Ethyl Acetate
Concen: 2.618 ppbv
RT: 5.77 min Scan# 882
Delta R.T. 0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

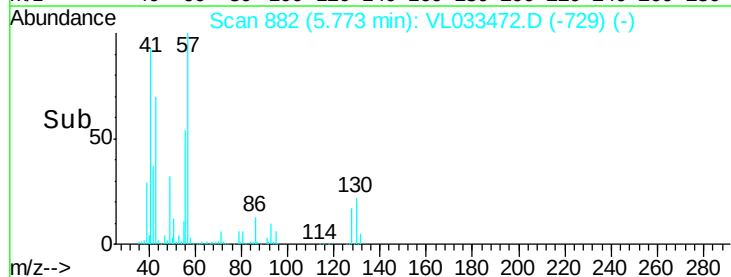
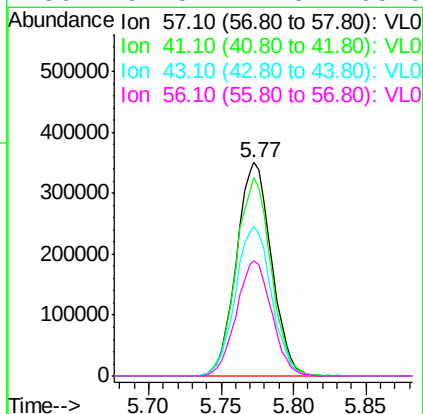
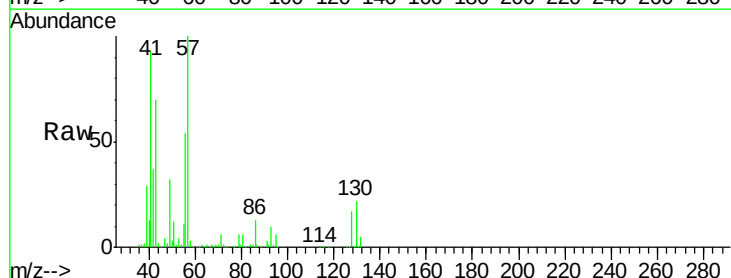
Instrument :
MSVOA_L
ClientSampleId :

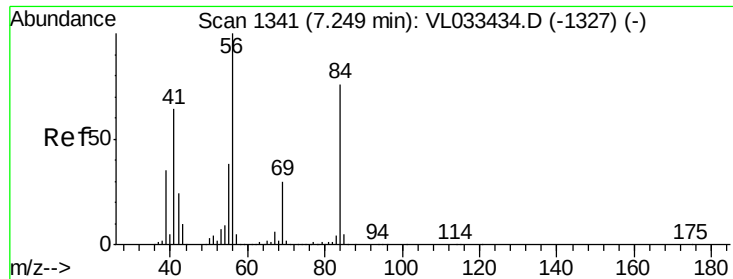
Tot Ion:	43	Resp:	423380
Ion	Ratio	Lower	Upper
43	100		
45	1.2	7.8	11.6#
61	0.8	7.3	10.9#
70	1.9	5.6	8.4#



#26
Hexane
Concen: 8.172 ppbv
RT: 5.77 min Scan# 882
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

Tgt Ion:	57	Resp:	587620
Ion	Ratio	Lower	Upper
57	100		
41	92.7	70.7	106.1
43	72.5	182.6	274.0#
56	54.5	42.0	63.0

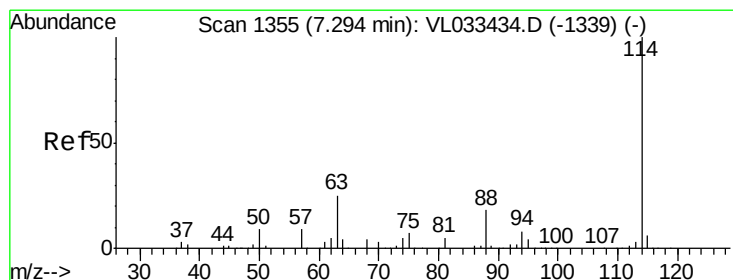
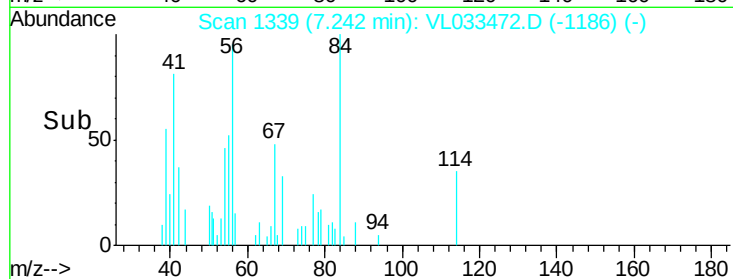
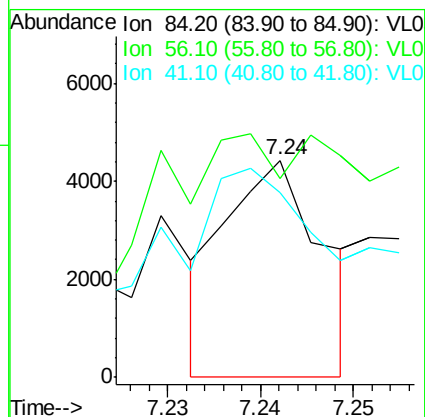
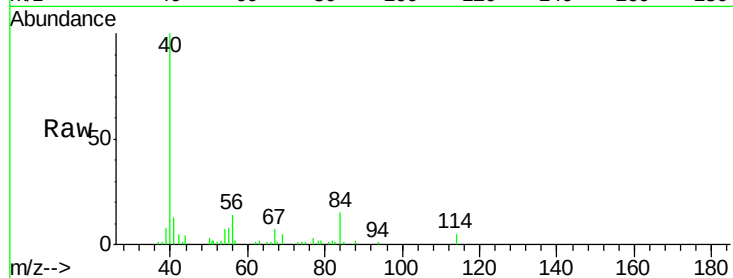




