

Data File : VL033544.D
Acq On : 4 Apr 2019 22:17
Operator : SY/AP
Sample : K2096-05
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
A-5

Quant Time: Apr 05 02:00:15 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	5.76	49	947611	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1792251	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	2210858	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.57 95 1751274 10.10 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 101.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	119757	0.867	ppbv	96
3) Chlorodifluoromethane	2.99	51	296405	2.717	ppbv #	66
4) Chloromethane	3.17	50	28794	0.499	ppbv	96
5) Vinyl Chloride	3.05	62	2369	0.042	ppbv	91
9) Propene	3.05	41	442767	9.664	ppbv #	61
10) Heptane	8.24	43	553418	4.519	ppbv	100
11) Trichlorofluoromethane	4.00	101	44065	0.259	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.55	101	4966	0.043	ppbv #	51
13) Ethanol	3.66	45	1594866	134.524	ppbv	65
15) Acetone	3.90	43	3859861	33.876	ppbv	98
16) 1,3-Butadiene	3.34	39	7455	0.165	ppbv #	6
17) tert-Butyl alcohol	4.37	59	67296	3.212	ppbv #	73
19) Isopropyl Alcohol	4.04	45	549352	7.623	ppbv #	1
20) Methylene Chloride	4.41	84	323745	6.694	ppbv	93
21) Allyl Chloride	4.41	41	7187	0.100	ppbv #	18
23) Vinyl Acetate	5.15	43	10160	0.063	ppbv #	72
25) Ethyl Acetate	5.77	43	404089	1.911	ppbv #	88
26) Hexane	5.78	57	403954	4.298	ppbv #	51
27) Carbon Disulfide	4.62	76	3360	0.030	ppbv #	1
30) Cyclohexane	7.24	84	16875	0.227	ppbv #	3
34) 2-Butanone	5.33	43	51678	0.480	ppbv	97
36) Benzene	7.00	78	26478	0.176	ppbv	99
39) 1,2-Dichloropropane	7.29	63	477943	8.113	ppbv #	22
41) Tetrahydrofuran	5.78	42	166764	2.816	ppbv #	51
44) 2,2,4-Trimethylpentane	7.99	57	13766	0.052	ppbv #	1
53) Toluene	9.94	91	1526224	8.734	ppbv	100
74) 1,2,4-Trimethylbenzene	16.92	105	10518	0.036	ppbv #	63

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

ALS Vial : 1 Sample Multiplier: 1

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.00 min

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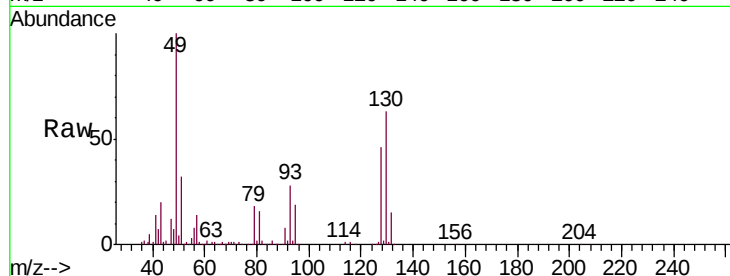
Tgt Ion: 49 Resp: 947611

Ion Ratio Lower Upper

49 100

128 49.0 24.0 72.0

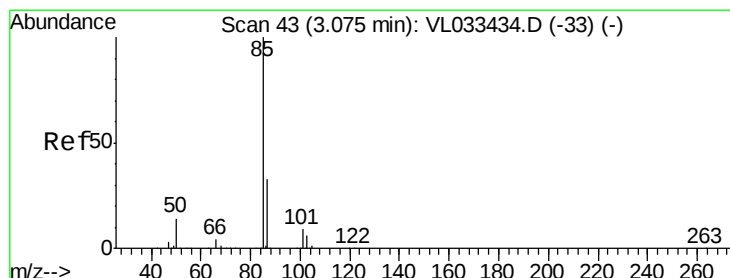
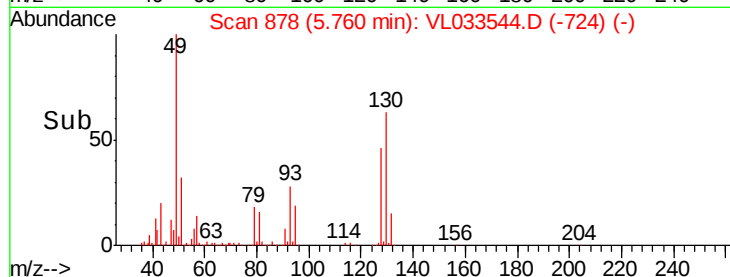
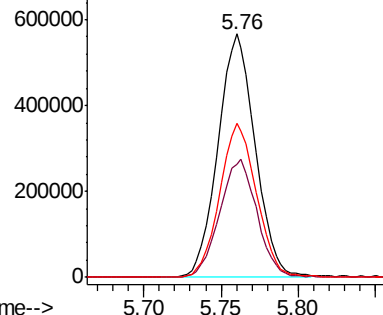
130 63.1 31.2 93.6



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.867 ppbv

RT: 3.08 min Scan# 43

Delta R.T. -0.00 min

Lab File: VL033544.D

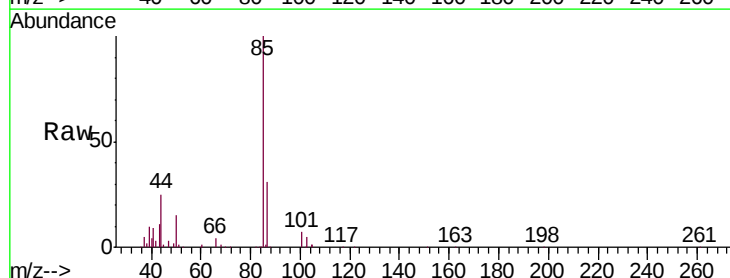
Acq: 4 Apr 2019 22:17

Tgt Ion: 85 Resp: 119757

Ion Ratio Lower Upper

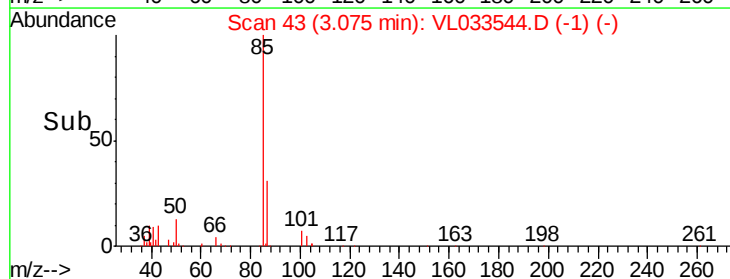
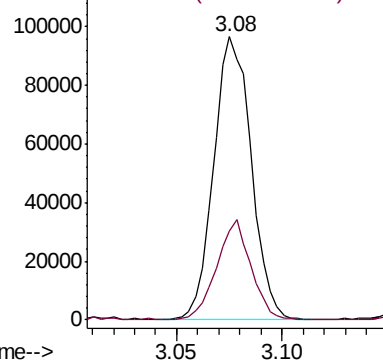
85 100

87 31.2 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

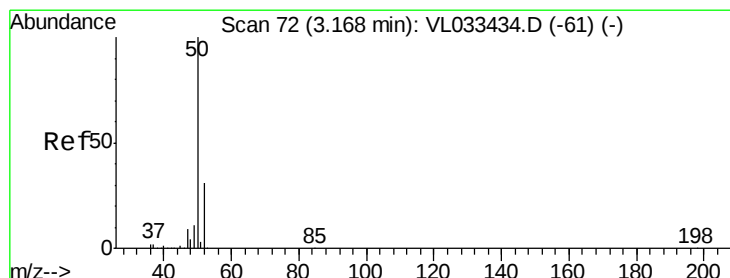
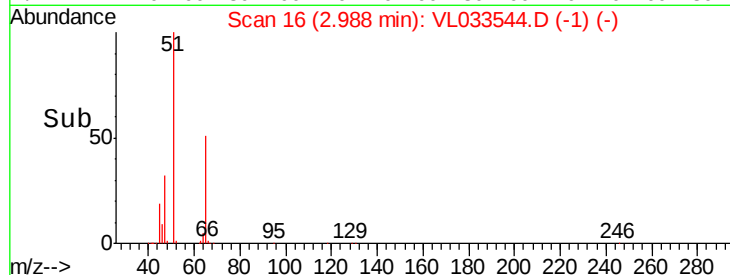
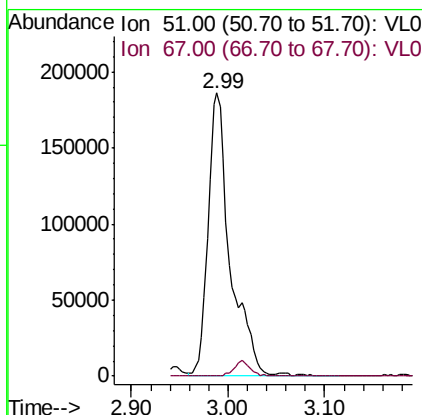
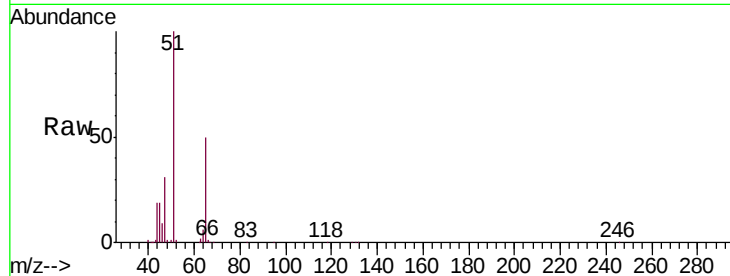




#3
 Chlorodifluoromethane
 Concen: 2.717 ppbv
 RT: 2.99 min Scan# 16
 Delta R.T. -0.03 min
 Lab File: VL033544.D
 Acq: 4 Apr 2019 22:17

