

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL032019\
 Data File : VL033399.D
 Acq On : 20 Mar 2019 21:06
 Operator : SY/AP
 Sample : K1975-02DL 10X
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

Quant Time: Mar 21 12:38:57 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL031519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar 15 14:52:14 2019
 QLast Update : Fri Mar 15 14:52:14 2019
 Response via : Initial Calibration

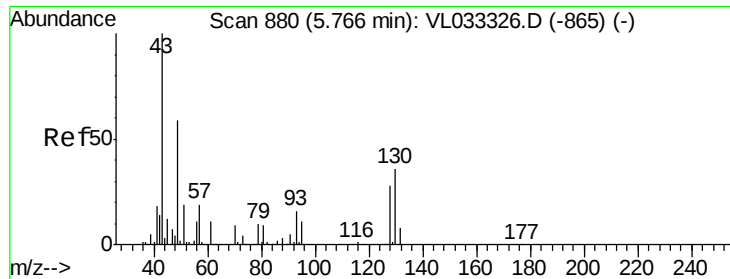
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	863046	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2119601	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.24	117	2059124	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1532668	10.04	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.40%

Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.08	85	13122	0.086 ppbv	96
3) Chlorodifluoromethane	3.01	51	9215	0.093 ppbv #	91
4) Chloromethane	3.17	50	18347	0.342 ppbv	92
9) Propene	3.04	41	6827	0.154 ppbv	87
10) Heptane	8.24	43	89205	0.813 ppbv	99
11) Trichlorofluoromethane	4.00	101	13354	0.088 ppbv	93
13) Ethanol	3.65	45	218452	10.363 ppbv	96
15) Acetone	3.89	43	3139908	23.404 ppbv	99
16) 1,3-Butadiene	3.34	39	10998	0.252 ppbv #	2
19) Isopropyl Alcohol	4.03	45	9429	0.148 ppbv #	95
20) Methylene Chloride	4.41	84	26981	0.617 ppbv #	89
21) Allyl Chloride	4.43	41	15706	0.241 ppbv #	50
23) Vinyl Acetate	5.13	43	72940	0.470 ppbv #	1
25) Ethyl Acetate	5.78	43	97392	0.499 ppbv #	81
26) Hexane	5.78	57	131149	1.504 ppbv #	41
30) Cyclohexane	7.24	84	23333	0.334 ppbv	90
34) 2-Butanone	5.33	43	114308	0.821 ppbv	97
36) Benzene	7.00	78	64630	0.341 ppbv #	95
39) 1,2-Dichloropropane	7.29	63	533001	7.503 ppbv #	24
44) 2,2,4-Trimethylpentane	7.99	57	135508	0.431 ppbv #	78
52) Tetrachloroethene	11.37	164	2897774	36.668 ppbv	98
53) Toluene	9.94	91	2148780	9.969 ppbv	100
58) Ethyl Benzene	12.86	91	93436	0.321 ppbv	90
59) m/p-Xylene	13.12	91	300991	1.202 ppbv #	100
60) o-Xylene	13.84	91	109385	0.448 ppbv	96
64) n-propylbenzene	15.72	120	7956	0.093 ppbv #	57
72) 4-Ethyltoluene	15.99	105	34923	0.126 ppbv #	70
73) 1,3,5-Trimethylbenzene	16.15	105	23123	0.086 ppbv	99
74) 1,2,4-Trimethylbenzene	16.92	105	167156	0.584 ppbv #	71
79) Naphthalene	22.42	128	13117	0.048 ppbv	99

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

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MSVOA_L

ClientSampleId :

IA1DL

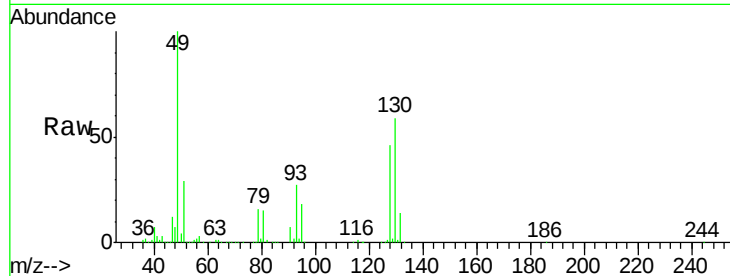
Tgt Ion: 49 Resp: 863046

Ion Ratio Lower Upper

49 100

128 48.1 23.5 70.6

130 61.9 30.1 90.3



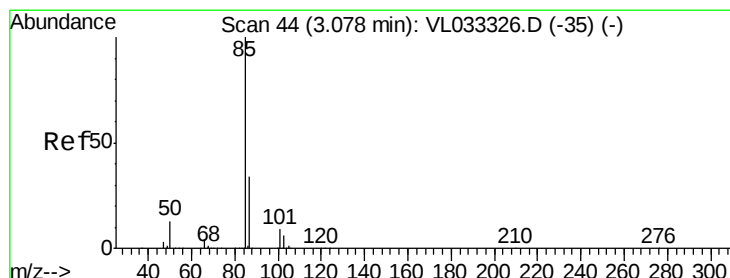
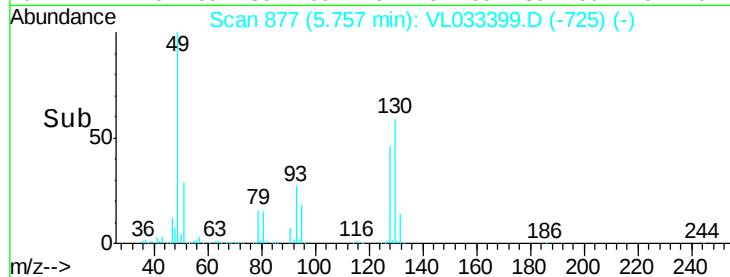
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

5.76

Time-->



#2

Dichlorodifluoromethane

Concen: 0.086 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL033399.D

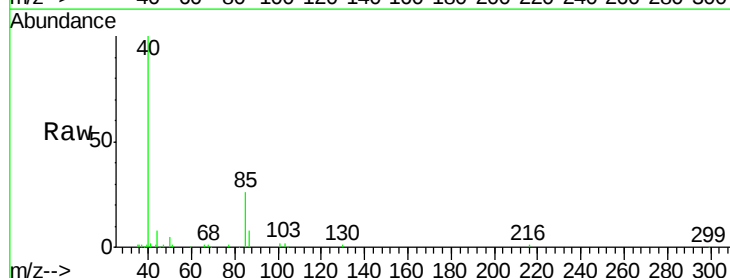
Acq: 20 Mar 2019 21:06

Tgt Ion: 85 Resp: 13122

Ion Ratio Lower Upper

85 100

87 31.1 26.9 40.3

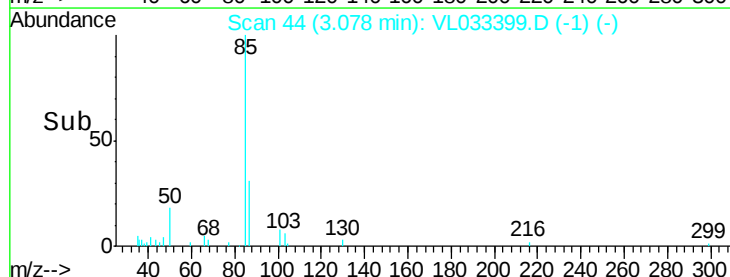


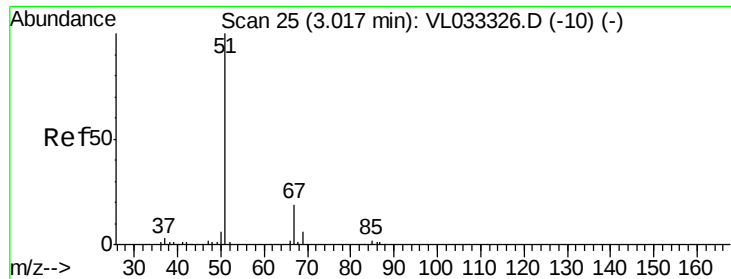
Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.08

Time-->

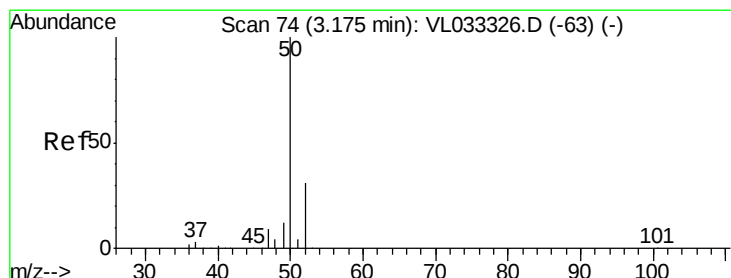
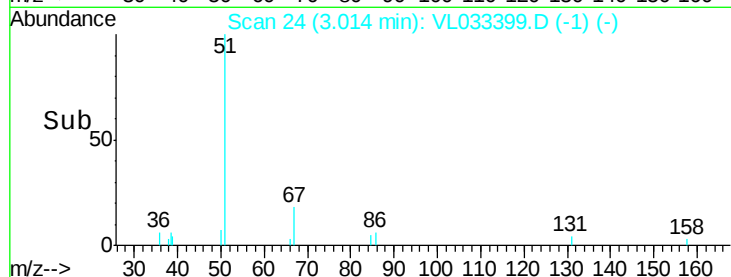
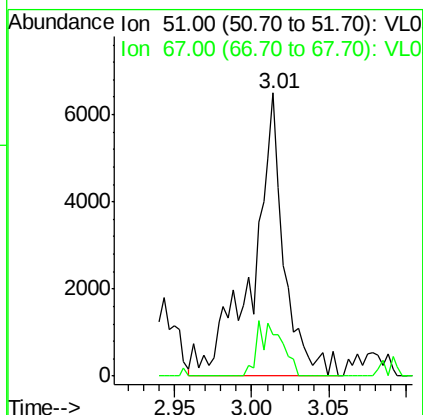
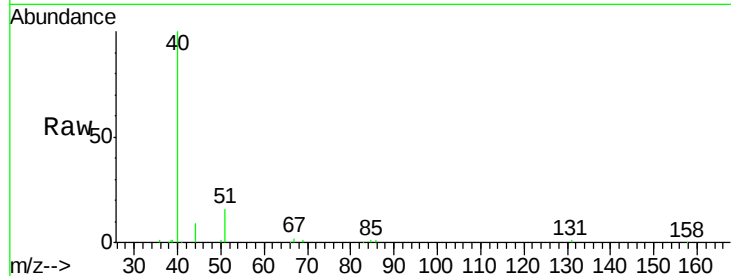




#3
Chlorodifluoromethane
Concen: 0.093 ppbv
RT: 3.01 min Scan# 24
Delta R.T. -0.00 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

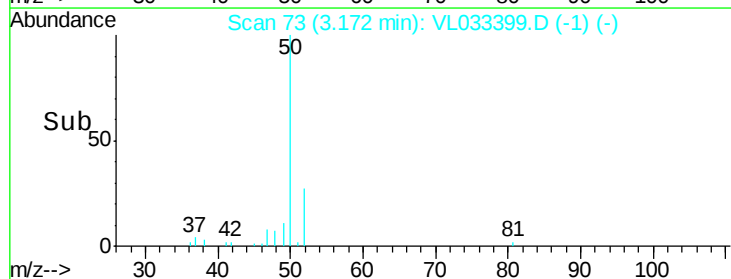
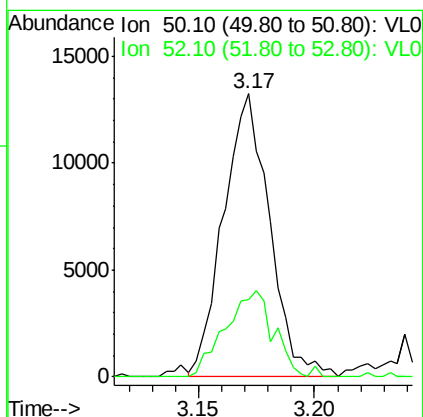
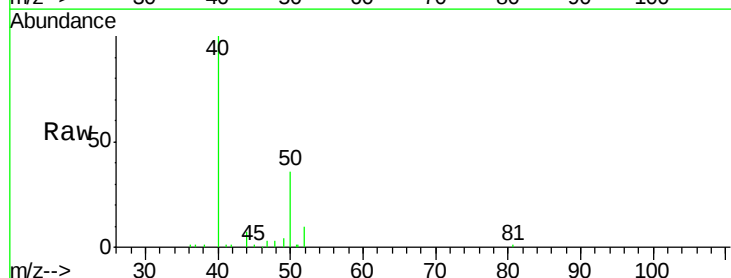
Instrument :
MSVOA_L
ClientSampled :
IA1DL