#30
Cyclohexane
Concen: 0.057 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

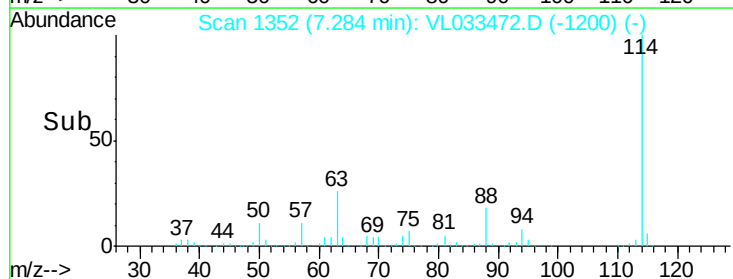
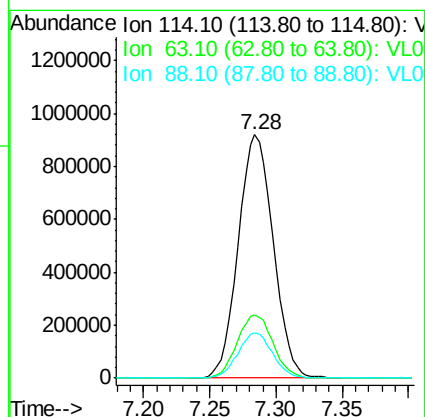
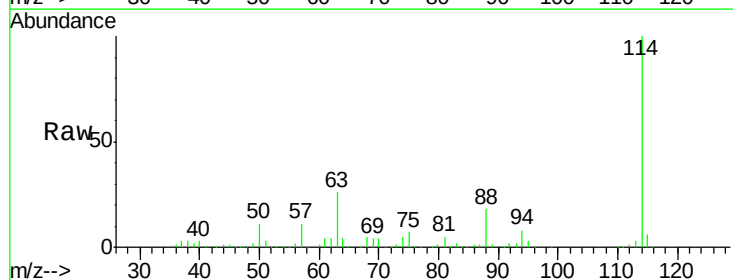
Instrument :
MSVOA_L
ClientSampleId :

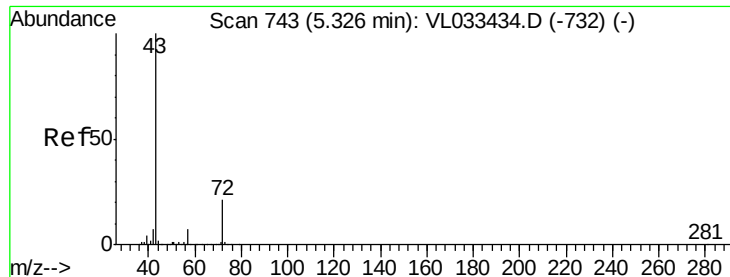
Tot Ion: 84 Resp: 3227
Ion Ratio Lower Upper
84 100
56 0.0 109.7 164.5#
41 273.3 68.2 102.2#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.28 min Scan# 1352
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

Tgt Ion: 114 Resp: 1690624
Ion Ratio Lower Upper
114 100
63 26.8 21.5 32.3
88 18.4 14.5 21.7





#34

2-Butanone

Concen: 0.282 ppbv

RT: 5.33 min Scan# 744

Delta R.T. 0.00 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Instrument :

MSVOA_L

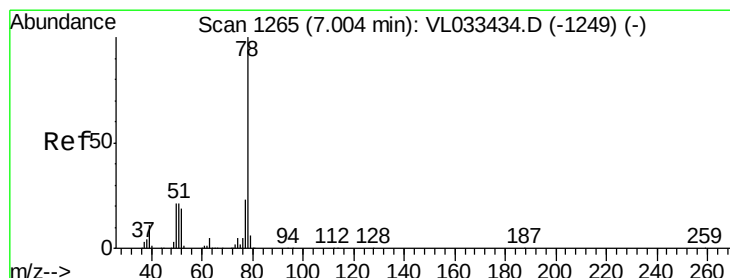
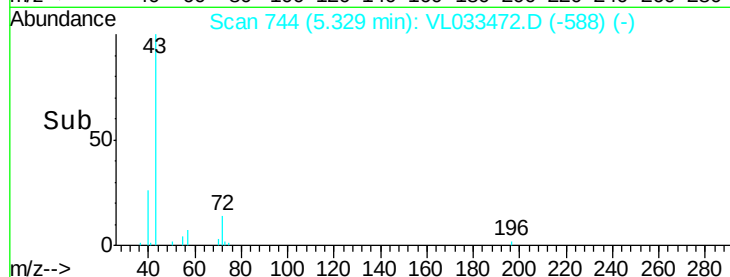
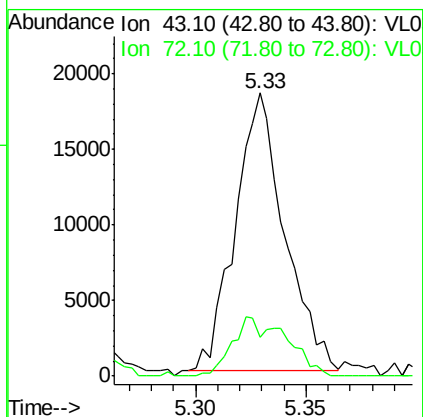
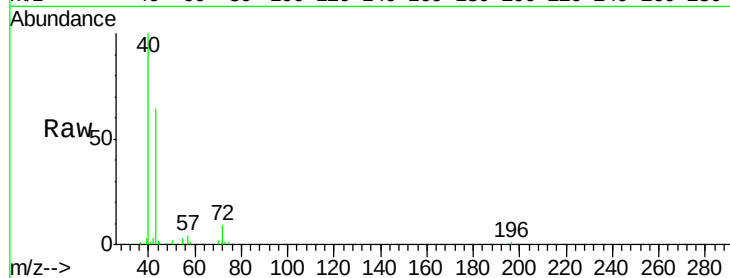
ClientSampleId :