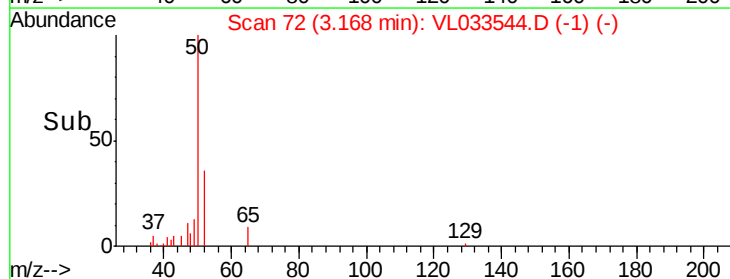
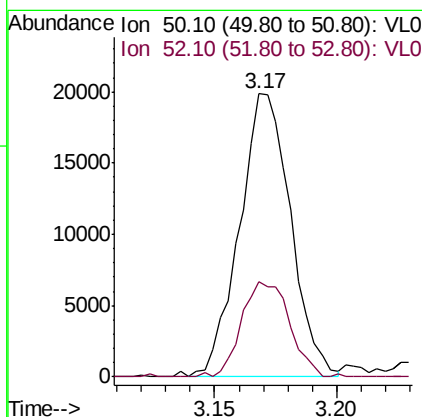
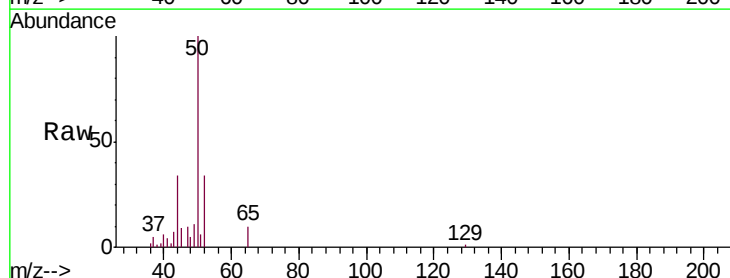
Instrument :
 MSVOA_L
 ClientSampleId :
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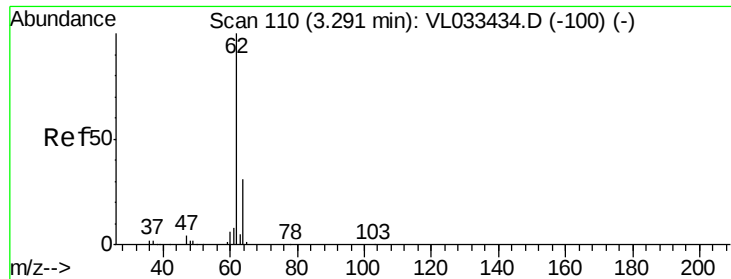
Tgt Ion: 51 Resp: 296405
 Ion Ratio Lower Upper
 51 100
 67 3.9 15.7 23.5#



#4
 Chloromethane
 Concen: 0.499 ppbv
 RT: 3.17 min Scan# 72
 Delta R.T. -0.00 min
 Lab File: VL033544.D
 Acq: 4 Apr 2019 22:17

Tgt Ion: 50 Resp: 28794
 Ion Ratio Lower Upper
 50 100
 52 33.5 25.0 37.6





#5

Vinyl Chloride

Concen: 0.042 ppbv

RT: 3.05 min Scan# 34

Delta R.T. -0.24 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Instrument :

MSVOA_L

ClientSampleId :

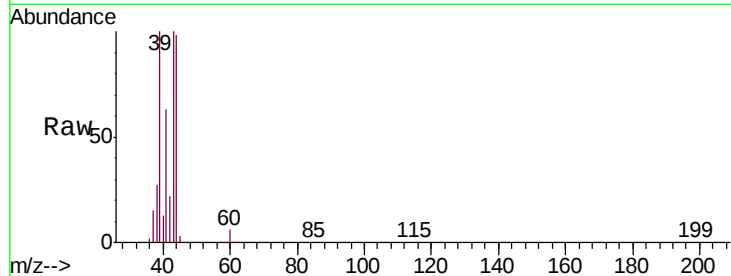
A-5

Tgt Ion: 62 Resp: 2369

Ion Ratio Lower Upper

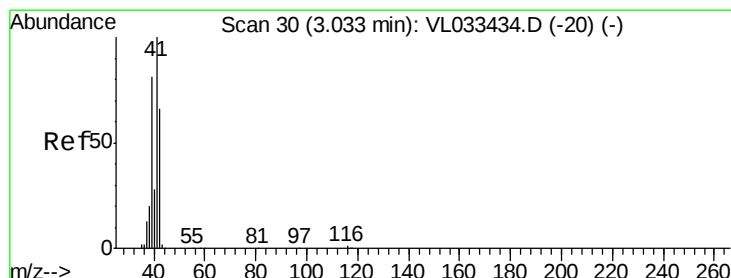
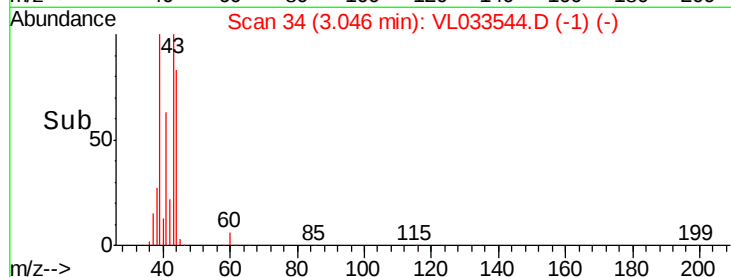
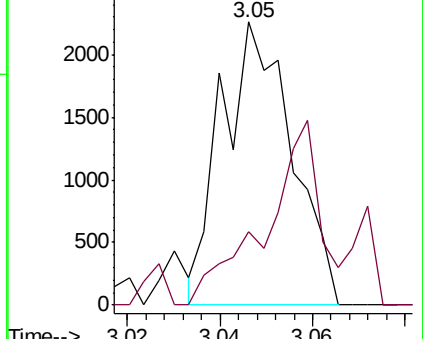
62 100

64 26.1 24.9 37.3



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#9

Propene

Concen: 9.664 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.02 min

Lab File: VL033544.D

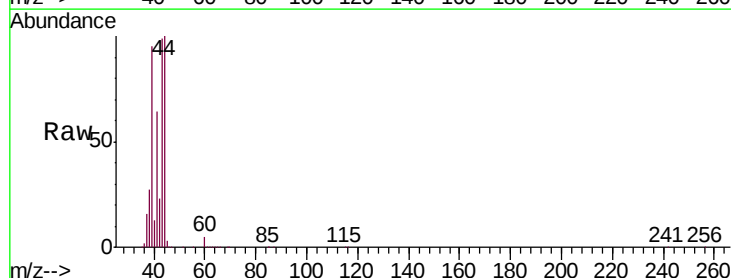
Acq: 4 Apr 2019 22:17

Tgt Ion: 41 Resp: 442767

Ion Ratio Lower Upper

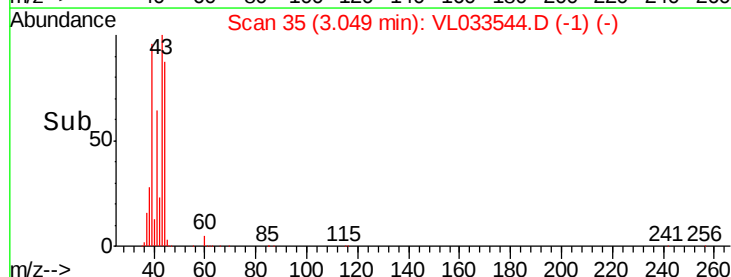
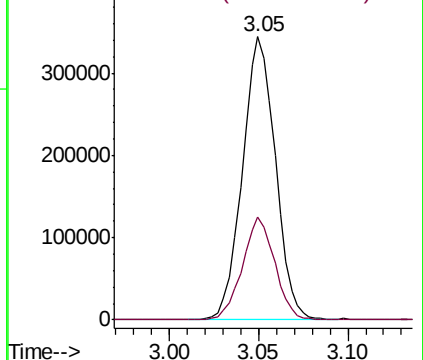
41 100

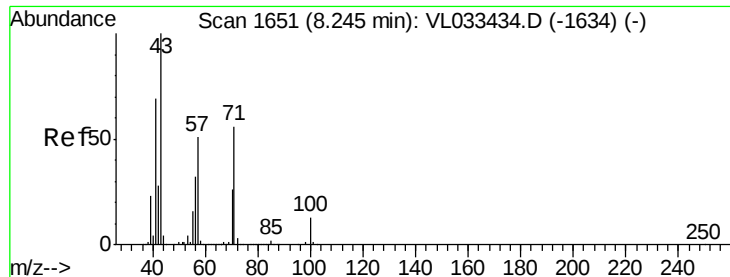
42 35.7 53.9 80.9#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 4.519 ppbv

RT: 8.24 min Scan# 1649

Delta R.T. -0.01 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Instrument :

MSVOA_L

ClientSampleId :

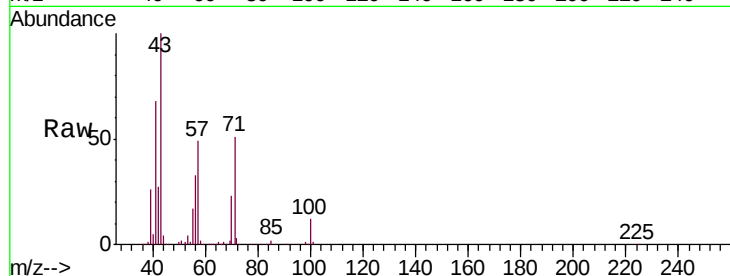
A-5

Tgt Ion: 43 Resp: 553418

Ion Ratio Lower Upper

43 100

57 51.0 40.6 60.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

8.24

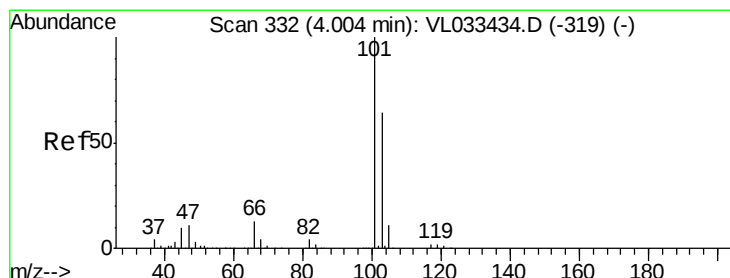
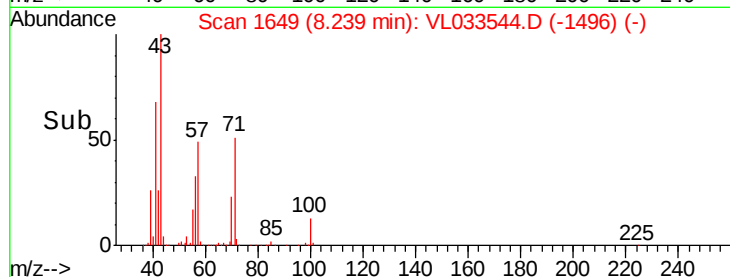
300000