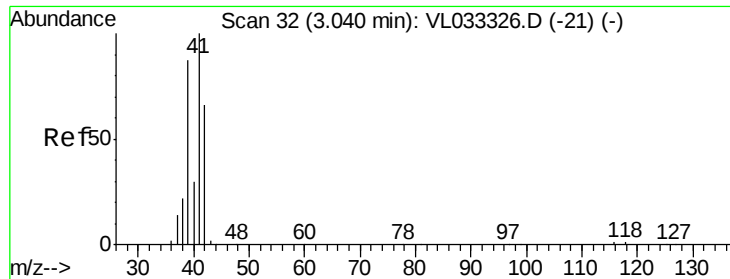
Tgt Ion: 51 Resp: 9215
Ion Ratio Lower Upper
51 100
67 14.7 14.9 22.3#



#4
Chloromethane
Concen: 0.342 ppbv
RT: 3.17 min Scan# 73
Delta R.T. -0.00 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

Tgt Ion: 50 Resp: 18347
Ion Ratio Lower Upper
50 100
52 26.8 25.0 37.6





#9

Propene

Concen: 0.154 ppbv

RT: 3.04 min Scan# 33

Delta R.T. 0.00 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Instrument :

MSVOA_L

ClientSampleId :

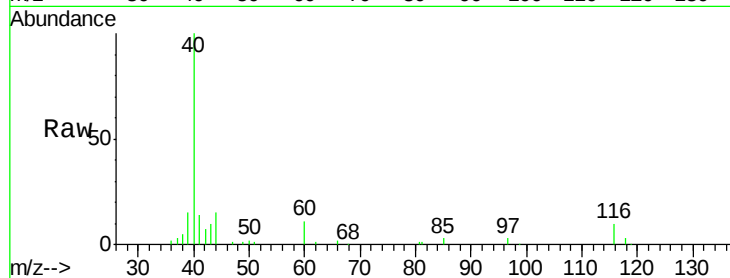
IA1DL

Tgt Ion: 41 Resp: 6827

Ion Ratio Lower Upper

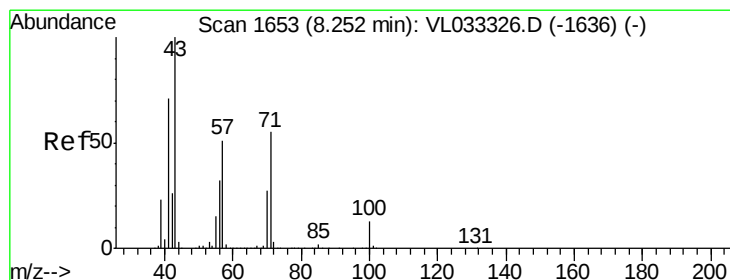
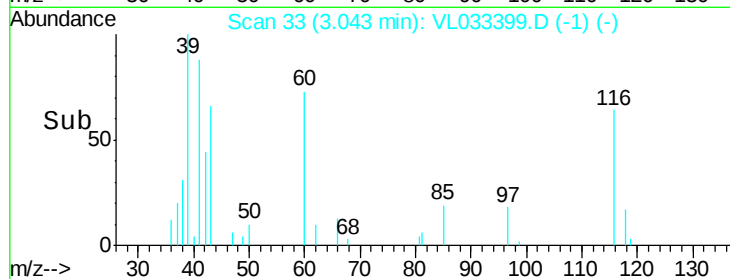
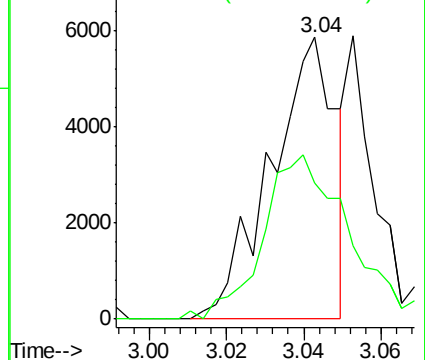
41 100

42 79.8 55.2 82.8



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.813 ppbv

RT: 8.24 min Scan# 1649

Delta R.T. -0.01 min

Lab File: VL033399.D

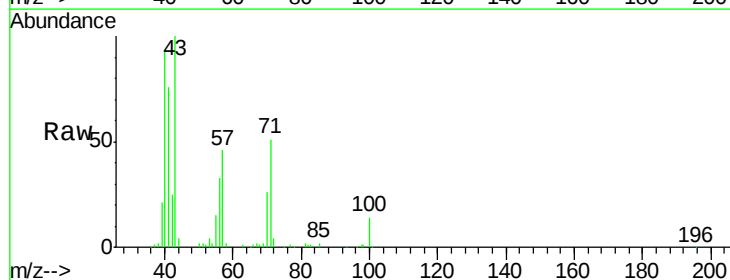
Acq: 20 Mar 2019 21:06

Tgt Ion: 43 Resp: 89205

Ion Ratio Lower Upper

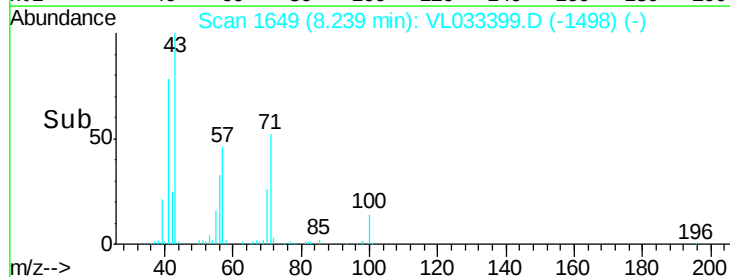
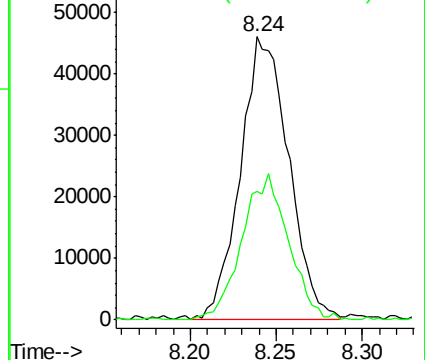
43 100

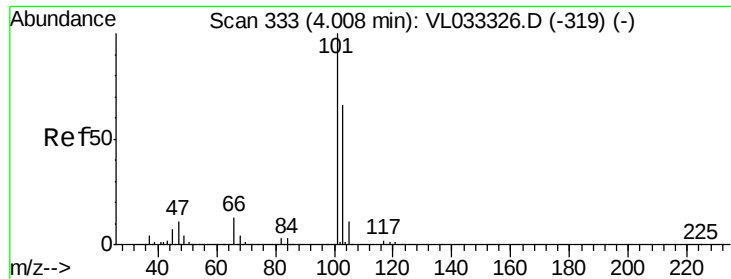
57 50.1 40.4 60.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

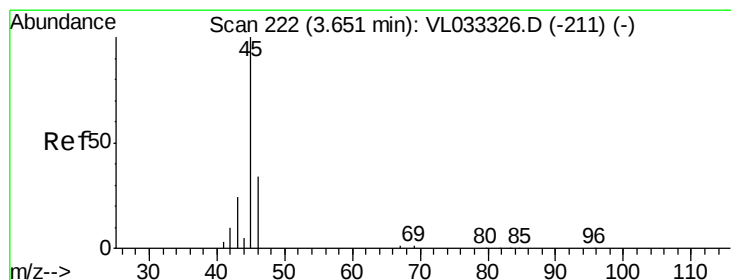
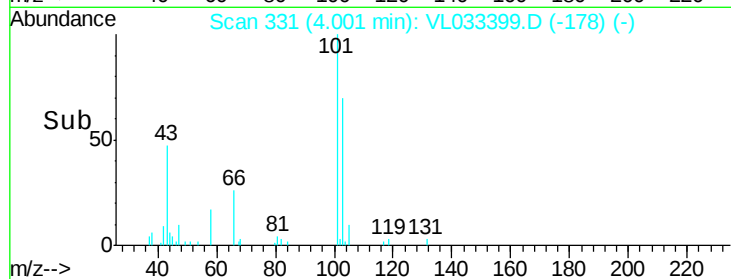
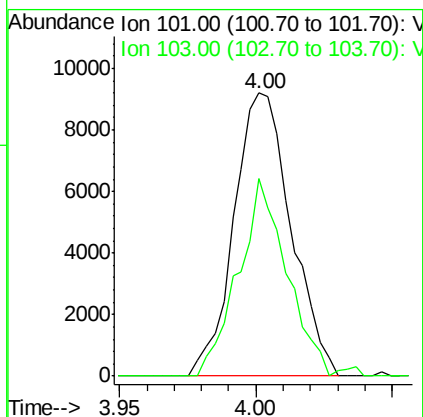
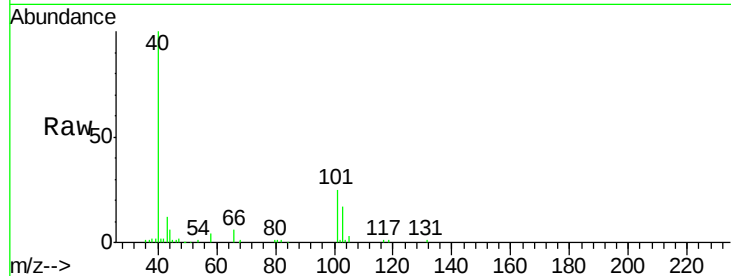




#11
 Trichlorofluoromethane
 Concen: 0.088 ppbv
 RT: 4.00 min Scan# 331
 Delta R.T. -0.01 min
 Lab File: VL033399.D
 Acq: 20 Mar 2019 21:06

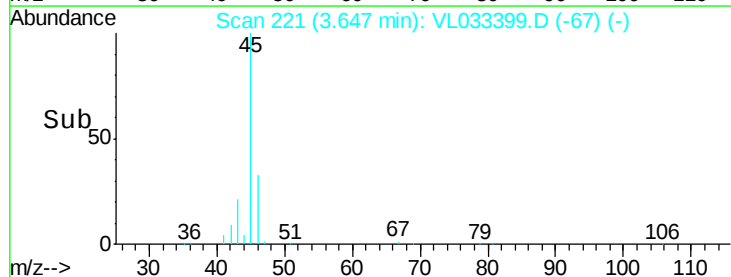
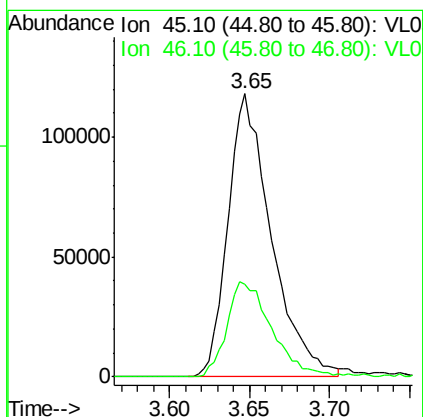
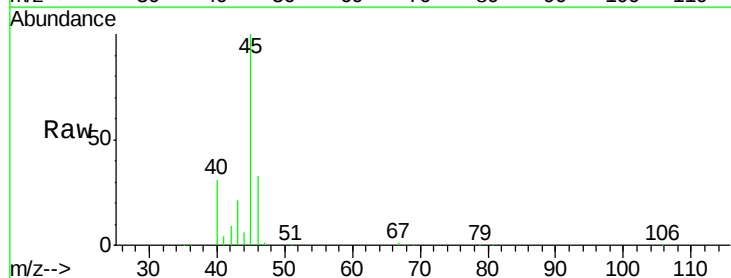
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