Tot Ion: 43 Resp: 28664

Ion Ratio Lower Upper

43 100

72 23.2 17.4 26.2



#36

Benzene

Concen: 0.216 ppbv

RT: 6.99 min Scan# 1262

Delta R.T. -0.01 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

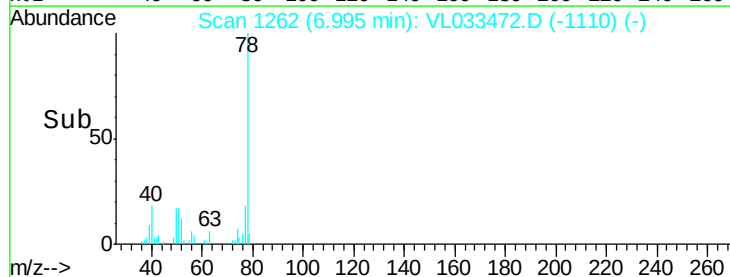
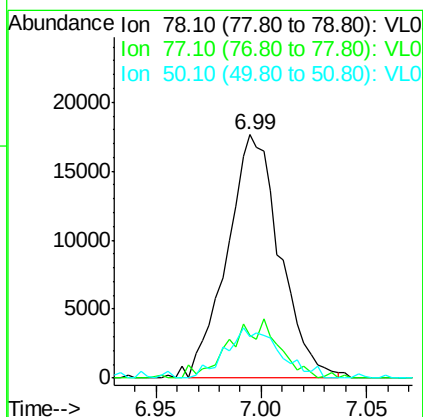
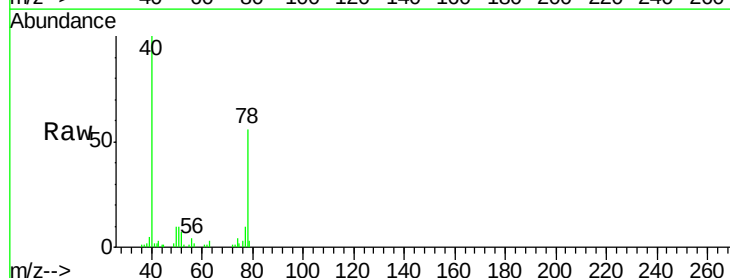
Tgt Ion: 78 Resp: 30638

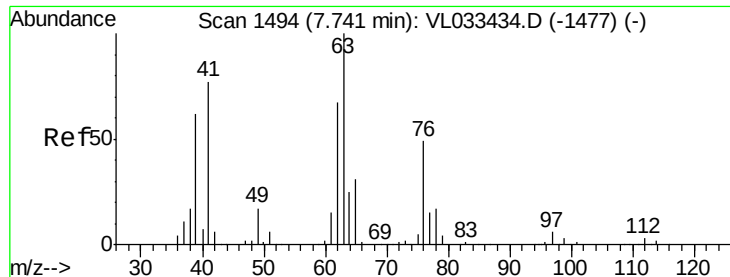
Ion Ratio Lower Upper

78 100

77 17.6 18.1 27.1#

50 17.2 16.7 25.1

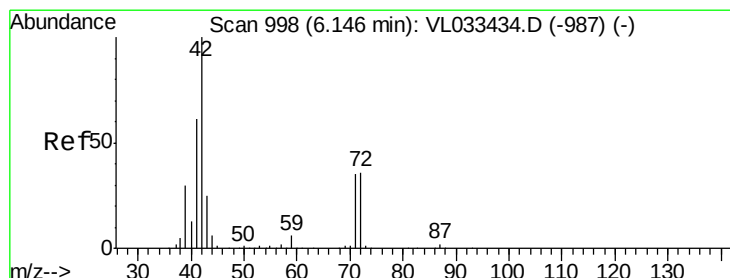
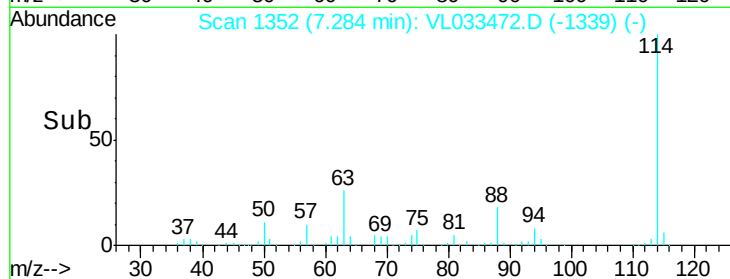
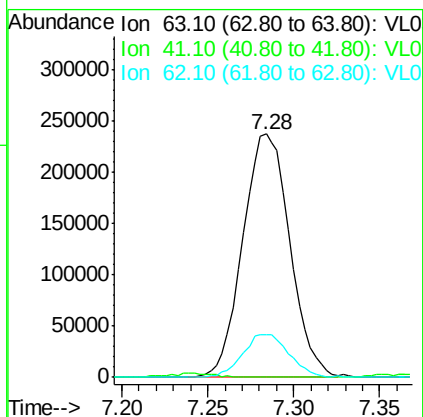
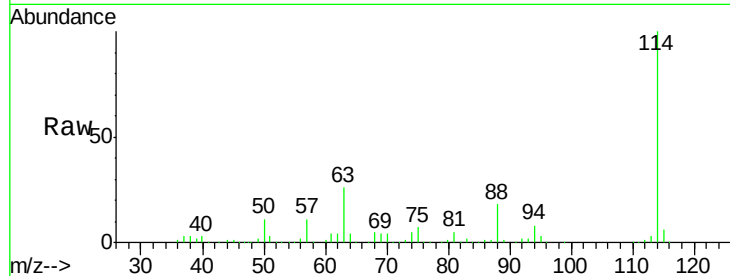