200000

100000

0

Time-->



#11

Trichlorofluoromethane

Concen: 0.259 ppbv

RT: 4.00 min Scan# 331

Delta R.T. -0.00 min

Lab File: VL033544.D

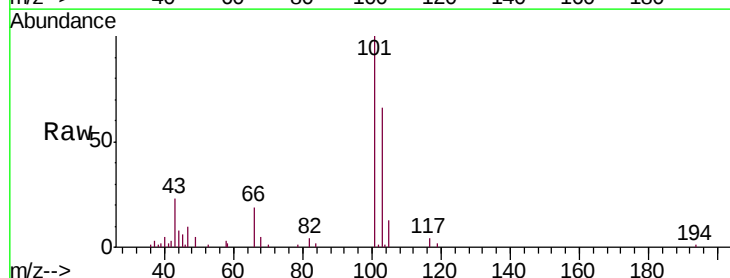
Acq: 4 Apr 2019 22:17

Tgt Ion: 101 Resp: 44065

Ion Ratio Lower Upper

101 100

103 65.0 51.3 76.9



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

4.00

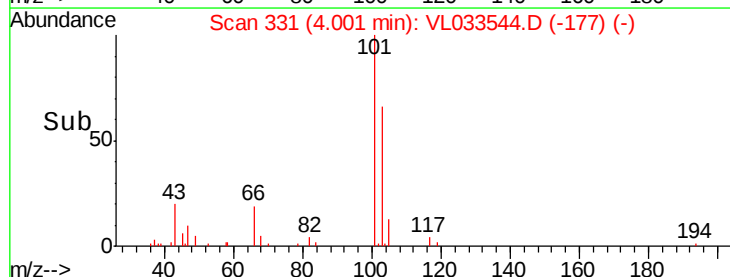
30000

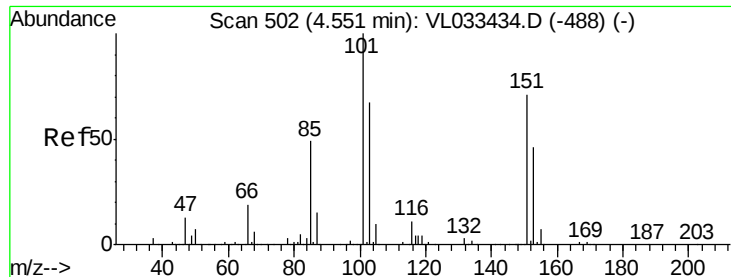
20000

10000

0

Time-->





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.043 ppbv

RT: 4.55 min Scan# 501

Delta R.T. -0.00 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Instrument :

MSVOA_L

ClientSampled :

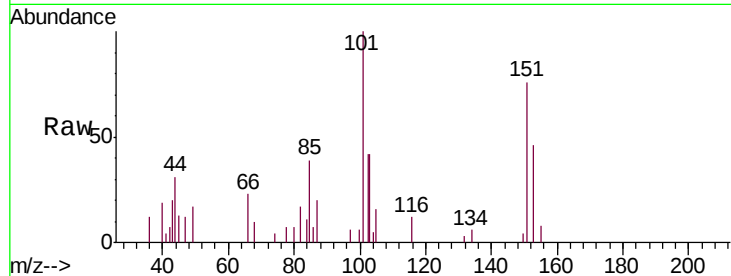
A-5

Tgt Ion:101 Resp: 4966

Ion Ratio Lower Upper

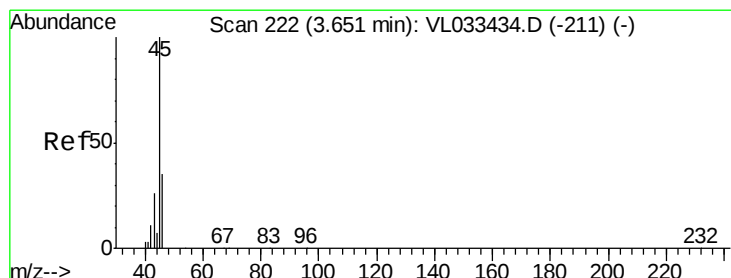
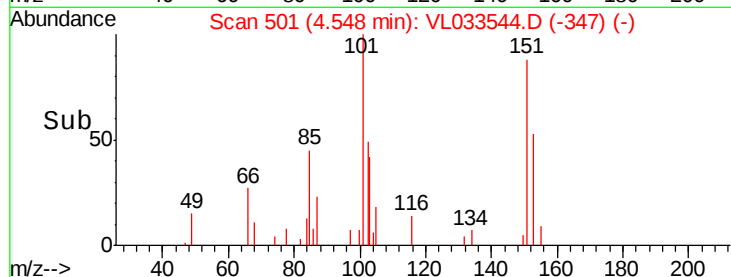
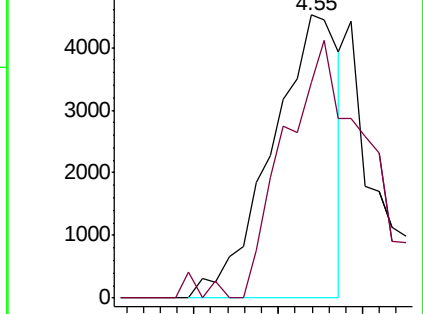
101 100

151 112.7 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: 134.524 ppbv

RT: 3.66 min Scan# 224

Delta R.T. 0.01 min

Lab File: VL033544.D

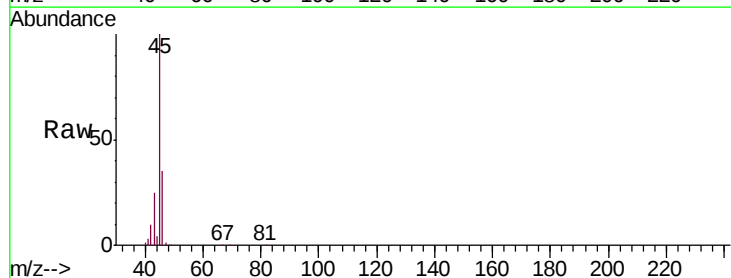
Acq: 4 Apr 2019 22:17

Tgt Ion: 45 Resp: 1594866

Ion Ratio Lower Upper

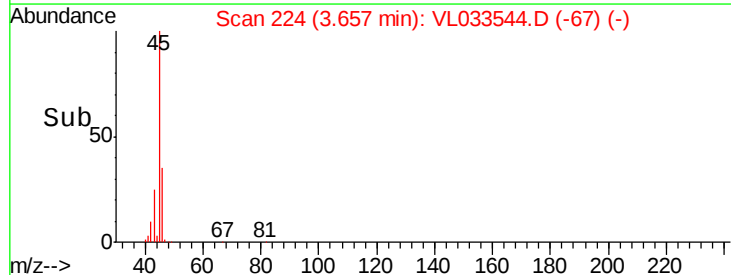
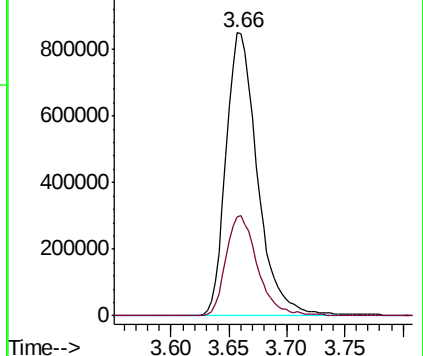
45 100

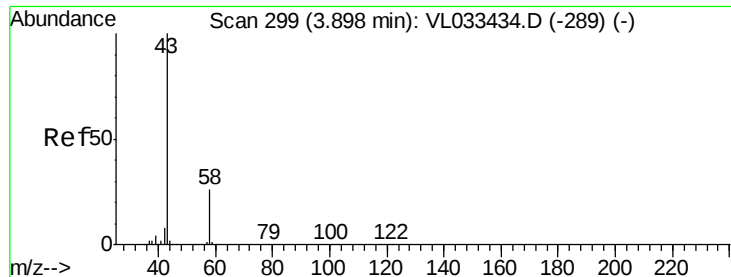
46 36.0 25.4 101.8



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 33.876 ppbv

RT: 3.90 min Scan# 298

Delta R.T. -0.00 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Instrument :

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ClientSampleId :

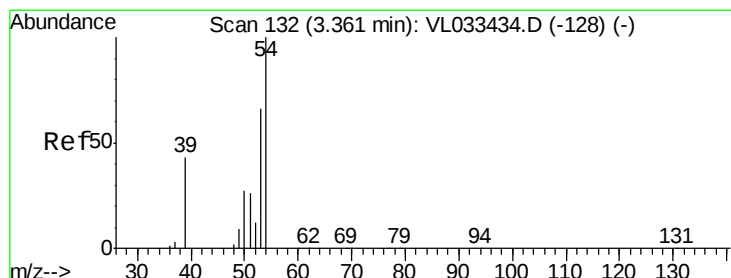
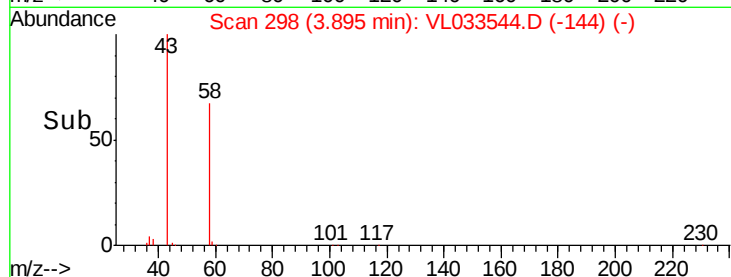
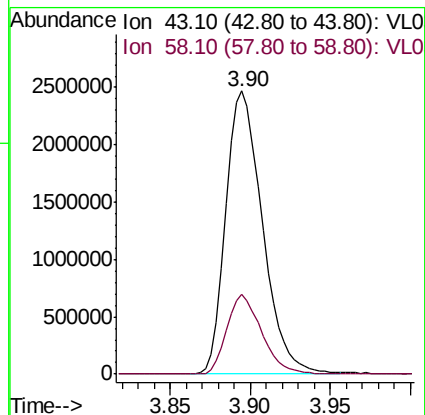
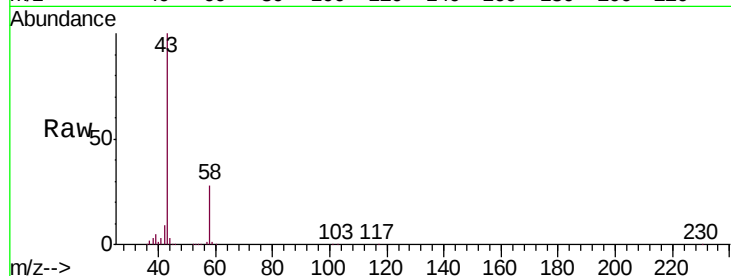
A-5