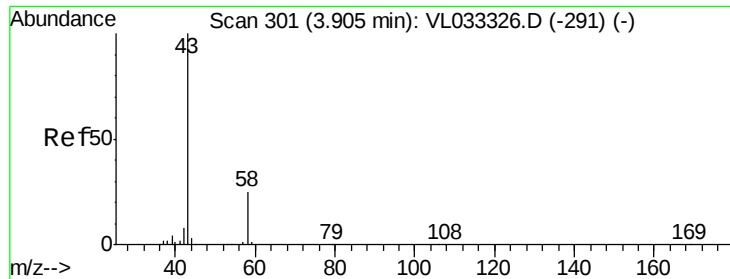
Tgt Ion: 101 Resp: 13354
 Ion Ratio Lower Upper
 101 100
 103 71.9 52.9 79.3



#13
 Ethanol
 Concen: 10.363 ppbv
 RT: 3.65 min Scan# 221
 Delta R.T. -0.00 min
 Lab File: VL033399.D
 Acq: 20 Mar 2019 21:06

Tgt Ion: 45 Resp: 218452
 Ion Ratio Lower Upper
 45 100
 46 35.1 14.9 59.7





#15

Acetone

Concen: 23.404 ppbv

RT: 3.89 min Scan# 297

Delta R.T. -0.01 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Instrument :

MSVOA_L

ClientSampleId :

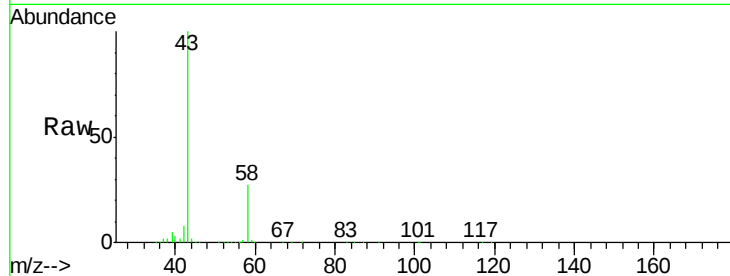
IA1DL

Tgt Ion: 43 Resp: 3139908

Ion Ratio Lower Upper

43 100

58 25.0 20.4 30.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.89

2000000

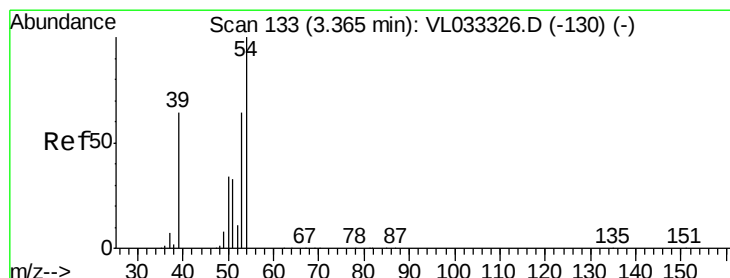
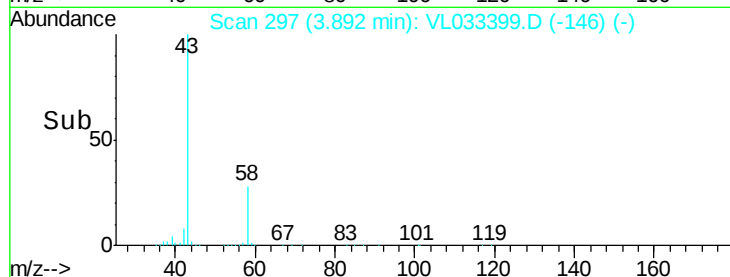
1500000

1000000

500000

0

Time--> 3.80 3.85 3.90 3.95 4.00



#16

1,3-Butadiene

Concen: 0.252 ppbv

RT: 3.34 min Scan# 126

Delta R.T. -0.02 min

Lab File: VL033399.D

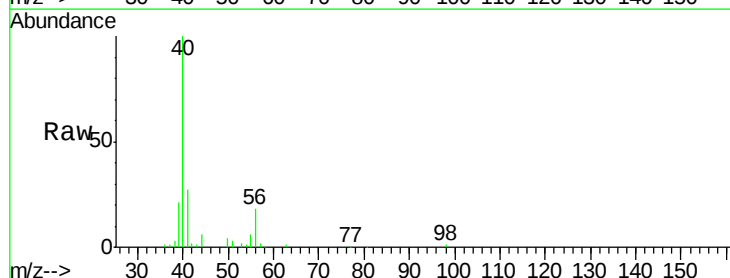
Acq: 20 Mar 2019 21:06

Tgt Ion: 39 Resp: 10998

Ion Ratio Lower Upper

39 100

54 0.0 76.8 115.2#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

3.34

50000

40000

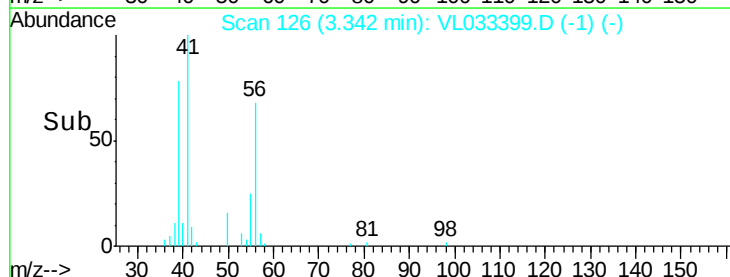
30000

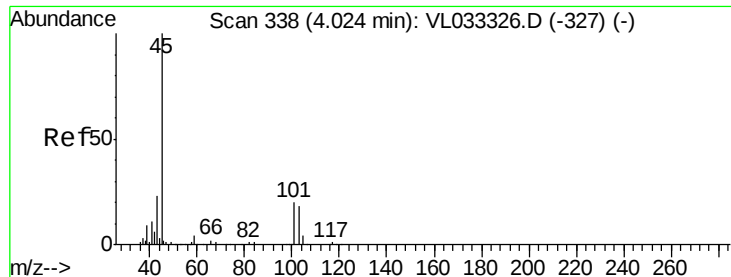
20000

10000

0

Time--> 3.30 3.32 3.34 3.36 3.38





#19

Isopropyl Alcohol

Concen: 0.148 ppbv

RT: 4.03 min Scan# 341

Delta R.T. 0.01 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Instrument :

MSVOA_L

ClientSampleId :

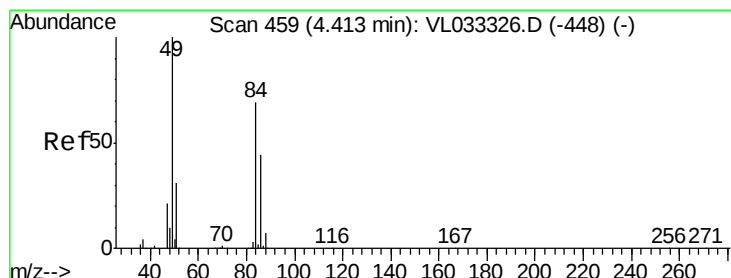
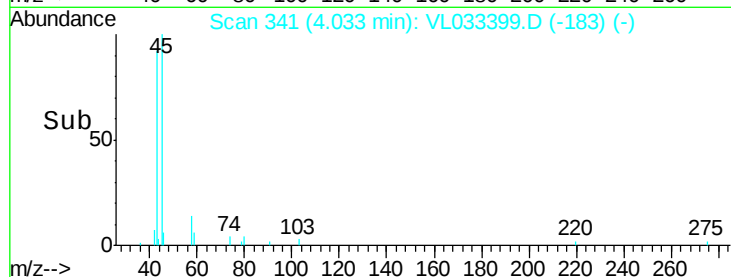
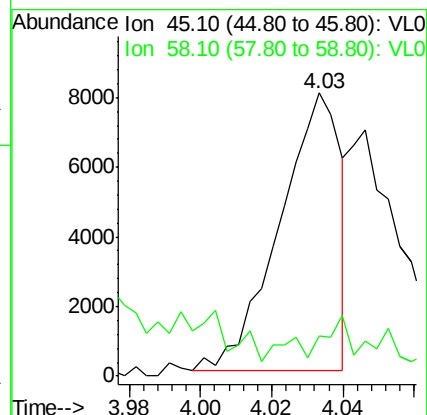
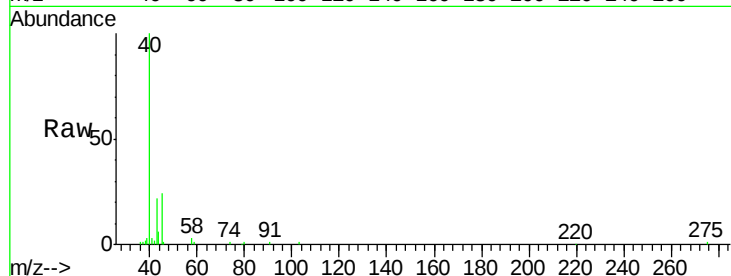
IA1DL

Tgt Ion: 45 Resp: 9429

Ion Ratio Lower Upper

45 100

58 0.0 1.5 2.3#



#20

Methylene Chloride

Concen: 0.617 ppbv

RT: 4.41 min Scan# 457

Delta R.T. -0.01 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Tgt Ion: 84 Resp: 26981

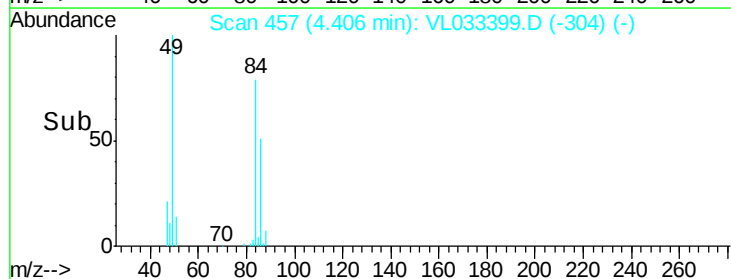
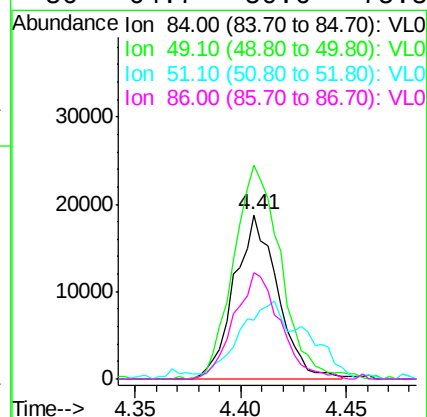
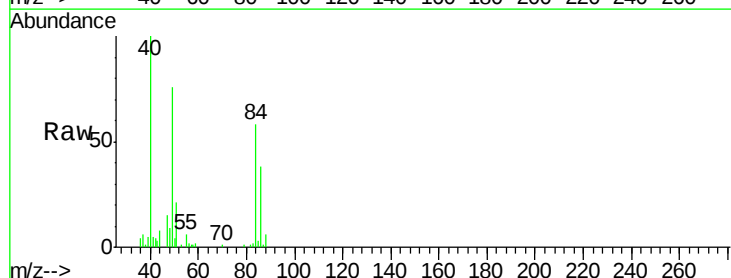
Ion Ratio Lower Upper