#39
 1,2-Dichloropropane
 Concen: 8.107 ppbv
 RT: 7.28 min Scan# 1352
 Delta R.T. -0.46 min
 Lab File: VL033472.D
 Acq: 27 Mar 2019 17:25

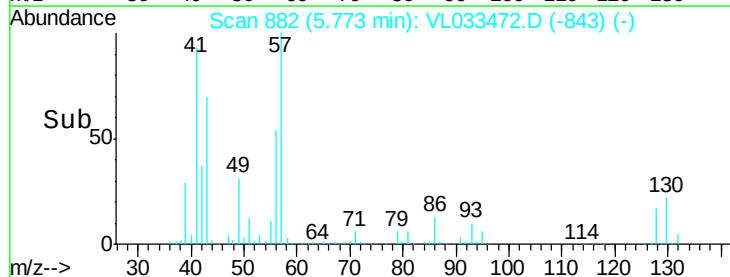
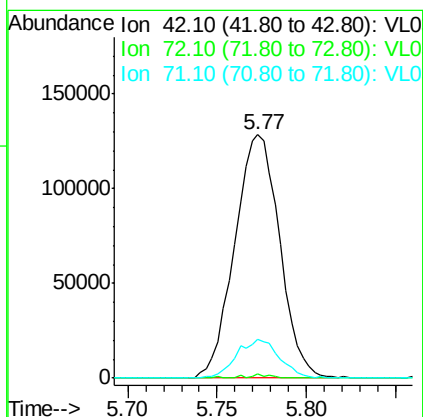
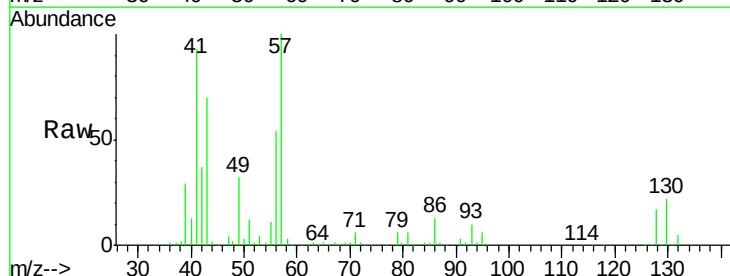
Instrument :
 MSVOA_L
 ClientSampled :

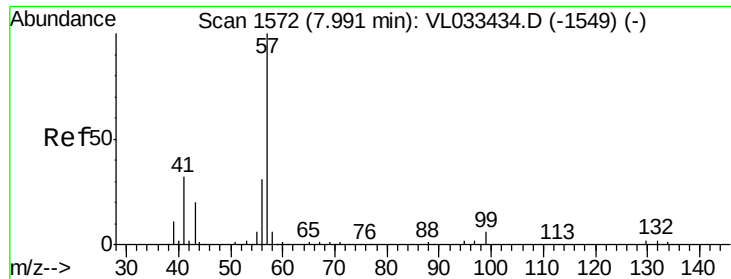
Tot Ion: 63 Resp: 450498
 Ion Ratio Lower Upper
 63 100
 41 0.1 61.2 91.8#
 62 17.4 54.0 81.0#



#41
 Tetrahydrofuran
 Concen: 4.000 ppbv
 RT: 5.77 min Scan# 882
 Delta R.T. -0.37 min
 Lab File: VL033472.D
 Acq: 27 Mar 2019 17:25

Tgt Ion: 42 Resp: 223446
 Ion Ratio Lower Upper
 42 100
 72 0.9 30.2 45.2#
 71 15.3 29.4 44.2#





#44

2,2,4-Trimethylpentane

Concen: 0.032 ppbv

RT: 7.99 min Scan# 1571

Delta R.T. -0.00 min

Lab File: VL033472.D

Acq: 27 Mar 2019 17:25

Instrument :

MSVOA_L

ClientSampleId :