Tgt Ion: 43 Resp: 3859861

Ion Ratio Lower Upper

43 100

58 26.8 20.5 30.7



#16

1,3-Butadiene

Concen: 0.165 ppbv

RT: 3.34 min Scan# 125

Delta R.T. -0.02 min

Lab File: VL033544.D

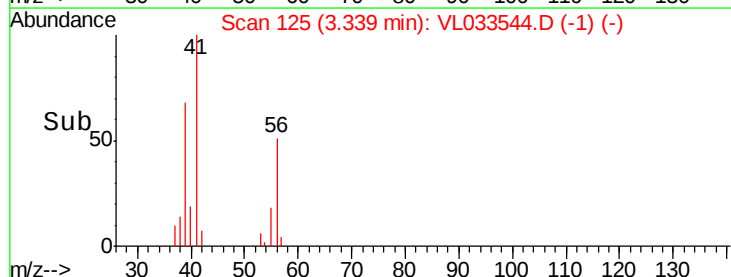
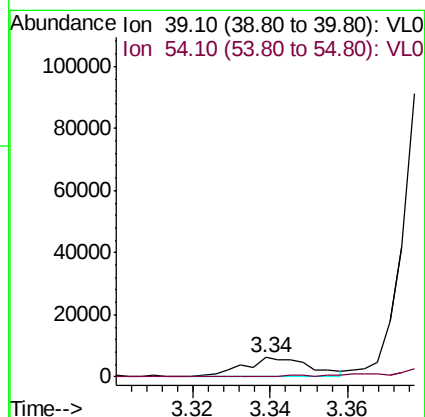
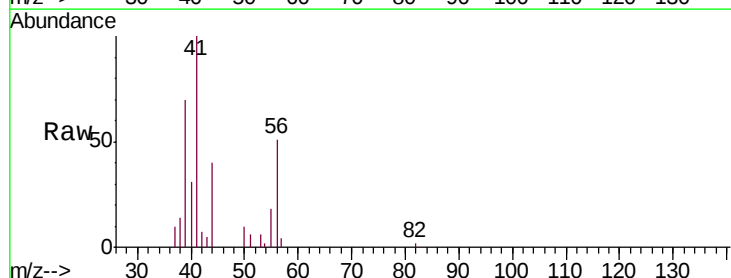
Acq: 4 Apr 2019 22:17

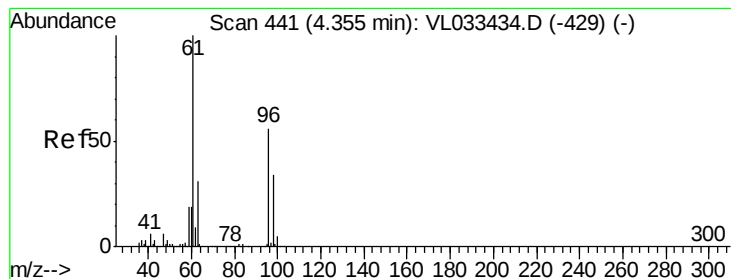
Tgt Ion: 39 Resp: 7455

Ion Ratio Lower Upper

39 100

54 0.0 69.4 104.2#



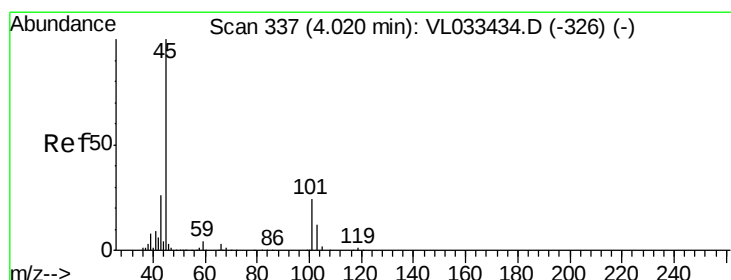
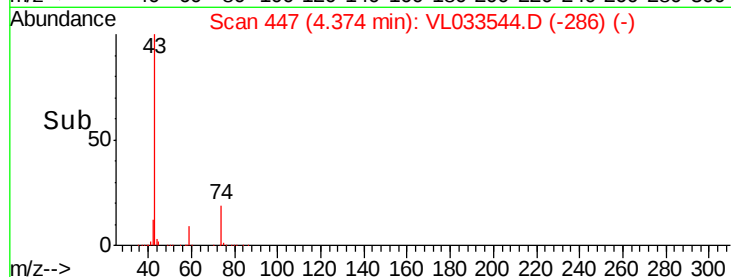
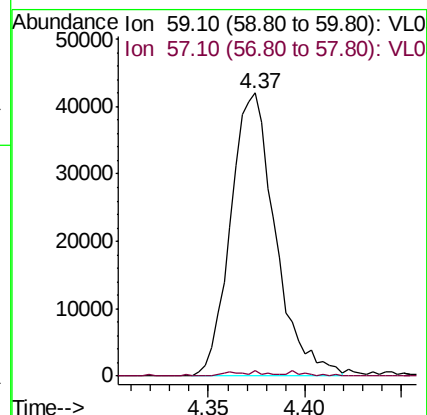
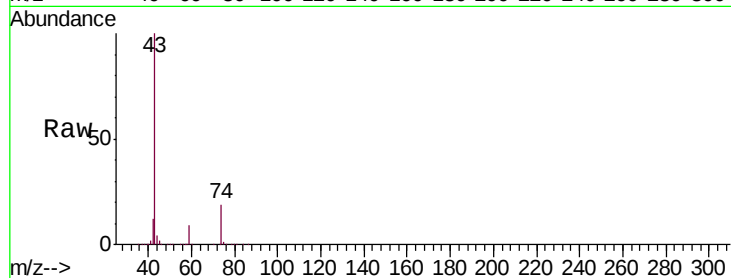


#17

tert-Butyl alcohol
Concen: 3.212 ppbv
RT: 4.37 min Scan# 447
Delta R.T. 0.02 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Instrument :
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ClientSampleId :
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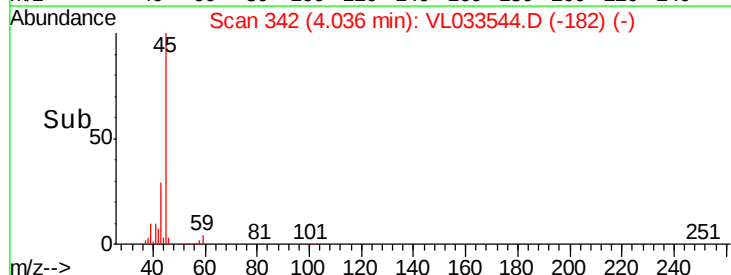
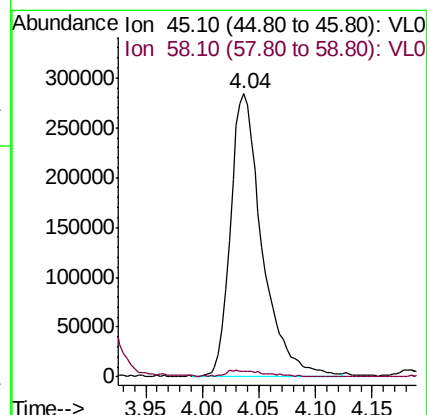
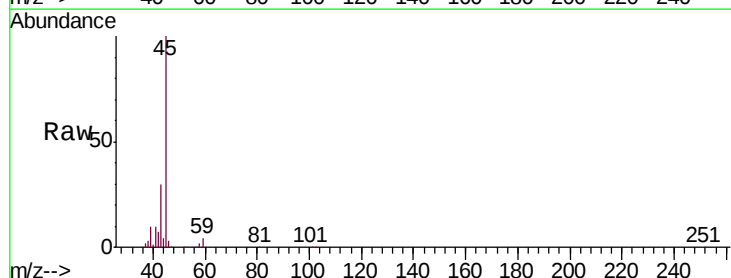
Tgt Ion: 59 Resp: 67296
Ion Ratio Lower Upper
59 100
57 0.0 7.8 11.8#

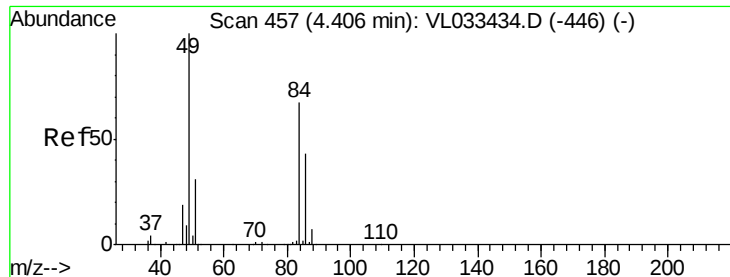


#19

Isopropyl Alcohol
Concen: 7.623 ppbv
RT: 4.04 min Scan# 342
Delta R.T. 0.02 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Tgt Ion: 45 Resp: 549352
Ion Ratio Lower Upper
45 100
58 188.8 1.4 2.2#

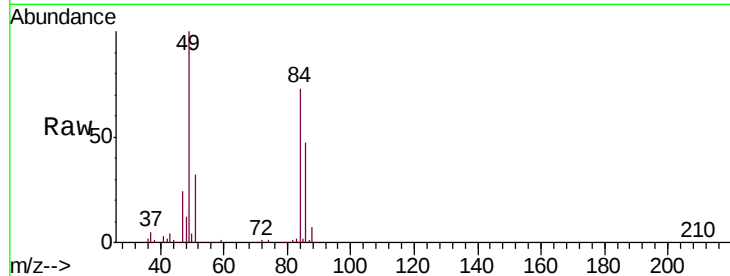




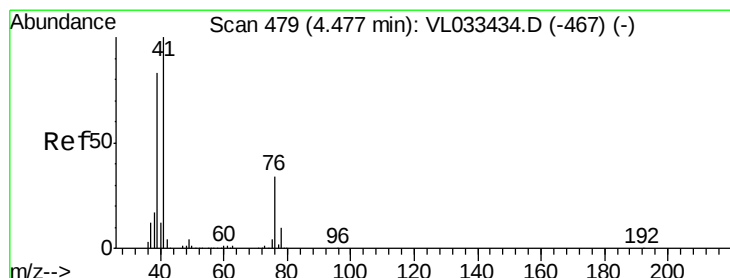
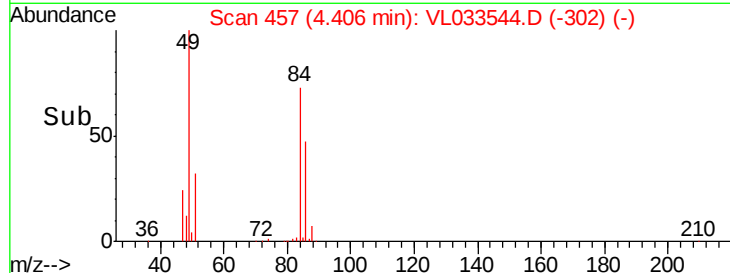
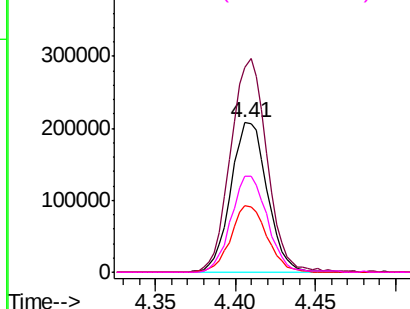
#20
Methylene Chloride
Concen: 6.694 ppbv
RT: 4.41 min Scan# 457
Delta R.T. -0.00 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Instrument :
MSVOA_L
ClientSampleId :
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Tgt Ion: 84 Resp: 323745
Ion Ratio Lower Upper
84 100
49 136.9 120.0 180.0
51 44.5 36.7 55.1
86 63.8 51.9 77.9