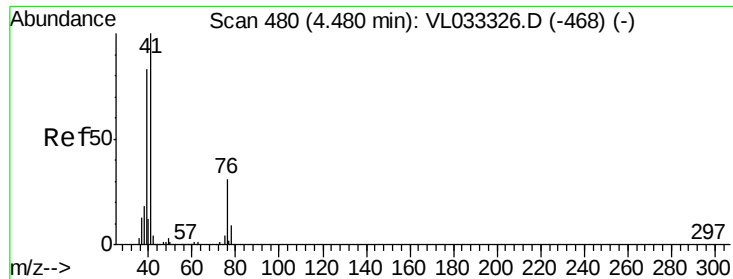
84 100

49 129.1 115.4 173.0

51 32.9 35.8 53.6#

86 64.7 50.6 75.8





#21

Allyl Chloride

Concen: 0.241 ppbv

RT: 4.43 min Scan# 464

Delta R.T. -0.05 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

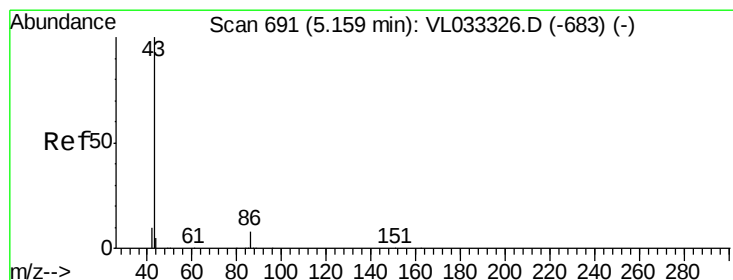
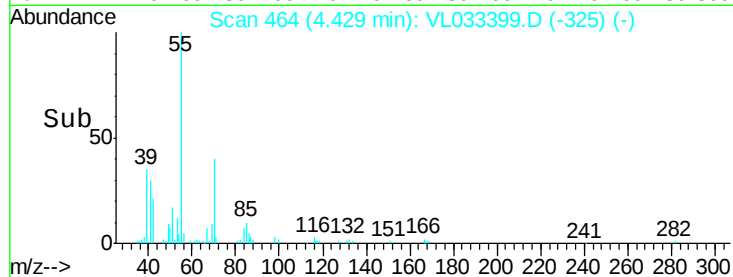
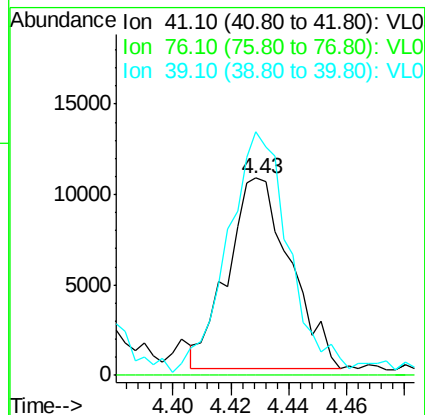
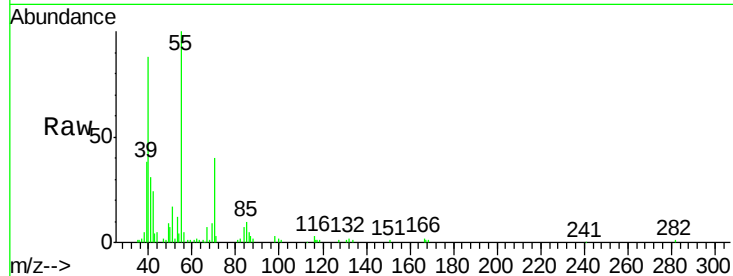
Tgt Ion: 41 Resp: 15706

Ion Ratio Lower Upper

41 100

76 0.0 25.0 37.4#

39 125.1 65.9 98.9#



#23

Vinyl Acetate

Concen: 0.470 ppbv

RT: 5.13 min Scan# 683

Delta R.T. -0.03 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Tgt Ion: 43 Resp: 72940

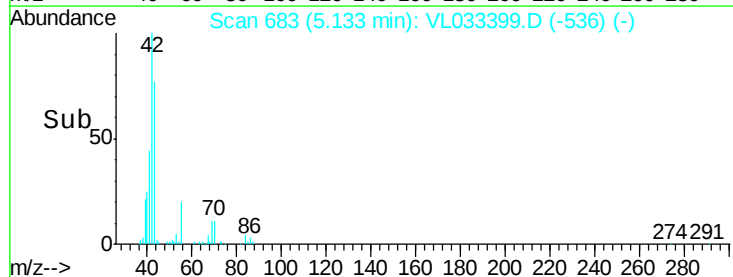
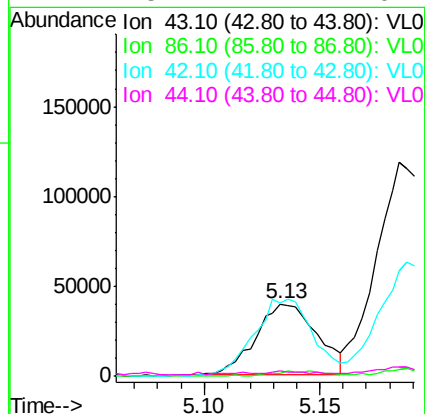
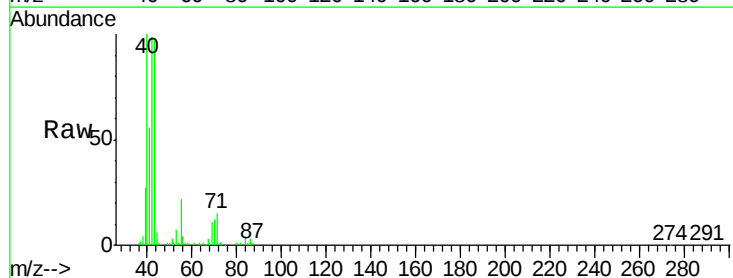
Ion Ratio Lower Upper

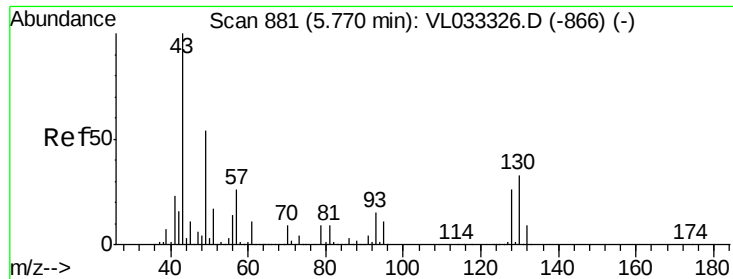
43 100

86 3.3 6.2 9.2#

42 102.7 8.1 12.1#

44 3.7 4.1 6.1#

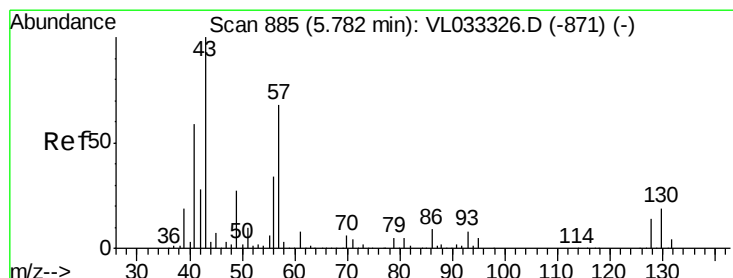
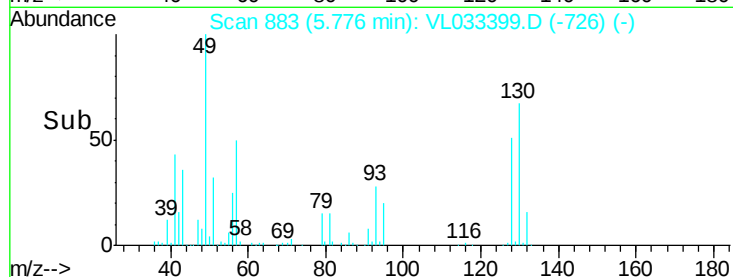
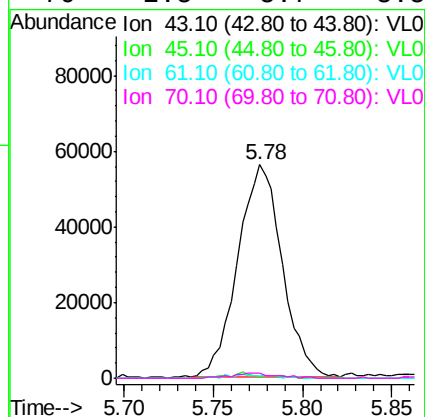
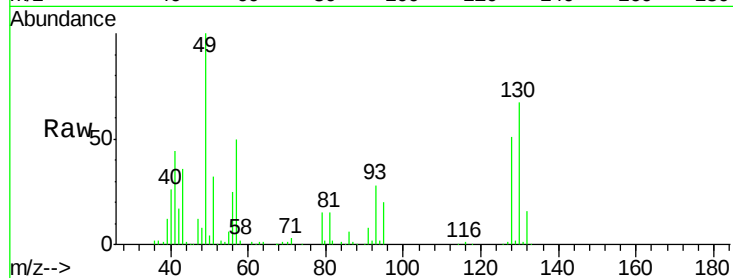




#25
Ethyl Acetate
Concen: 0.499 ppbv
RT: 5.78 min Scan# 883
Delta R.T. 0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

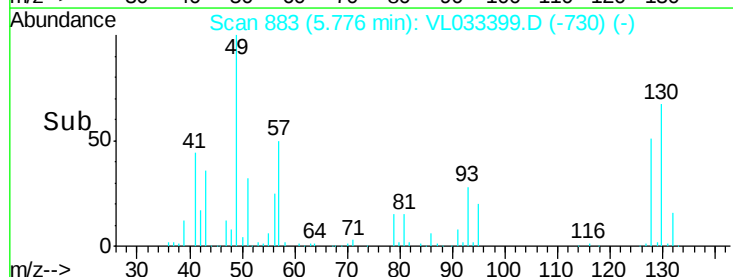
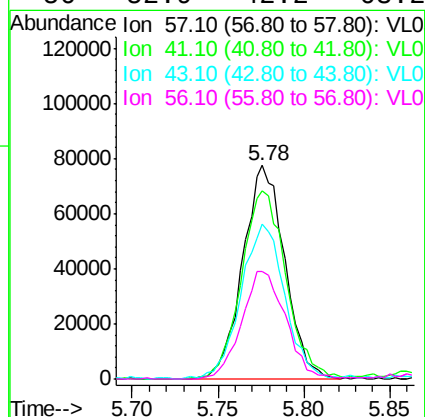
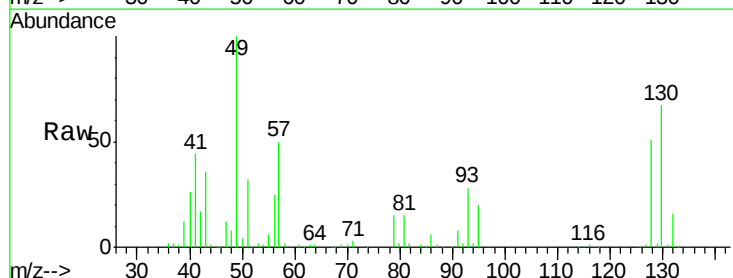
Instrument :
MSVOA_L
ClientSampled :
IA1DL

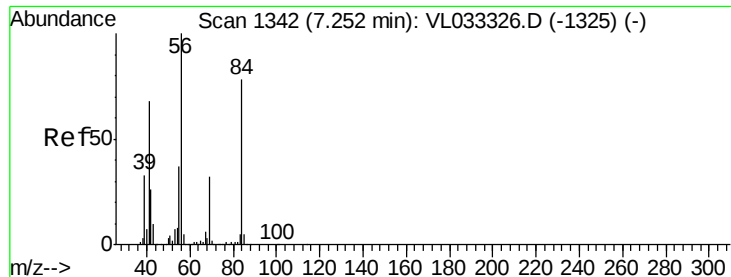
Tgt Ion:	43	Resp:	97392
Ion	Ratio	Lower	Upper
43	100		
45	2.2	7.9	11.9#
61	1.7	7.4	11.2#
70	2.5	5.7	8.5#



#26
Hexane
Concen: 1.504 ppbv
RT: 5.78 min Scan# 883
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

Tgt Ion:	57	Resp:	131149
Ion	Ratio	Lower	Upper
57	100		
41	93.9	70.5	105.7
43	75.5	181.8	272.8#
56	52.9	42.2	63.2