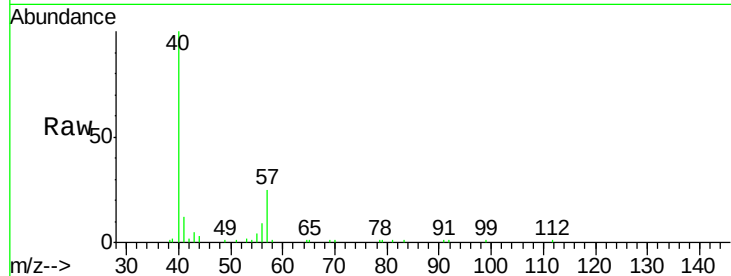
Tot Ion: 57 Resp: 7872

Ion Ratio Lower Upper

57 100

41 105.1 26.0 39.0#

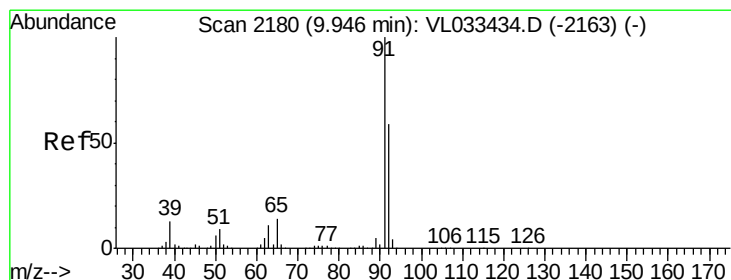
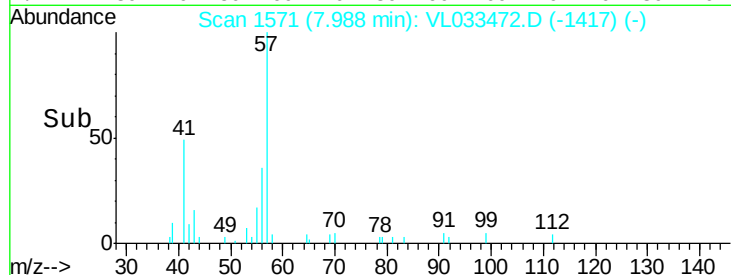
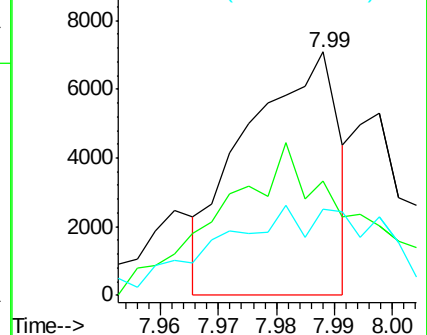
56 76.9 24.6 37.0#



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: 11.345 ppbv

RT: 9.94 min Scan# 2177

Delta R.T. -0.01 min

Lab File: VL033472.D

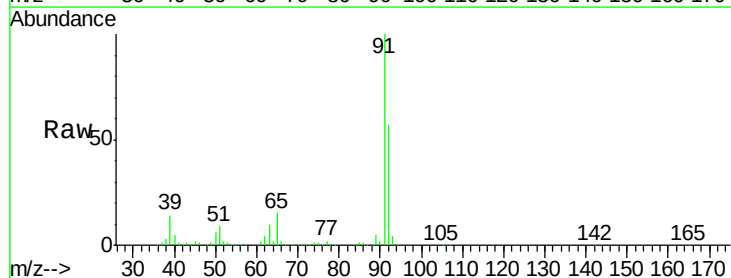
Acq: 27 Mar 2019 17:25

Tgt Ion: 91 Resp: 1870090

Ion Ratio Lower Upper

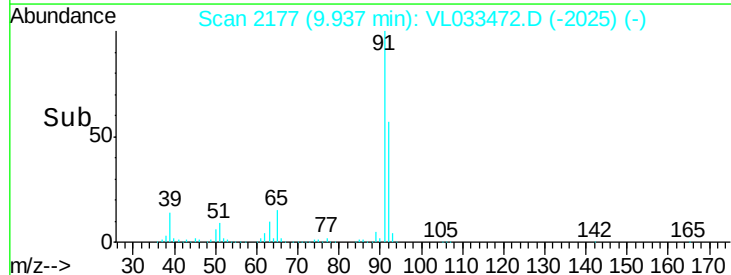
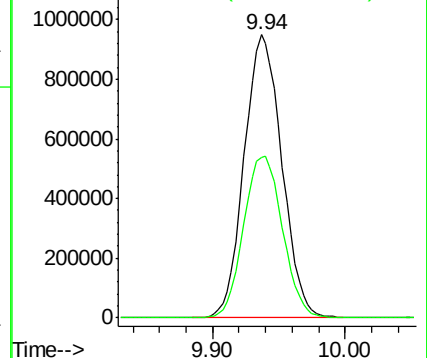
91 100

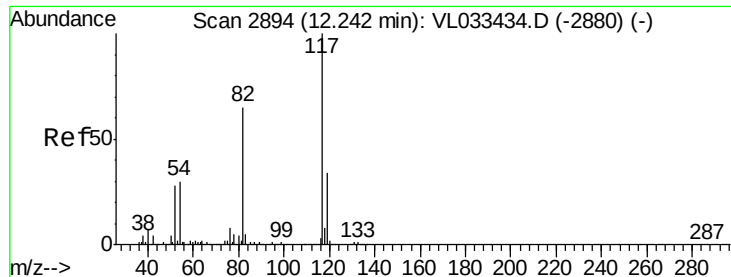
92 59.1 47.4 71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