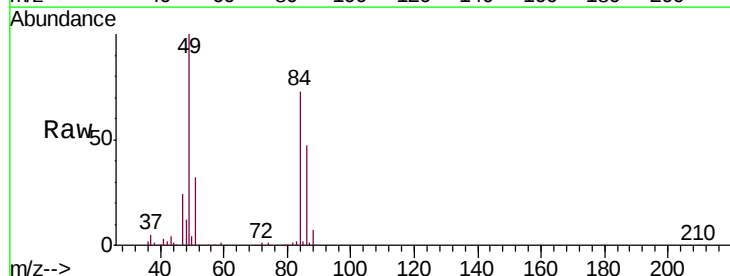


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

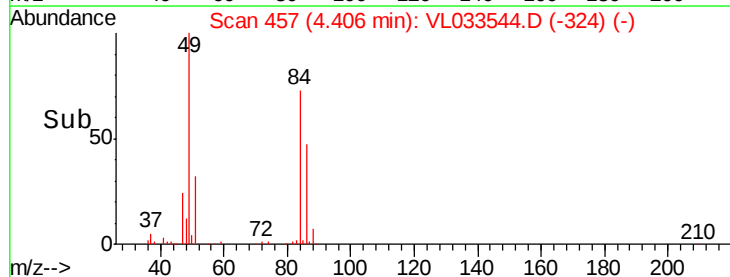
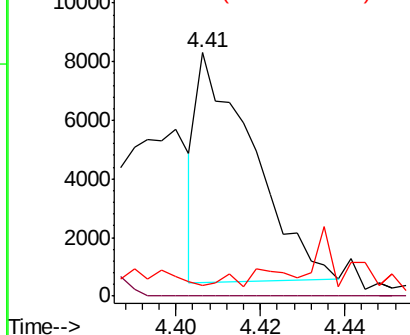


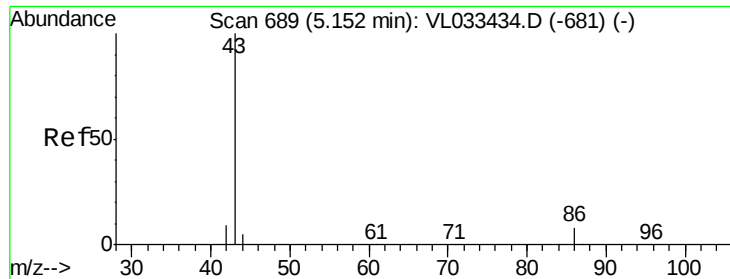
#21
Allyl Chloride
Concen: 0.100 ppbv
RT: 4.41 min Scan# 457
Delta R.T. -0.07 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Tgt Ion: 41 Resp: 7187
Ion Ratio Lower Upper
41 100
76 0.0 25.4 38.2#
39 0.0 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: 0.063 ppbv

RT: 5.15 min Scan# 689

Delta R.T. -0.00 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Instrument :

MSVOA_L

ClientSampleId :

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Tgt Ion: 43 Resp: 10160

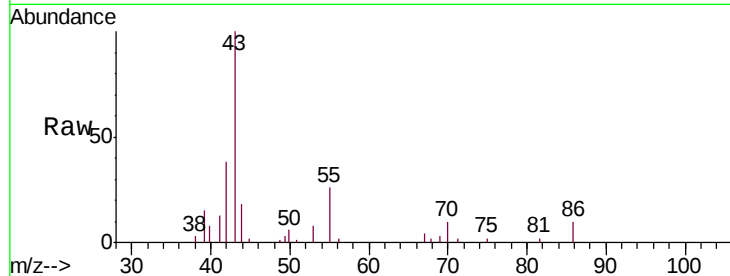
Ion Ratio Lower Upper

43 100

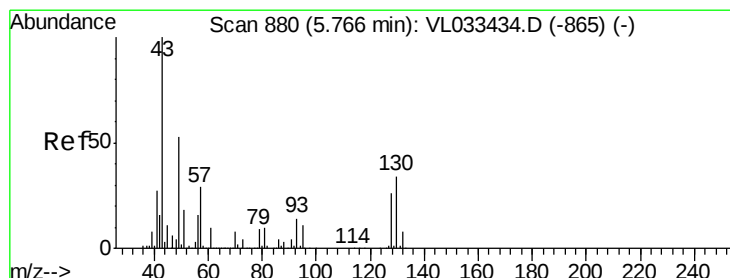
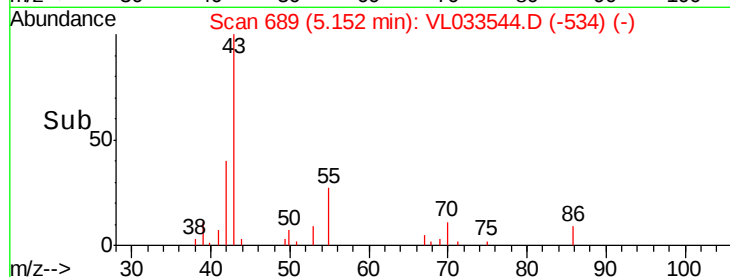
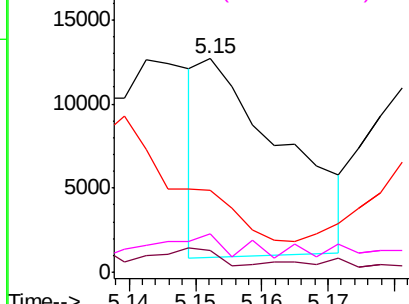
86 6.7 5.6 8.4

42 29.0 8.0 12.0#

44 11.7 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: 1.911 ppbv

RT: 5.77 min Scan# 882

Delta R.T. 0.01 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Tgt Ion: 43 Resp: 404089

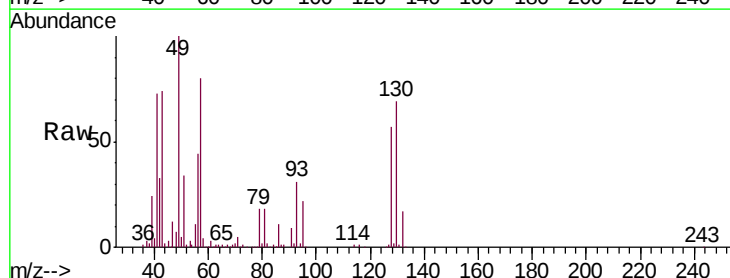
Ion Ratio Lower Upper

43 100

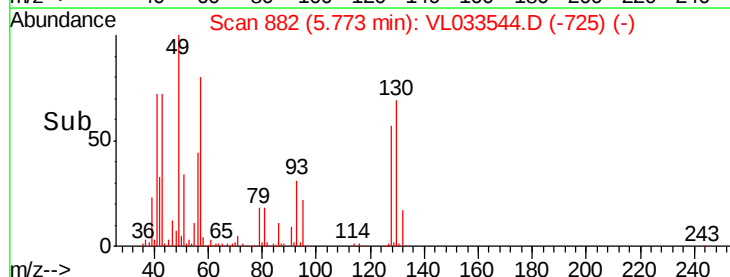
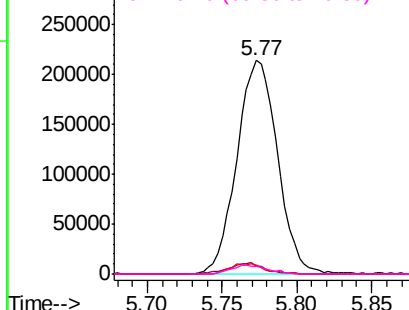
45 4.7 7.8 11.6#

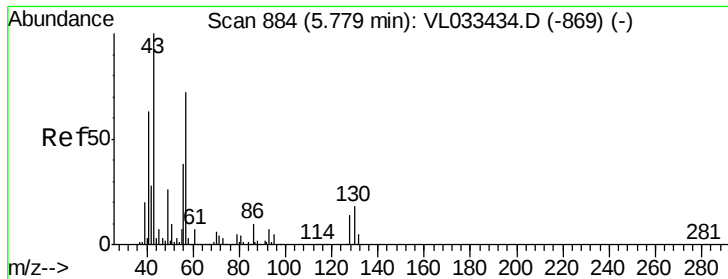
61 4.2 7.3 10.9#

70 3.7 5.6 8.4#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

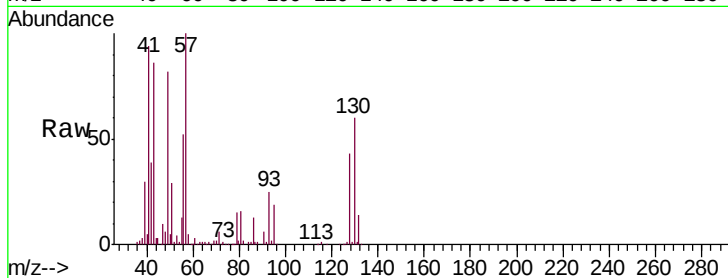




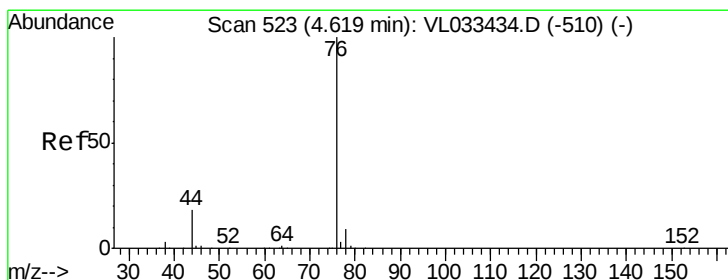
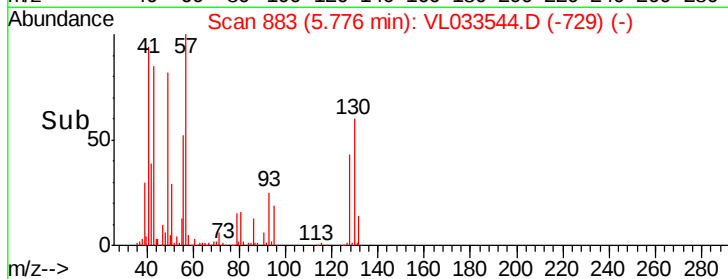
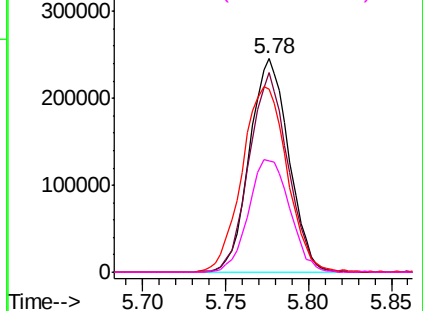
#26
Hexane
Concen: 4.298 ppbv
RT: 5.78 min Scan# 883
Delta R.T. -0.00 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Instrument :
MSVOA_L
ClientSampleId :
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Tgt Ion: 57 Resp: 403954
Ion Ratio Lower Upper
57 100
41 92.8 70.7 106.1
43 101.1 182.6 274.0#
56 55.3 42.0 63.0