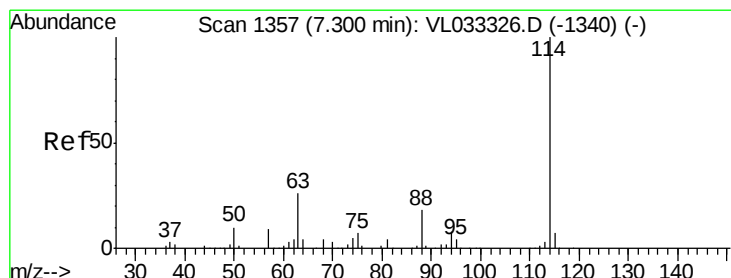
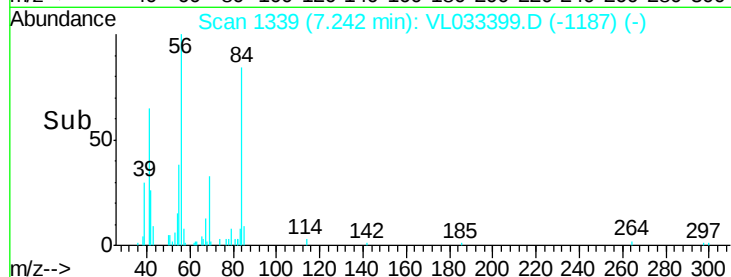
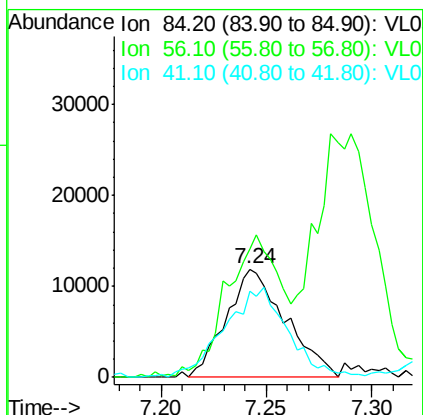
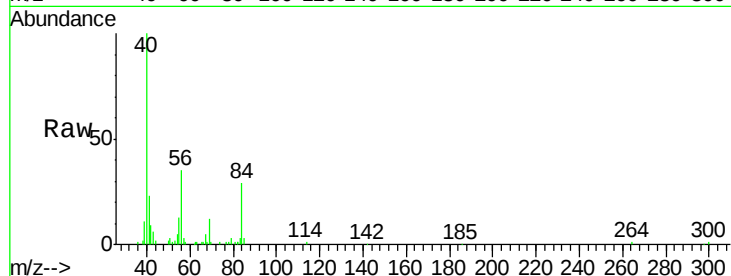




#30
Cyclohexane
Concen: 0.334 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

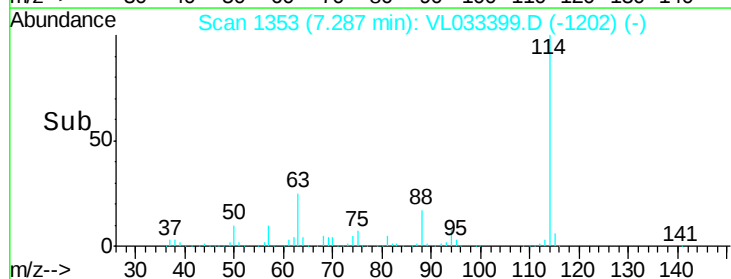
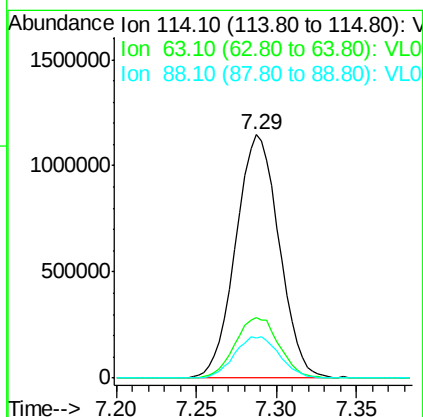
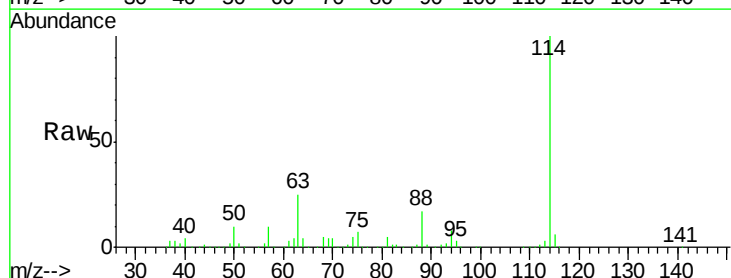
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

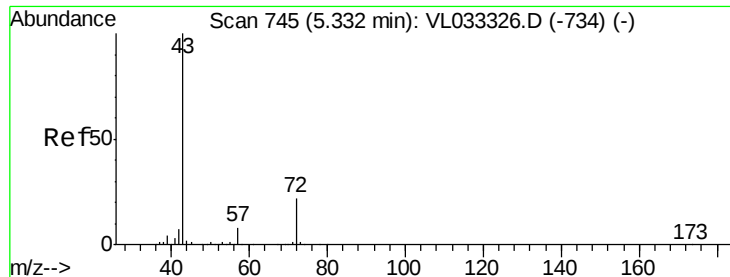
Tgt Ion: 84 Resp: 23333
Ion Ratio Lower Upper
84 100
56 120.5 111.3 166.9
41 88.5 69.6 104.4



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1353
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

Tgt Ion: 114 Resp: 2119601
Ion Ratio Lower Upper
114 100
63 25.3 21.4 32.2
88 17.8 14.5 21.7





#34

2-Butanone

Concen: 0.821 ppbv

RT: 5.33 min Scan# 744

Delta R.T. -0.00 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Instrument :

MSVOA_L

ClientSampleId :

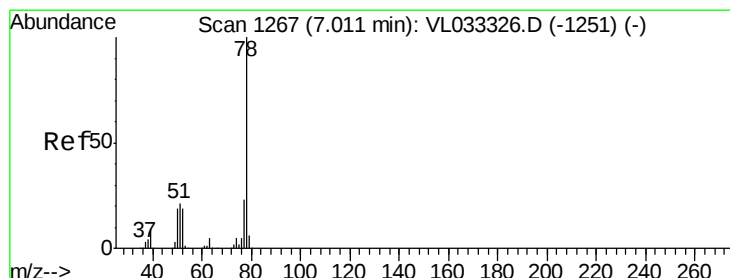
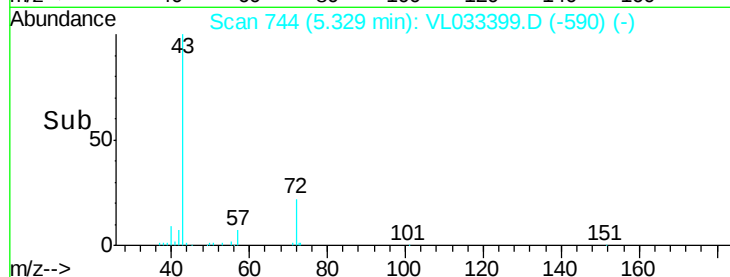
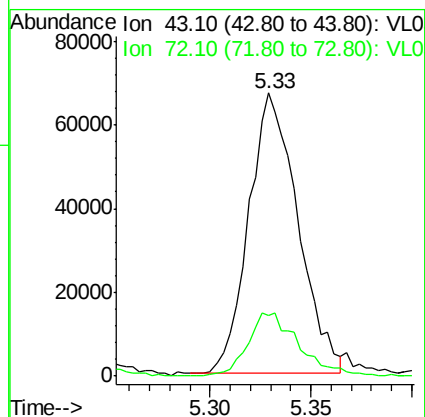
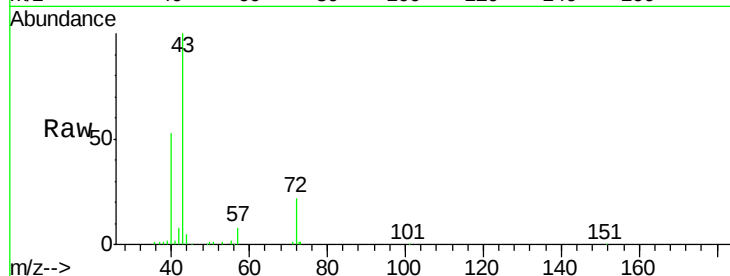
IA1DL

Tgt Ion: 43 Resp: 114308

Ion Ratio Lower Upper

43 100

72 23.5 17.7 26.5



#36

Benzene

Concen: 0.341 ppbv

RT: 7.00 min Scan# 1265

Delta R.T. -0.01 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

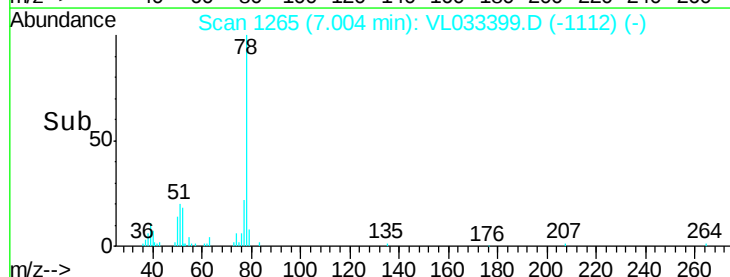
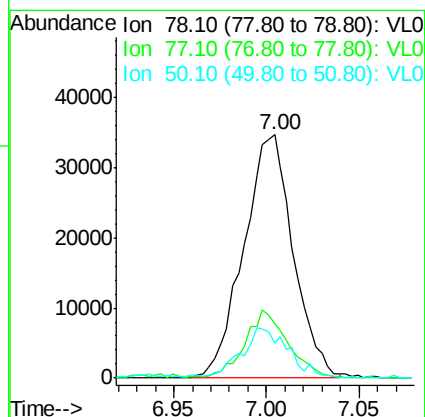
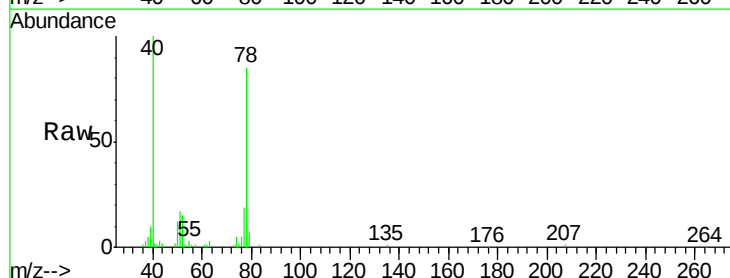
Tgt Ion: 78 Resp: 64630

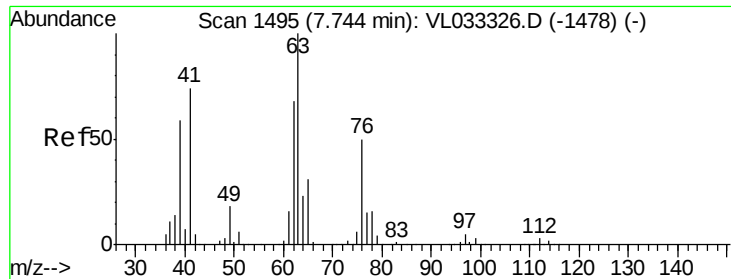
Ion Ratio Lower Upper

78 100

77 22.0 18.1 27.1

50 14.5 15.2 22.8#

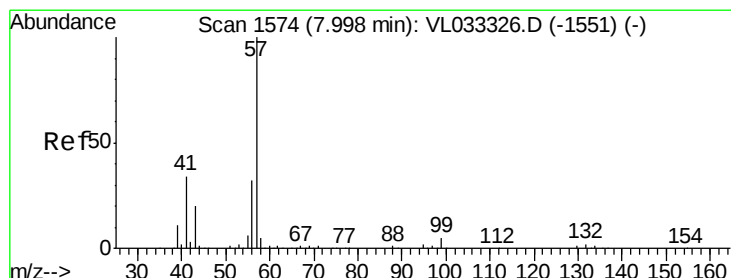
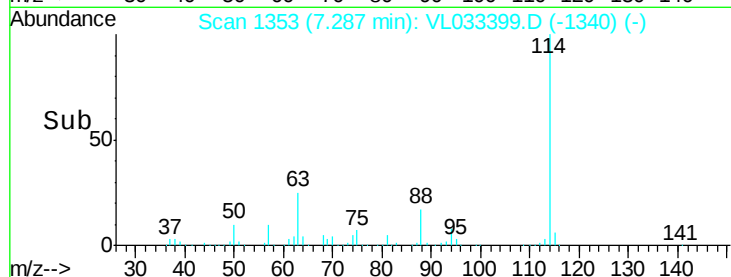
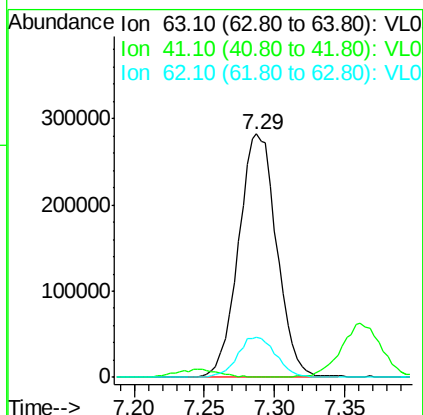
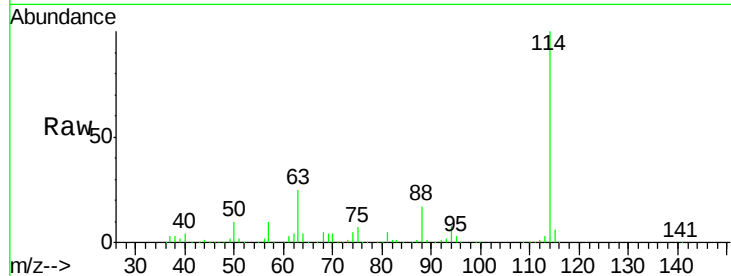