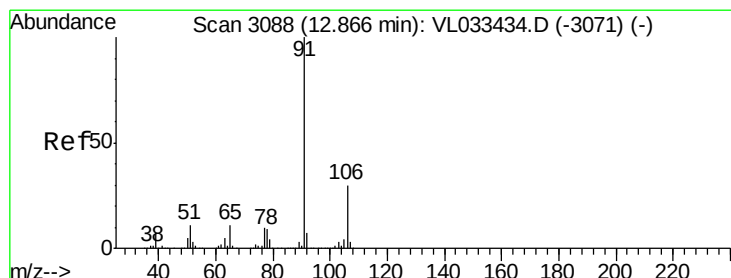
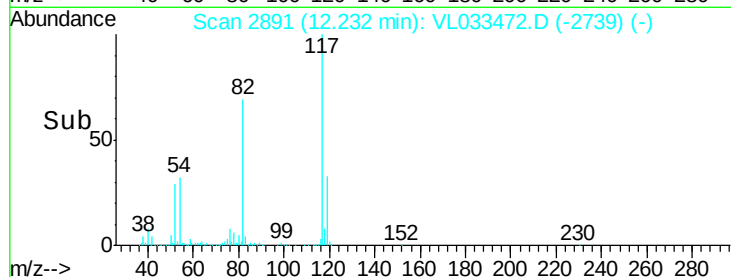
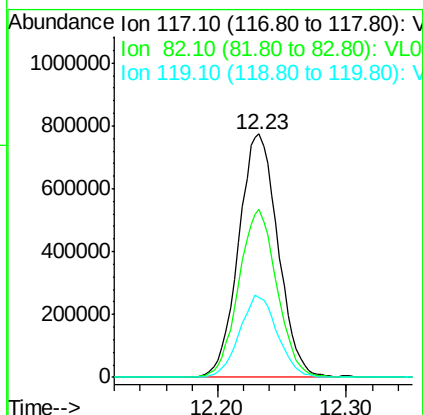
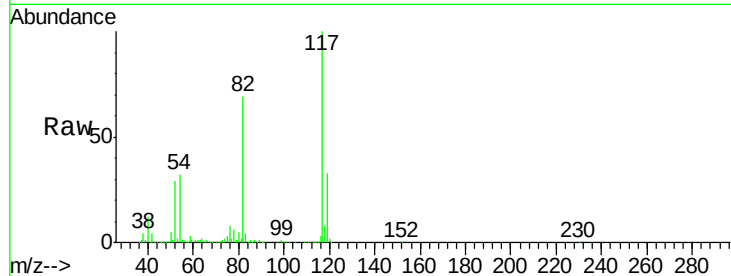




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.23 min Scan# 2891
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

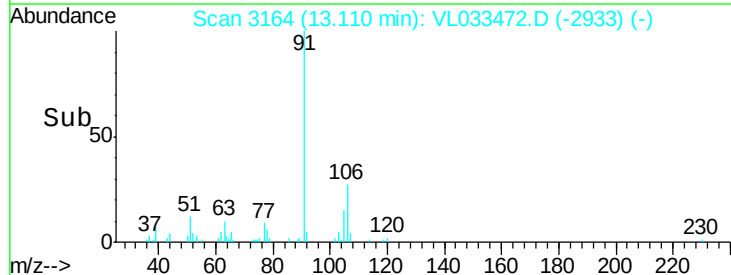
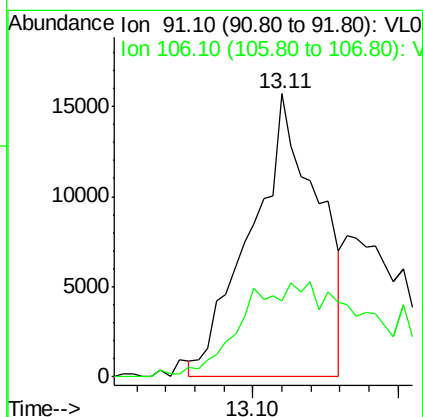
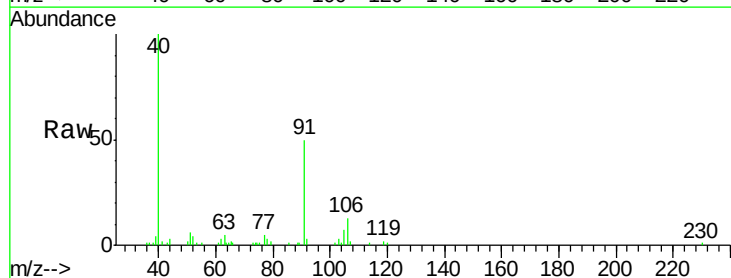
Instrument :
MSVOA_L
ClientSampleId :

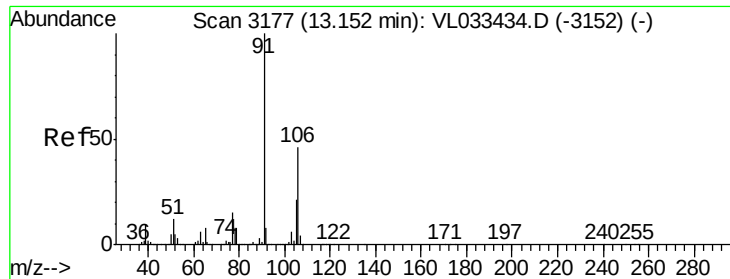
Tot Ion:117 Resp: 1644721
Ion Ratio Lower Upper
117 100
82 67.5 51.5 77.3
119 32.6 25.5 38.3



#58
Ethyl Benzene
Concen: 0.114 ppbv
RT: 13.11 min Scan# 3164
Delta R.T. 0.24 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