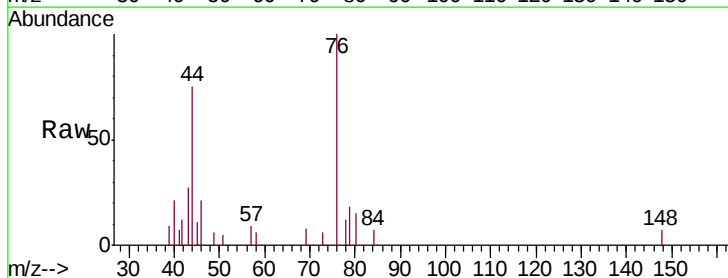


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

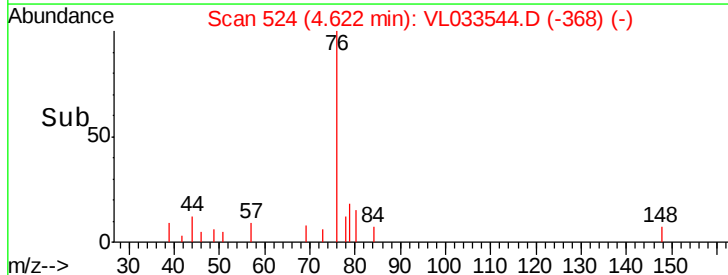
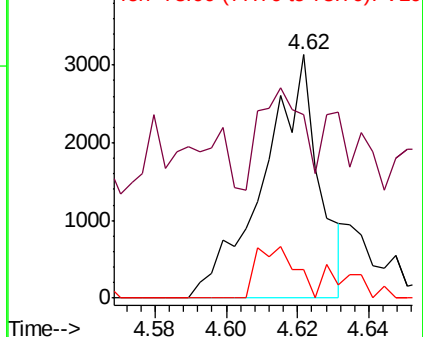


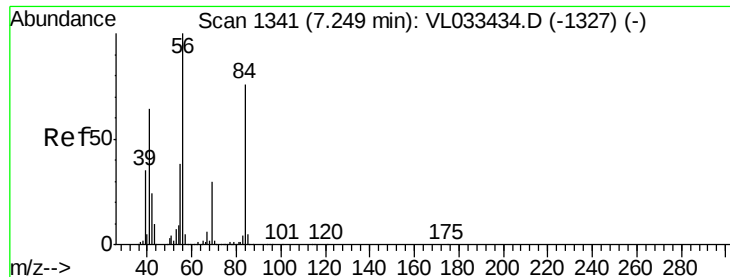
#27
Carbon Disulfide
Concen: 0.030 ppbv
RT: 4.62 min Scan# 524
Delta R.T. 0.00 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Tgt Ion: 76 Resp: 3360
Ion Ratio Lower Upper
76 100
44 149.6 14.8 22.2#
78 22.8 7.6 11.4#



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0

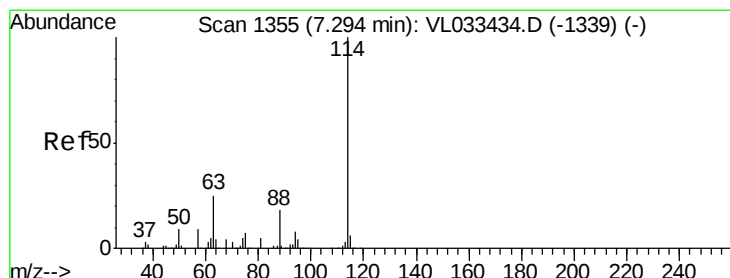
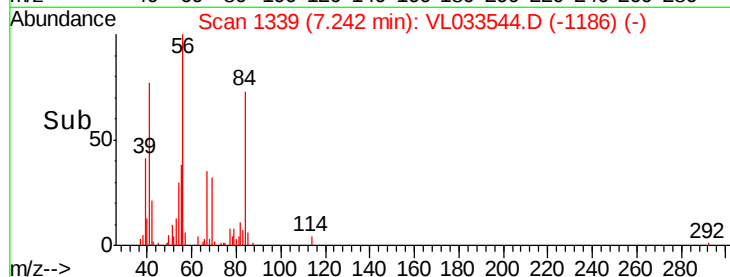
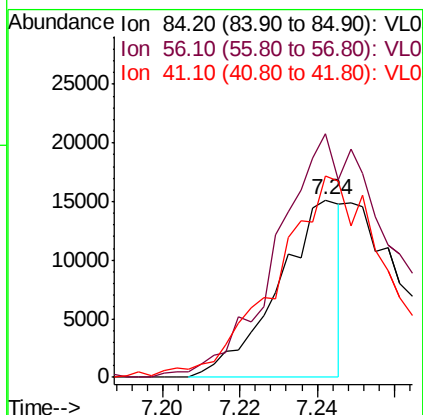
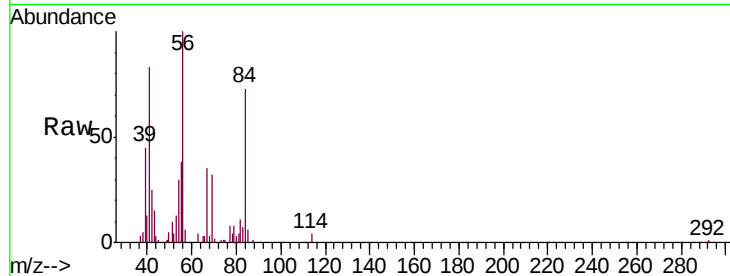




#30
Cyclohexane
Concen: 0.227 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

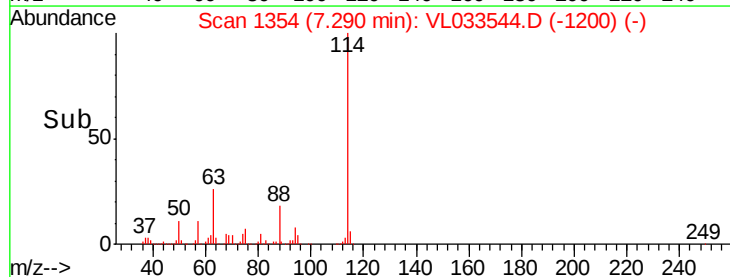
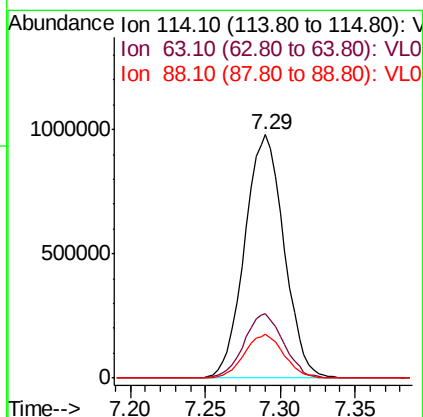
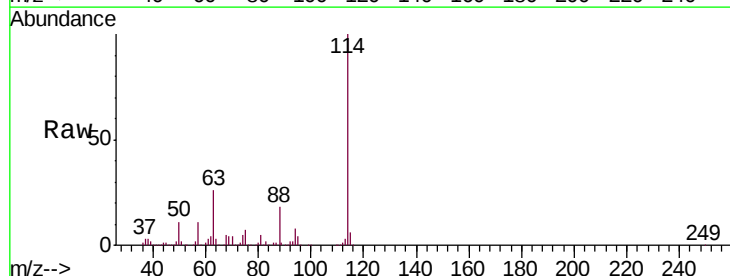
Instrument :
MSVOA_L
ClientSampleId :
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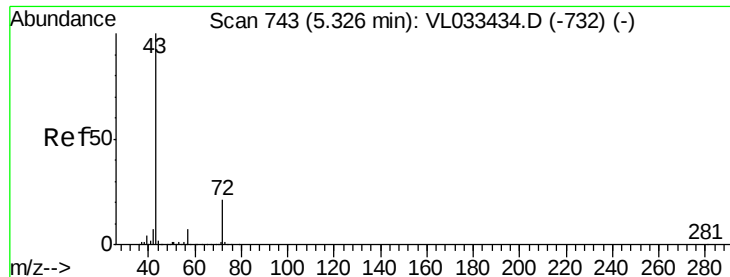
Tgt Ion: 84 Resp: 16875
Ion Ratio Lower Upper
84 100
56 231.4 109.7 164.5#
41 201.5 68.2 102.2#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1354
Delta R.T. -0.00 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Tgt Ion: 114 Resp: 1792251
Ion Ratio Lower Upper
114 100
63 26.7 21.5 32.3
88 18.0 14.5 21.7