#39
 1,2-Dichloropropane
 Concen: 7.503 ppbv
 RT: 7.29 min Scan# 1353
 Delta R.T. -0.46 min
 Lab File: VL033399.D
 Acq: 20 Mar 2019 21:06

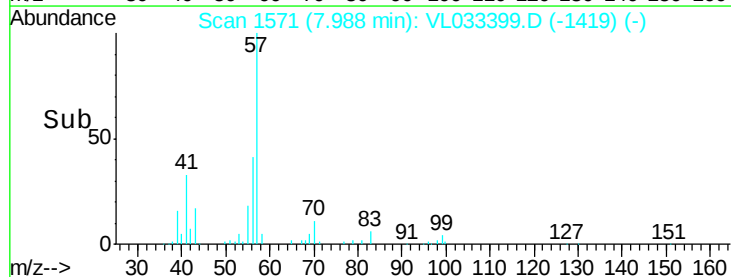
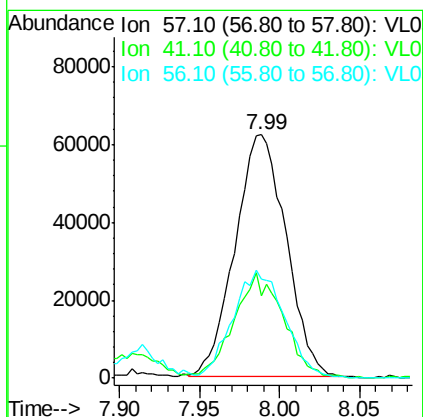
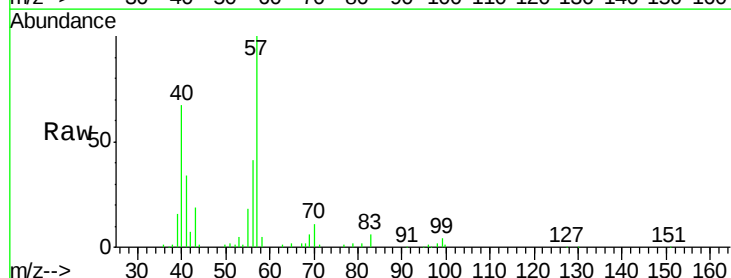
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

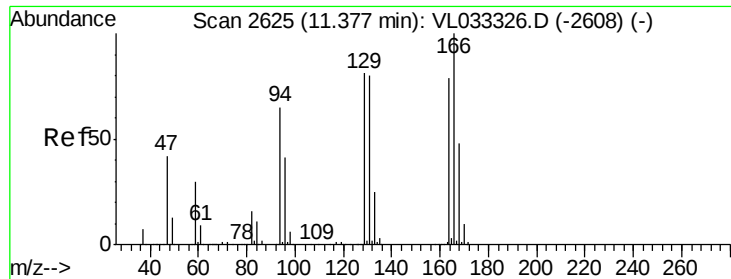
Tgt Ion: 63 Resp: 533001
 Ion Ratio Lower Upper
 63 100
 41 0.0 59.5 89.3#
 62 16.4 54.7 82.1#



#44
 2,2,4-Trimethylpentane
 Concen: 0.431 ppbv
 RT: 7.99 min Scan# 1571
 Delta R.T. -0.01 min
 Lab File: VL033399.D
 Acq: 20 Mar 2019 21:06

Tgt Ion: 57 Resp: 135508
 Ion Ratio Lower Upper
 57 100
 41 42.0 26.0 39.0#
 56 45.4 24.6 36.8#





#52

Tetrachloroethene

Concen: 36.668 ppbv

RT: 11.37 min Scan# 2624

Delta R.T. -0.00 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

Tgt Ion:164 Resp: 2897774

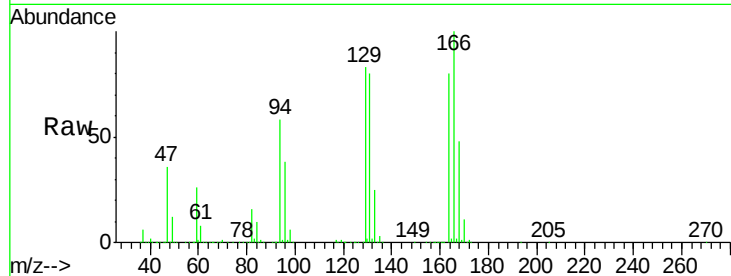
Ion Ratio Lower Upper

164 100

166 124.5 101.5 152.3

129 103.5 82.2 123.2

131 99.8 81.1 121.7

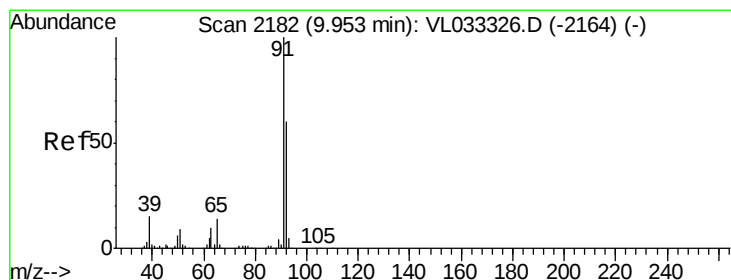
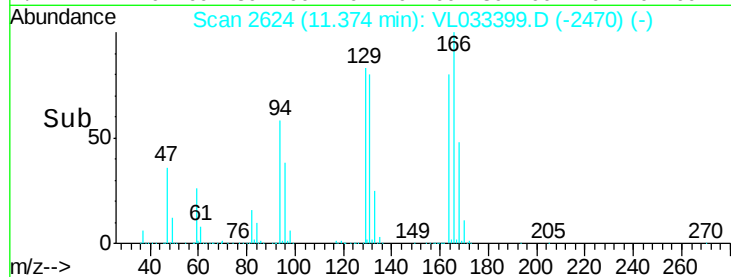
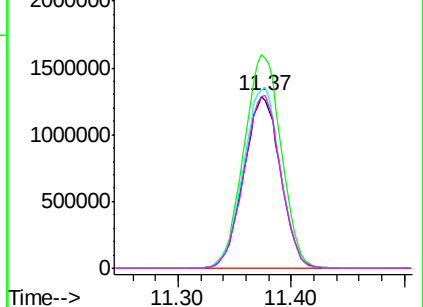


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 9.969 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.01 min

Lab File: VL033399.D

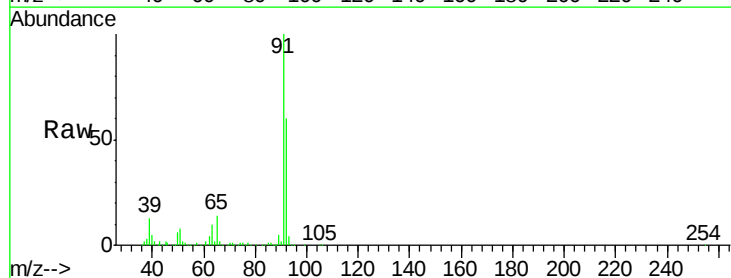
Acq: 20 Mar 2019 21:06

Tgt Ion: 91 Resp: 2148780

Ion Ratio Lower Upper

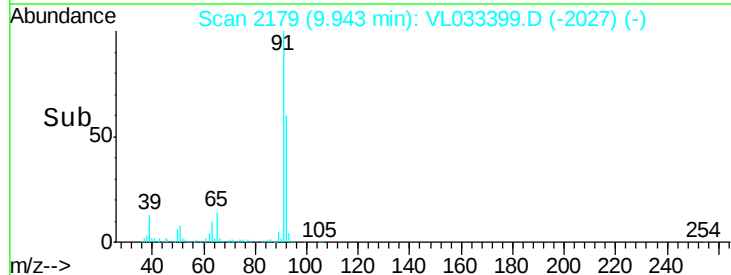
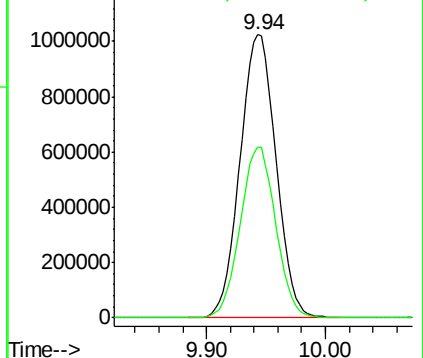
91 100

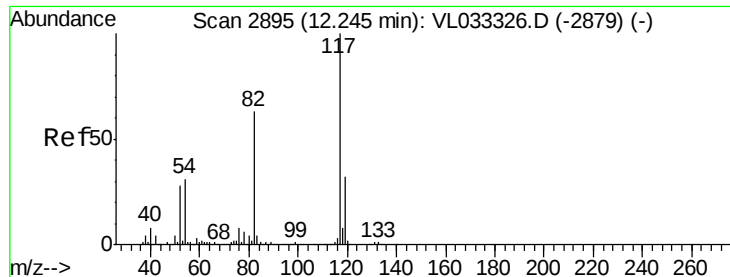
92 59.5 47.4 71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

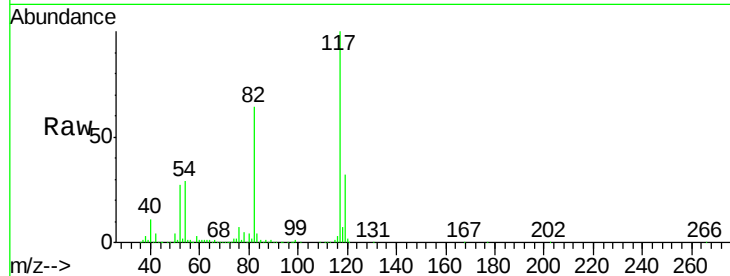




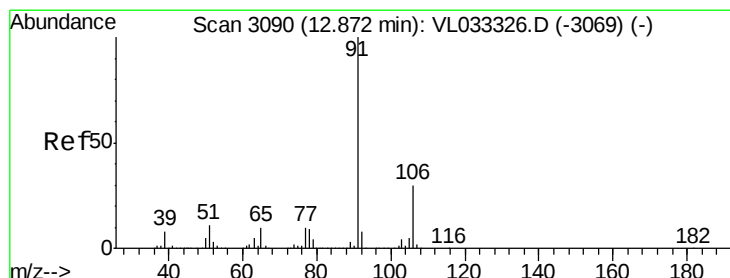
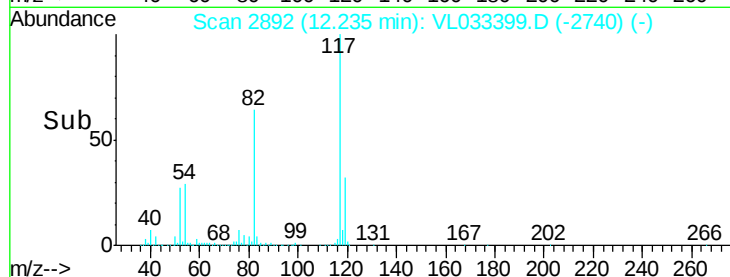
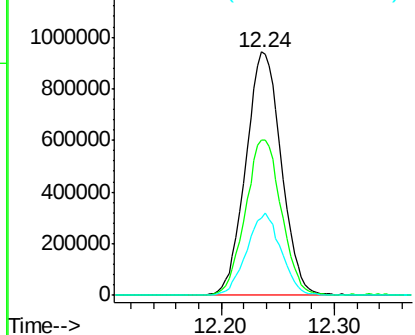
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2892
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