Tgt Ion: 91 Resp: 25112
Ion Ratio Lower Upper
91 100
106 25.3 23.8 35.6

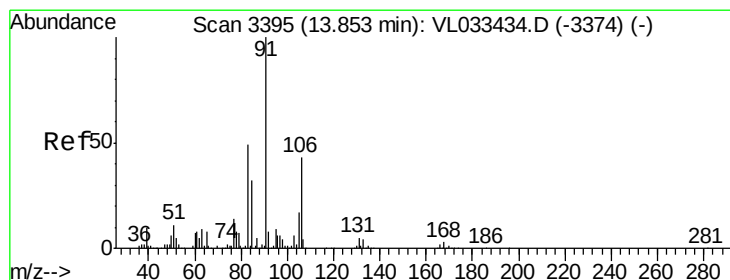
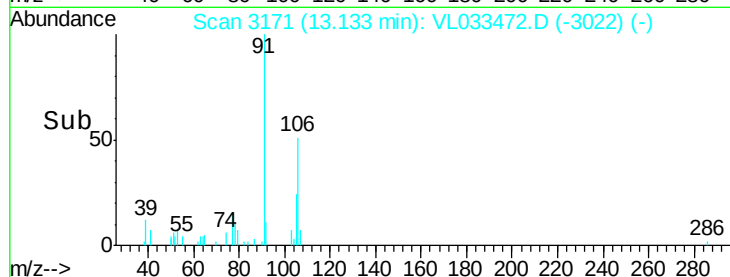
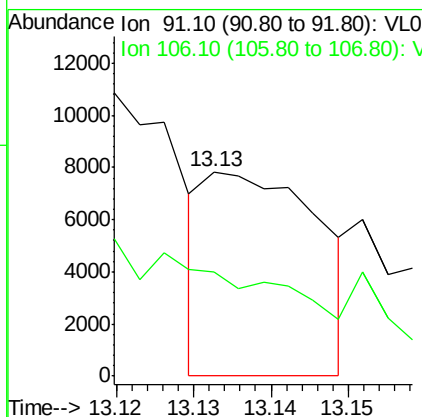
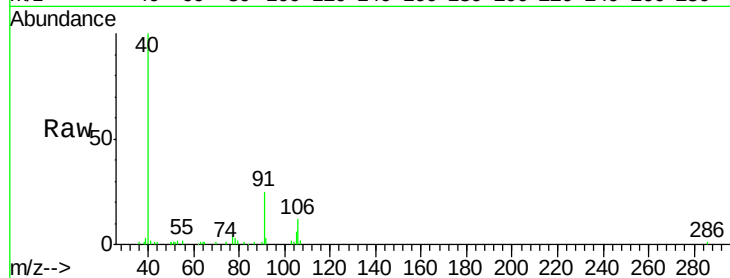




#59
m/p-Xylene
Concen: 0.041 ppbv
RT: 13.13 min Scan# 3171
Delta R.T. -0.02 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

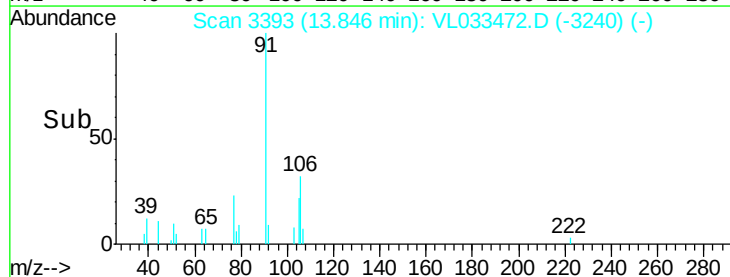
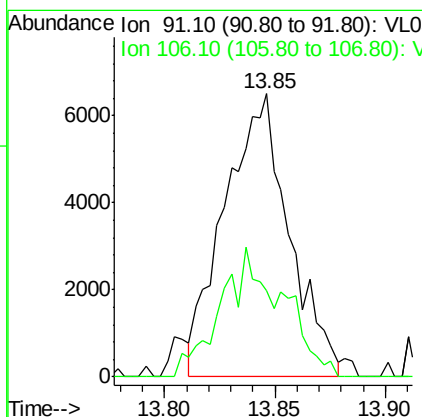
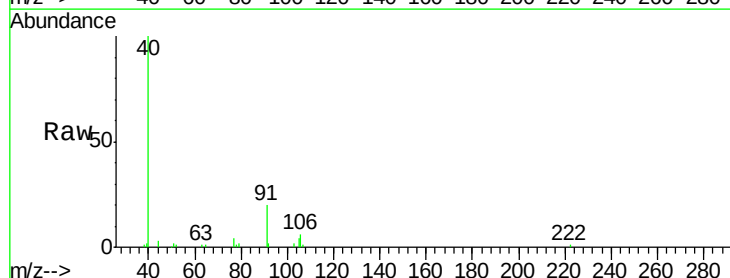
Instrument :
MSVOA_L
ClientSampleId :

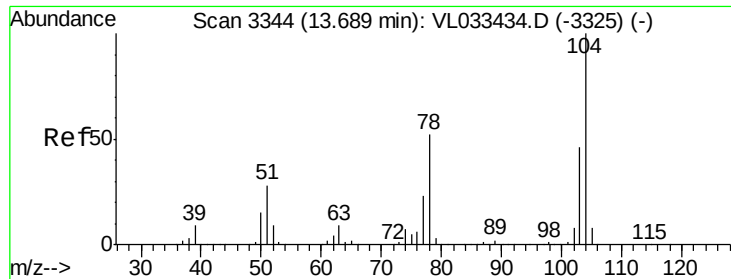
Tot Ion: 91 Resp: 8016
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0



#60
o-Xylene
Concen: 0.070 ppbv
RT: 13.85 min Scan# 3393
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