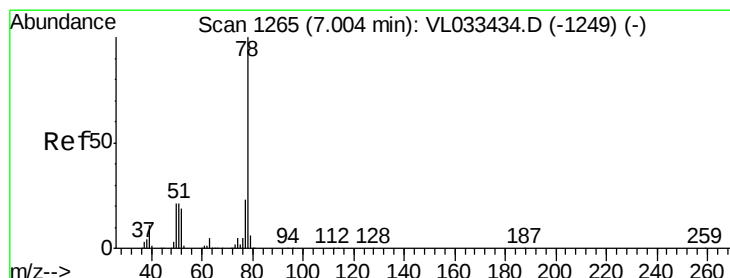
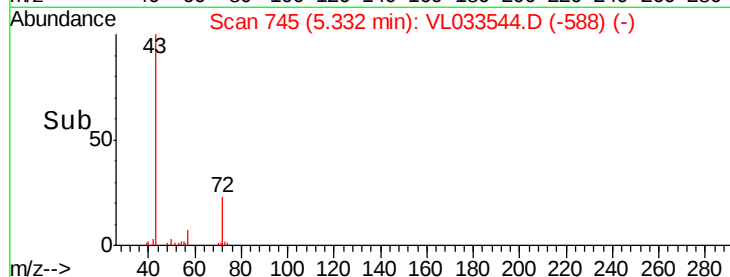
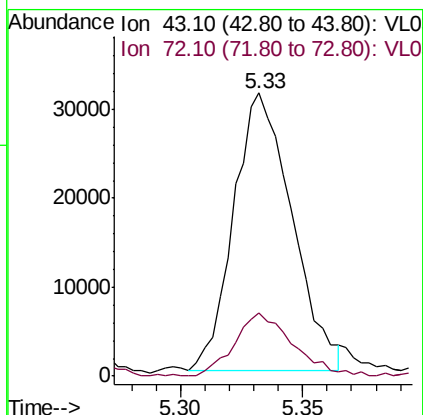
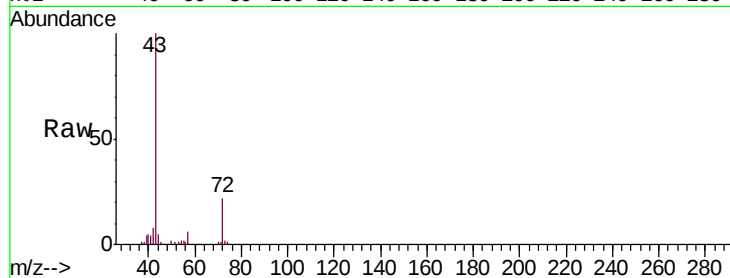




#34
2-Butanone
Concen: 0.480 ppbv
RT: 5.33 min Scan# 745
Delta R.T. 0.01 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

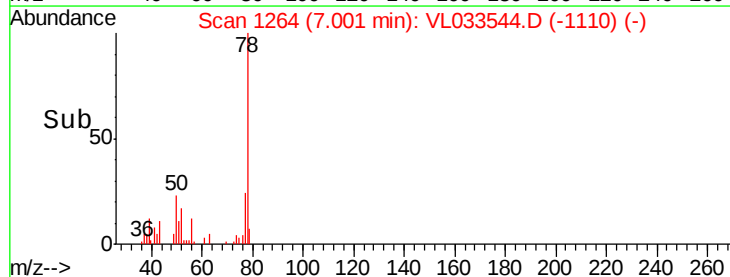
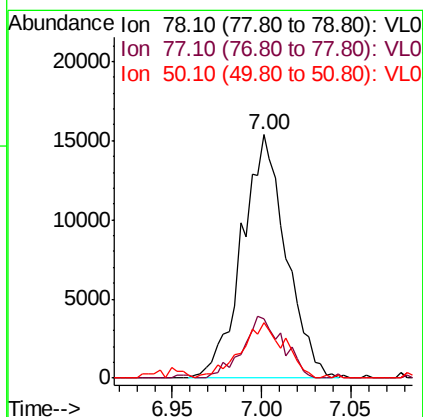
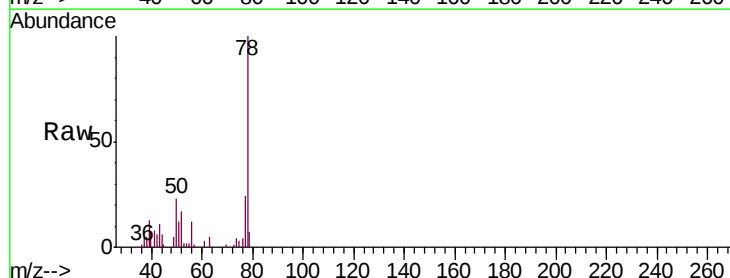
Instrument :
MSVOA_L
ClientSampleId :
A-5

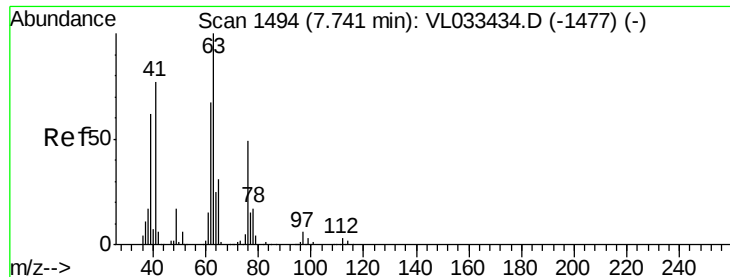
Tgt Ion: 43 Resp: 51678
Ion Ratio Lower Upper
43 100
72 23.3 17.4 26.2



#36
Benzene
Concen: 0.176 ppbv
RT: 7.00 min Scan# 1264
Delta R.T. -0.00 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Tgt Ion: 78 Resp: 26478
Ion Ratio Lower Upper
78 100
77 23.0 18.1 27.1
50 21.8 16.7 25.1





#39

1,2-Dichloropropane

Concen: 8.113 ppbv

RT: 7.29 min Scan# 1354

Delta R.T. -0.45 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Instrument :

MSVOA_L

ClientSampleId :

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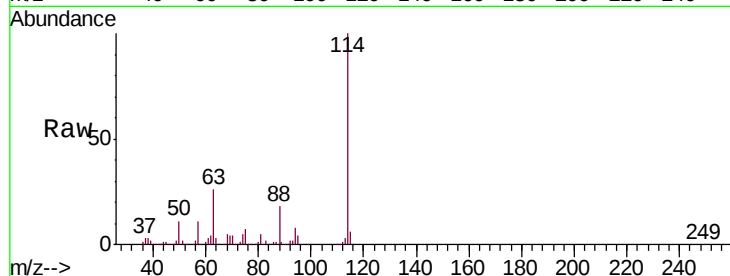
Tgt Ion: 63 Resp: 477943

Ion Ratio Lower Upper

63 100

41 0.0 61.2 91.8#

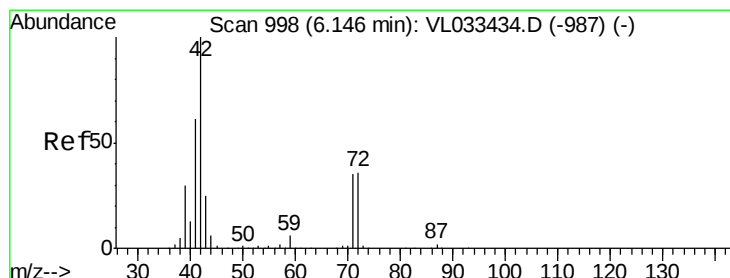
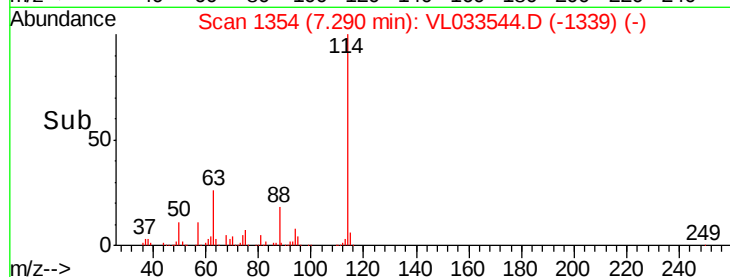
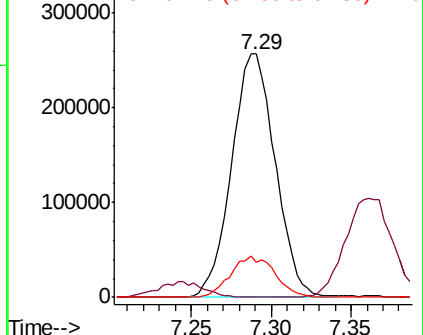
62 14.4 54.0 81.0#



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



#41

Tetrahydrofuran

Concen: 2.816 ppbv

RT: 5.78 min Scan# 883

Delta R.T. -0.37 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

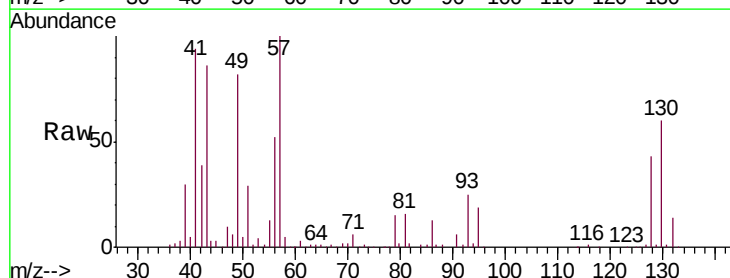
Tgt Ion: 42 Resp: 166764

Ion Ratio Lower Upper

42 100

72 0.9 30.2 45.2#

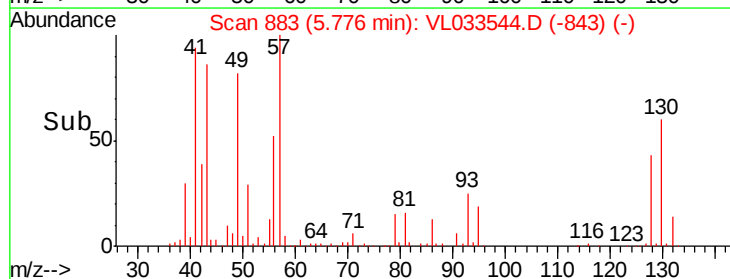
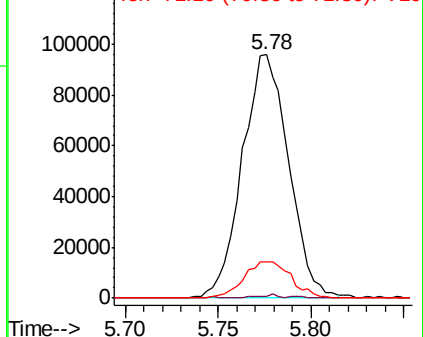
71 15.2 29.4 44.2#

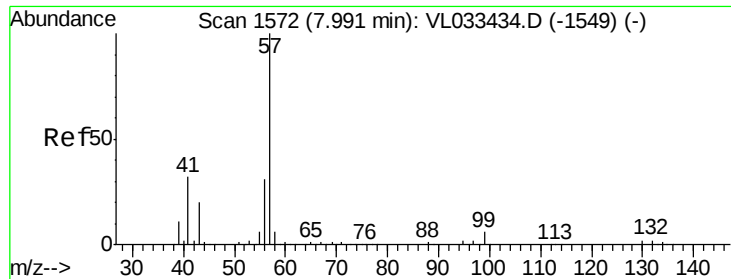


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 0.052 ppbv

RT: 7.99 min Scan# 1571

Delta R.T. -0.00 min

Lab File: VL033544.D

Acq: 4 Apr 2019 22:17

Instrument :

MSVOA_L

ClientSampleId :