Instrument :
MSVOA_L
ClientSampleId :
IA1DL

Tgt Ion: 117 Resp: 2059124
Ion Ratio Lower Upper
117 100
82 64.7 53.4 80.2
119 32.7 27.3 40.9

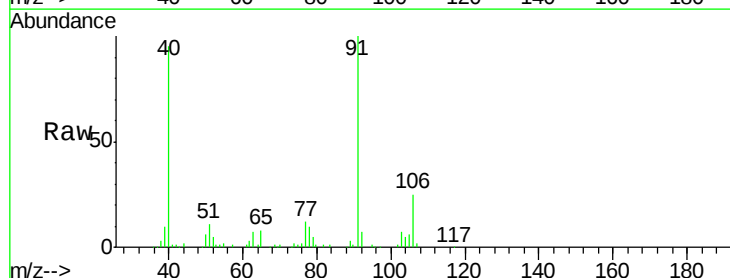


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

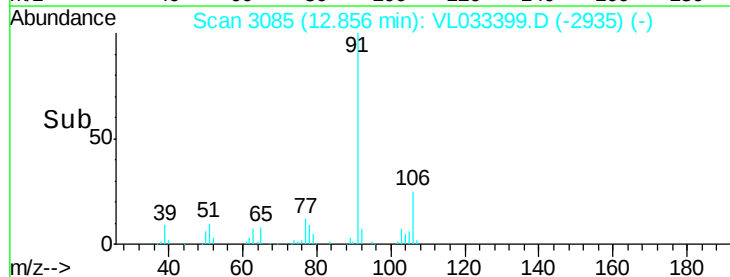
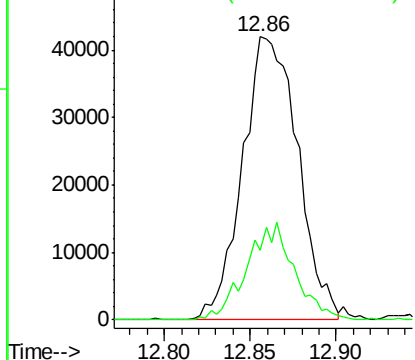


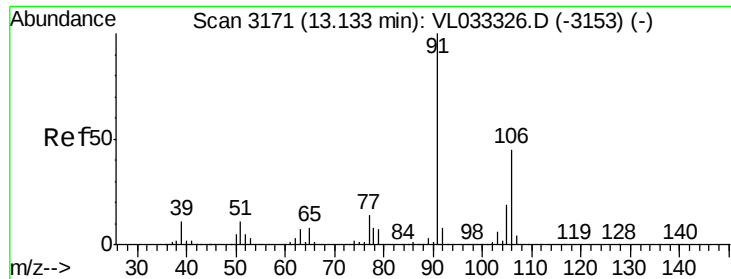
#58
Ethyl Benzene
Concen: 0.321 ppbv
RT: 12.86 min Scan# 3085
Delta R.T. -0.02 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

Tgt Ion: 91 Resp: 93436
Ion Ratio Lower Upper
91 100
106 24.7 24.2 36.2



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V

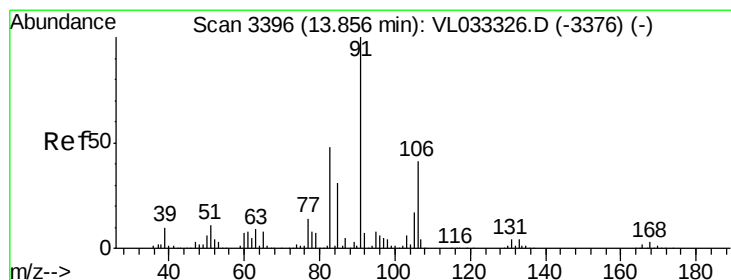
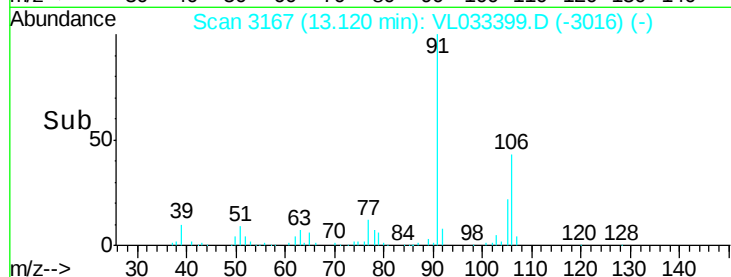
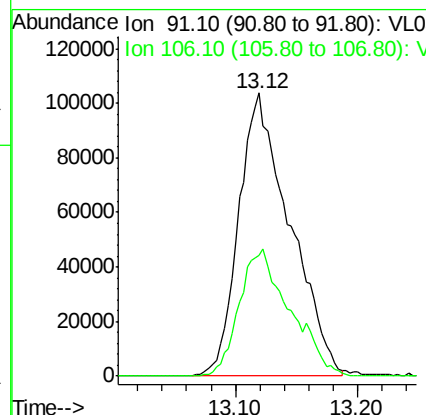
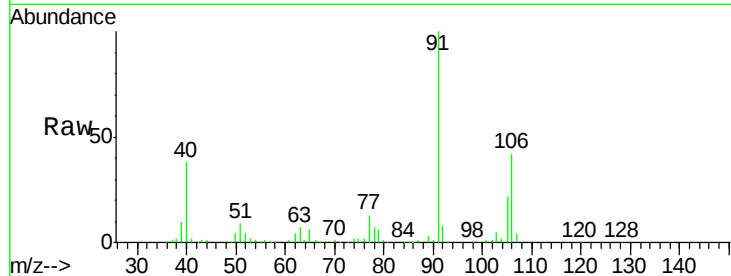




#59
m/p-Xylene
Concen: 1.202 ppbv
RT: 13.12 min Scan# 3167
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

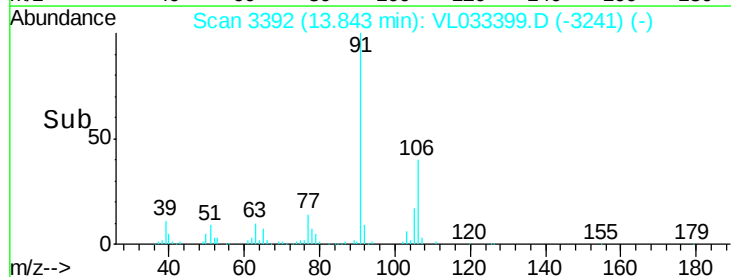
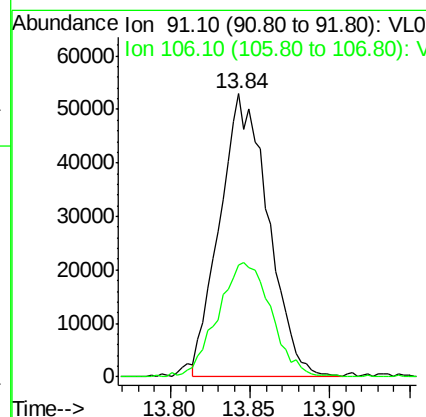
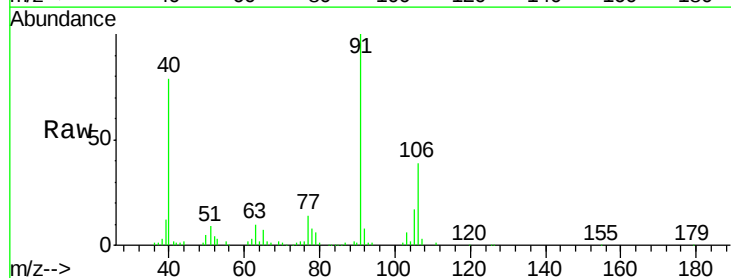
Instrument :
MSVOA_L
ClientSampled :
IA1DL

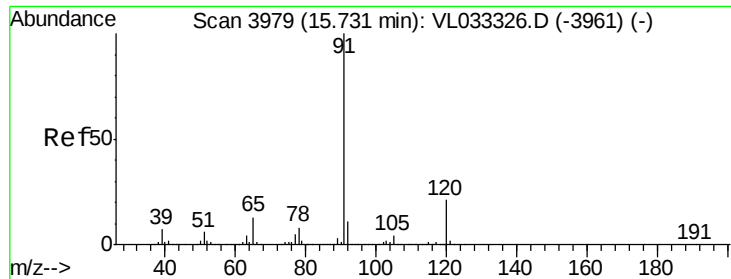
Tgt Ion: 91 Resp: 300991
Ion Ratio Lower Upper
91 100
106 44.5 0.0 0.0#



#60
o-Xylene
Concen: 0.448 ppbv
RT: 13.84 min Scan# 3392
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

Tgt Ion: 91 Resp: 109385
Ion Ratio Lower Upper
91 100
106 44.8 21.3 63.9

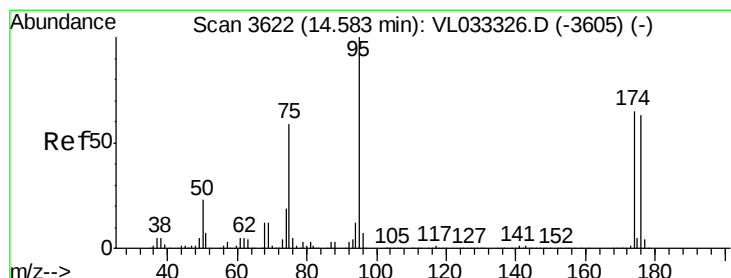
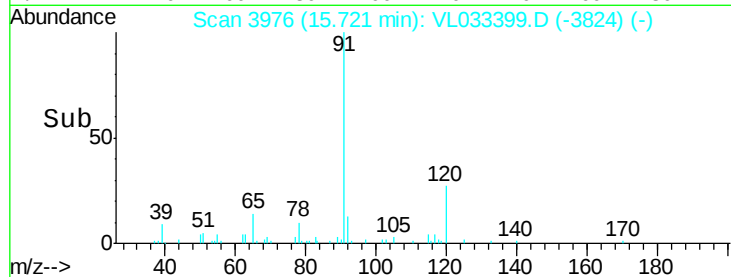
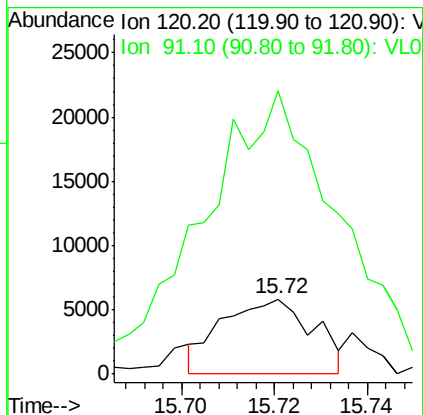
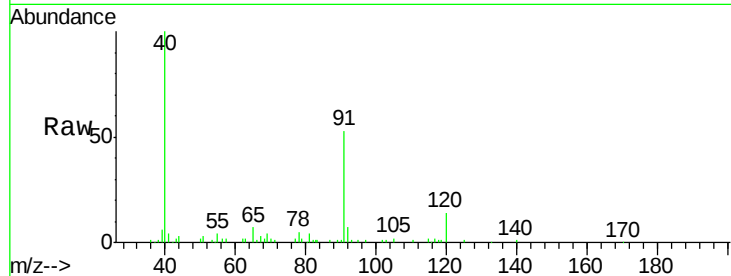




#64
n-propylbenzene
Concen: 0.093 ppbv
RT: 15.72 min Scan# 3976
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