Tgt Ion: 91 Resp: 13239
Ion Ratio Lower Upper
91 100
106 43.7 21.4 64.3

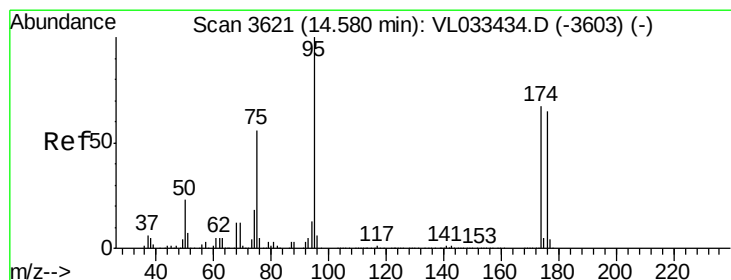
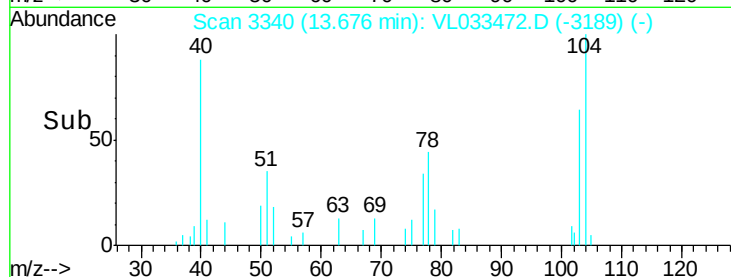
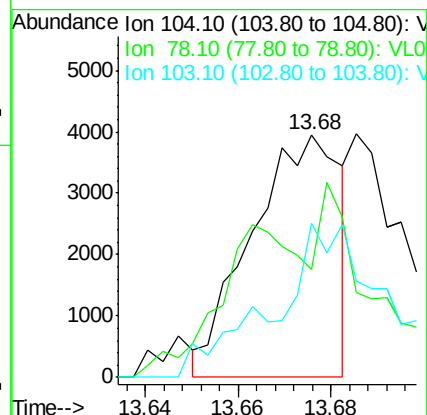
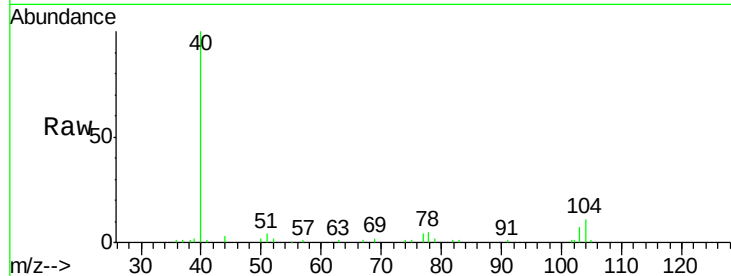




#61
Stvrene
Concen: 0.040 ppbv
RT: 13.68 min Scan# 3340
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

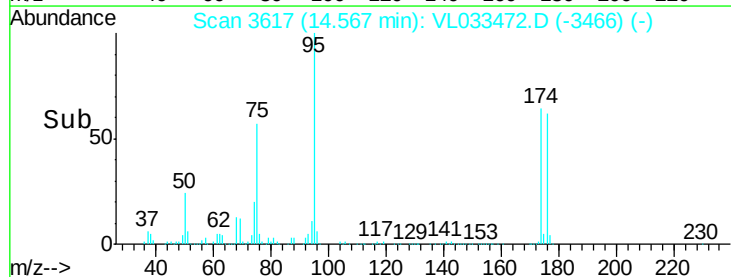
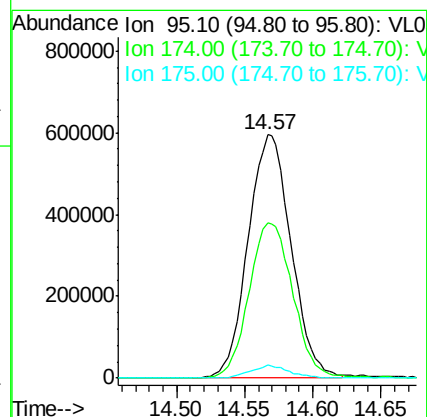
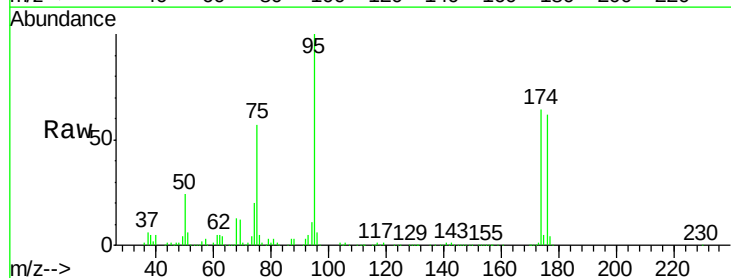
Instrument :
MSVOA_L
ClientSampleId :

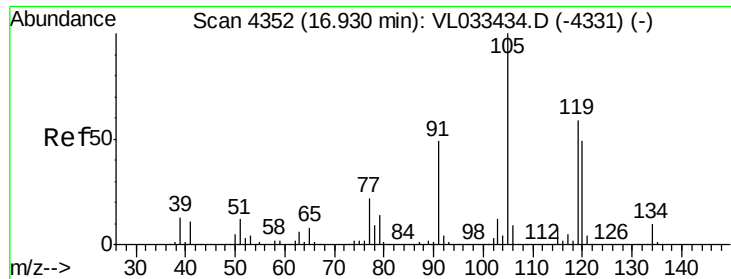
Tot Ion:104 Resp: 5241
Ion Ratio Lower Upper
104 100
78 111.7 43.2 64.8#
103 78.8 37.8 56.8#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.098 ppbv
RT: 14.57 min Scan# 3617
Delta R.T. -0.01 min
Lab File: VL033472.D
Acq: 27 Mar 2019 17:25

Tgt Ion: 95 Resp: 1302035
Ion Ratio Lower Upper
95 100
174 65.5 52.9 79.3
175 4.8 3.8 5.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.032 ppbv
 RT: 16.91 min Scan# 4347
 Delta R.T. -0.02 min
 Lab File: VL033472.D
 Acq: 27 Mar 2019 17:25

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion	Ratio	Lower	Upper
105	100		
120	35.6	39.0	58.6#
91	10.5	40.0	60.0#
77	12.2	17.5	26.3#