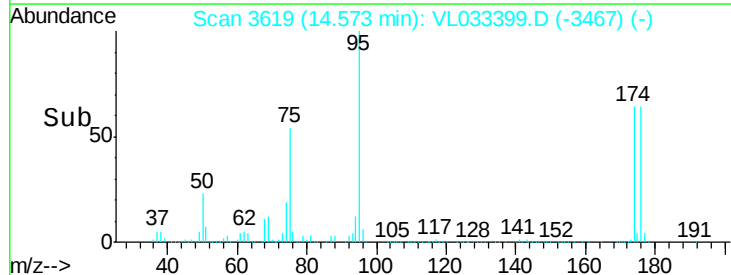
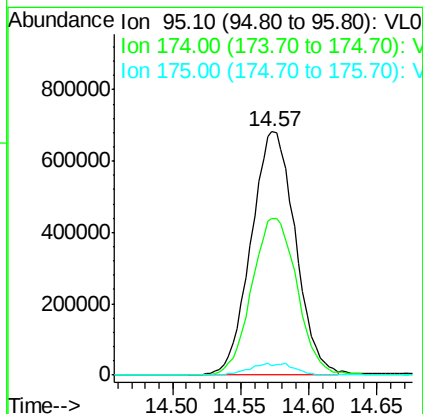
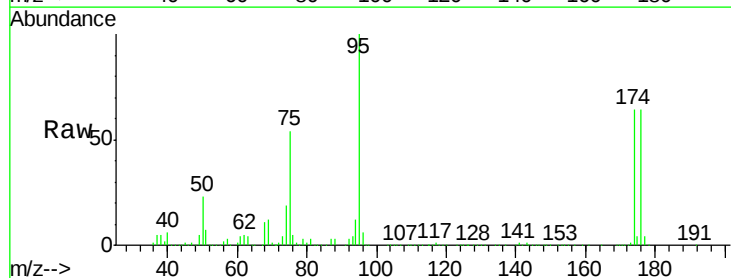
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

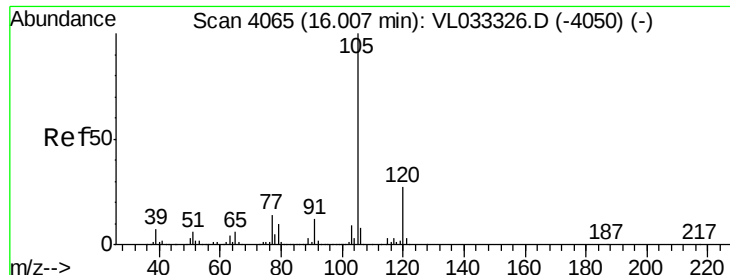
Tgt Ion: 120 Resp: 7956
Ion Ratio Lower Upper
120 100
91 604.1 389.8 584.6#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.045 ppbv
RT: 14.57 min Scan# 3619
Delta R.T. -0.01 min
Lab File: VL033399.D
Acq: 20 Mar 2019 21:06

Tgt Ion: 95 Resp: 1532668
Ion Ratio Lower Upper
95 100
174 66.4 51.5 77.3
175 4.9 3.8 5.6





#72

4-Ethyltoluene

Concen: 0.126 ppbv

RT: 15.99 min Scan# 4061

Delta R.T. -0.01 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

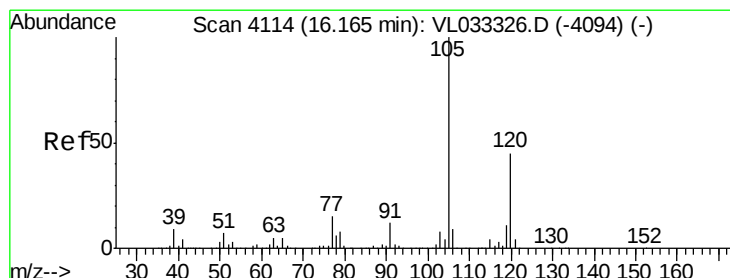
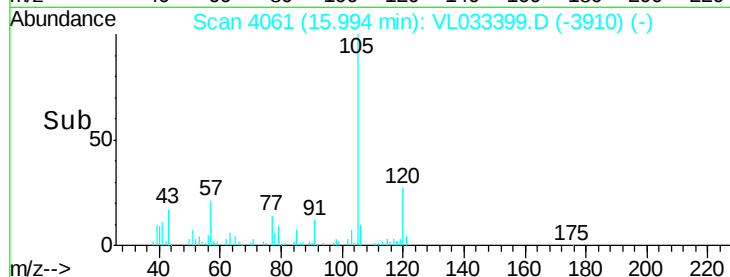
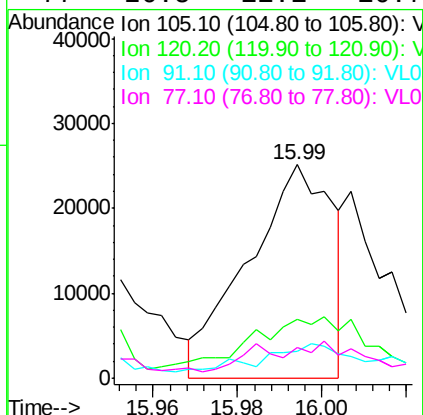
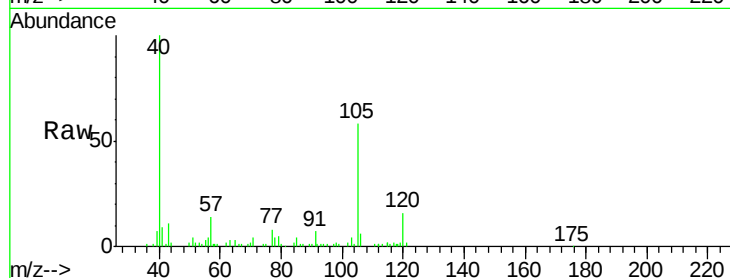
Instrument :

MSVOA_L

ClientSampleId :

IA1DL

Tgt Ion:	105	Resp:	34923
Ion	Ratio	Lower	Upper
105	100		
120	43.9	22.9	34.3#
91	24.7	10.2	15.2#
77	26.5	11.1	16.7#



#73

1,3,5-Trimethylbenzene

Concen: 0.086 ppbv

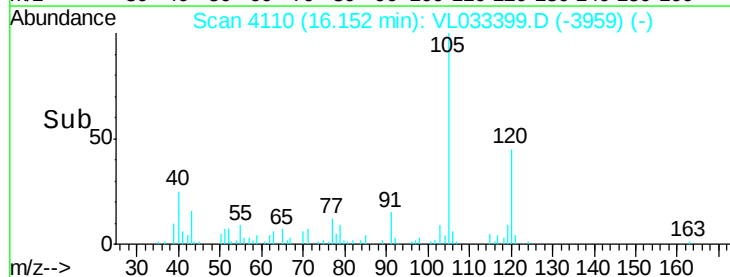
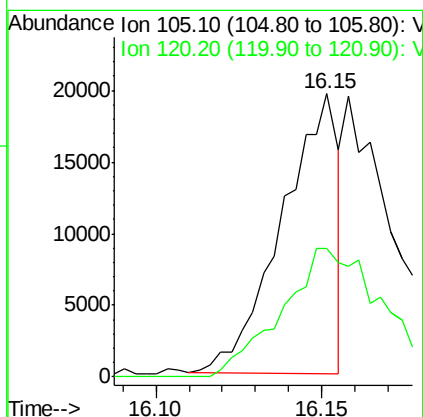
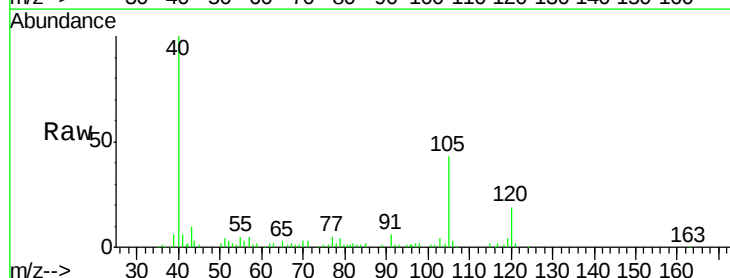
RT: 16.15 min Scan# 4110

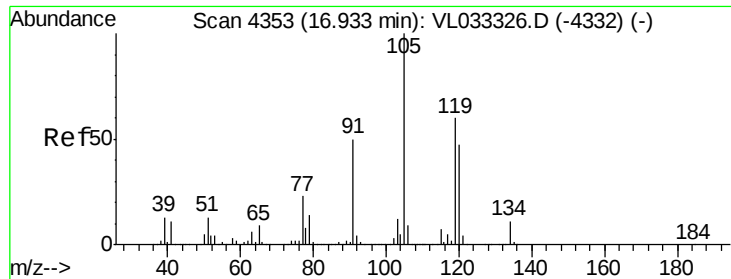
Delta R.T. -0.01 min

Lab File: VL033399.D

Acq: 20 Mar 2019 21:06

Tgt Ion:	105	Resp:	23123
Ion	Ratio	Lower	Upper
105	100		
120	45.9	36.2	54.4

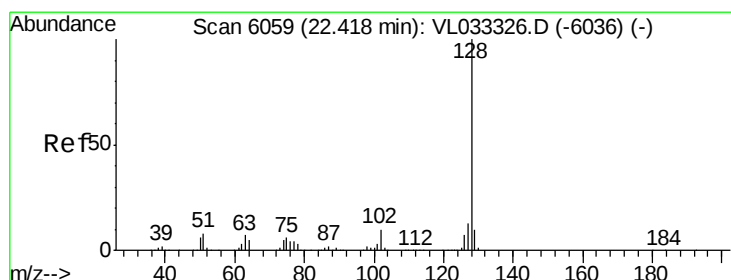
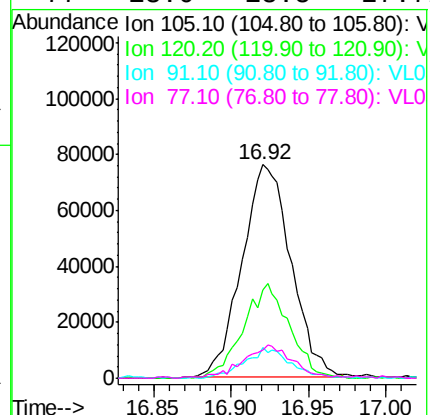
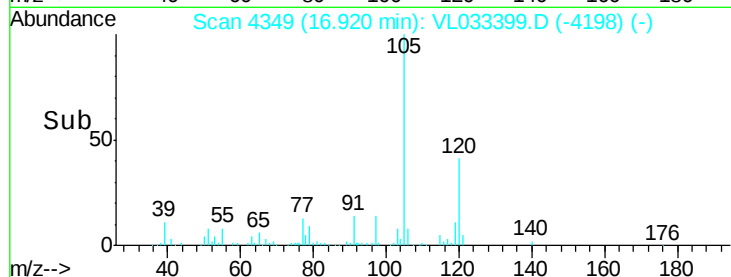
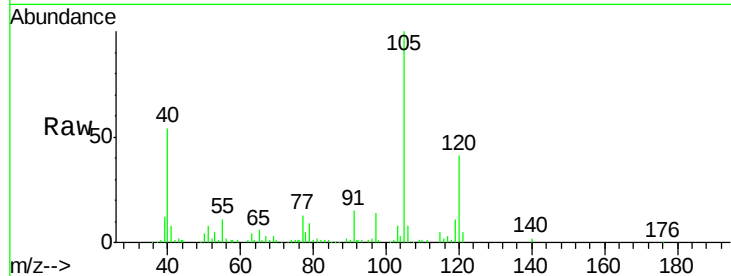




#74
 1,2,4-Trimethylbenzene
 Concen: 0.584 ppbv
 RT: 16.92 min Scan# 4349
 Delta R.T. -0.01 min
 Lab File: VL033399.D
 Acq: 20 Mar 2019 21:06

Instrument :
 MSVOA_L
 ClientSampled :
 IA1DL

Tgt Ion:	105	Resp:	167156
Ion	Ratio	Lower	Upper
105	100		
120	41.1	37.4	56.2
91	15.2	41.0	61.4#
77	13.0	18.5	27.7#



#79
 Naphthalene
 Concen: 0.048 ppbv
 RT: 22.42 min Scan# 6059
 Delta R.T. -0.00 min
 Lab File: VL033399.D
 Acq: 20 Mar 2019 21:06

Tgt Ion:	128	Resp:	13117
Ion	Ratio	Lower	Upper
128	100		
127	13.4	10.1	15.1
129	10.3	8.2	12.2