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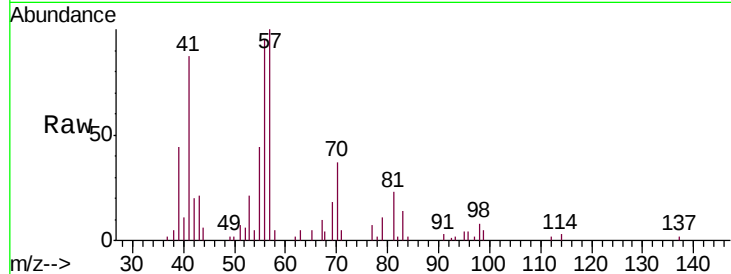
Tgt Ion: 57 Resp: 13766

Ion Ratio Lower Upper

57 100

41 176.9 26.0 39.0#

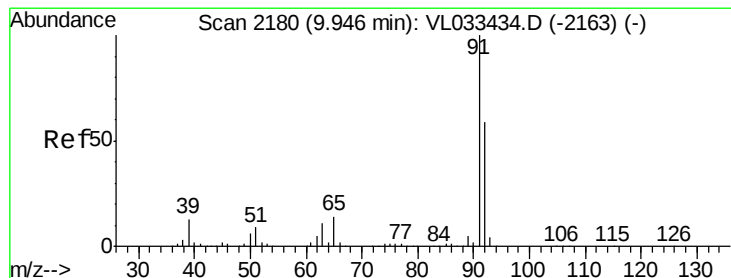
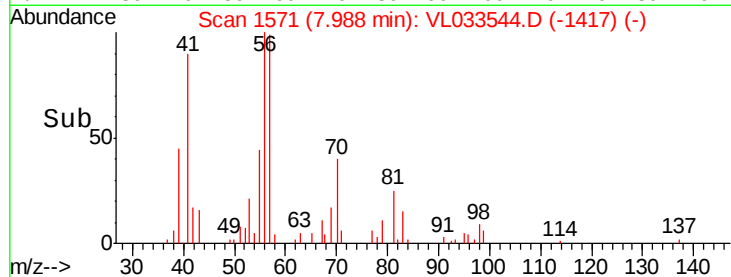
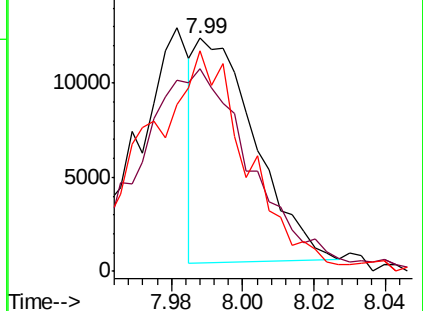
56 178.4 24.6 37.0#



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: 8.734 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. -0.01 min

Lab File: VL033544.D

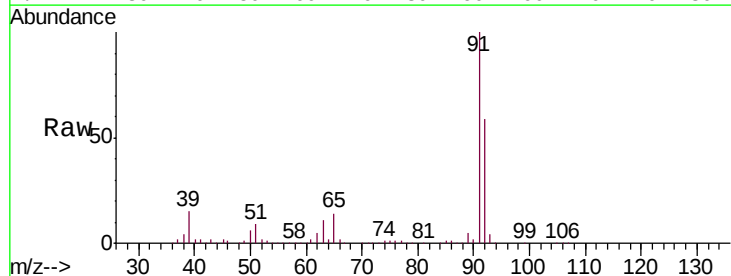
Acq: 4 Apr 2019 22:17

Tgt Ion: 91 Resp: 1526224

Ion Ratio Lower Upper

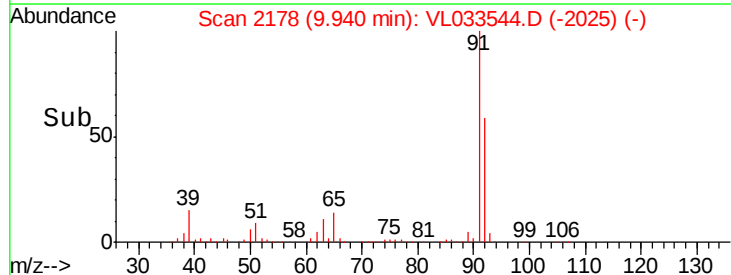
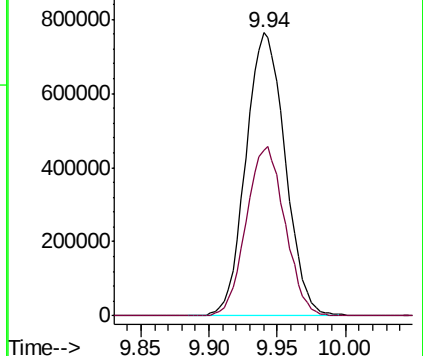
91 100

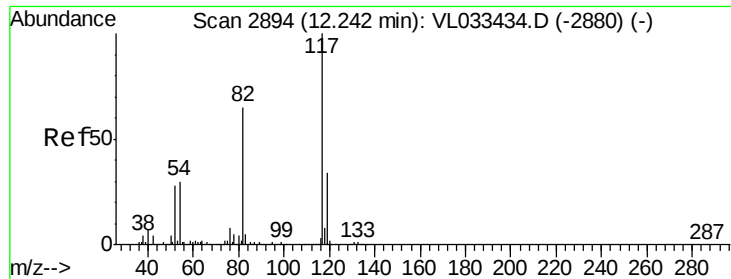
92 59.1 47.4 71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

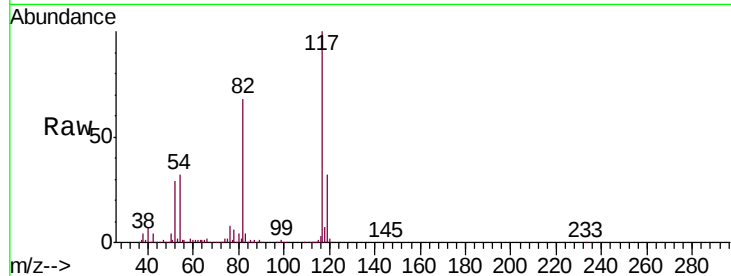




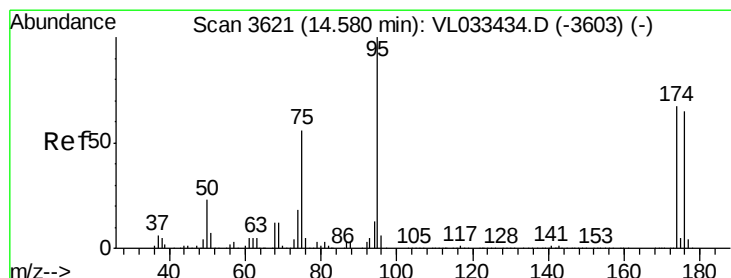
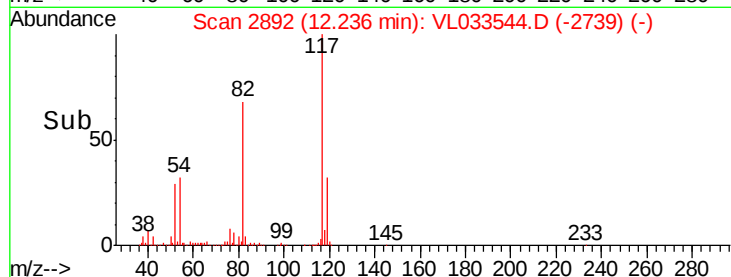
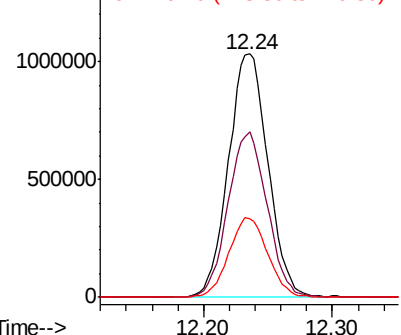
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2892
Delta R.T. -0.01 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Instrument :
MSVOA_L
ClientSampleId :
A-5

Tgt Ion:117 Resp: 2210858
Ion Ratio Lower Upper
117 100
82 67.1 51.5 77.3
119 32.4 25.5 38.3

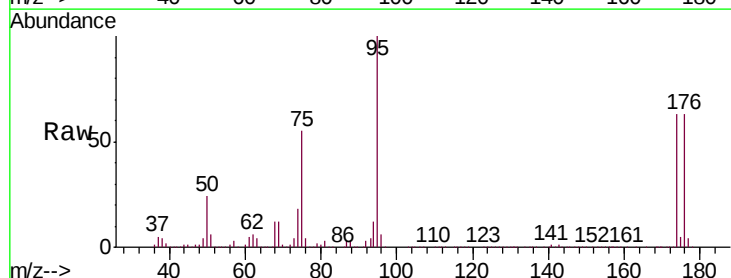


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

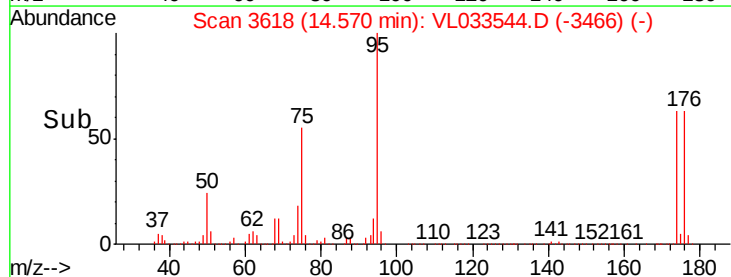
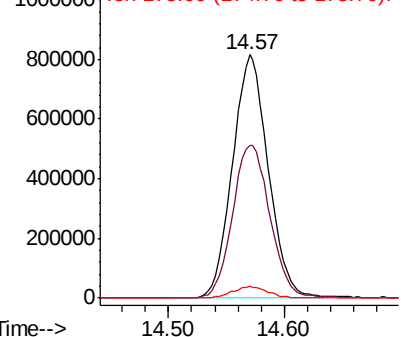


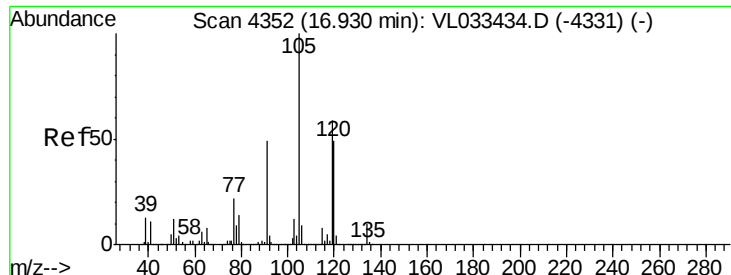
#68
1-Bromo-4-Fluorobenzene
Concen: 10.104 ppbv
RT: 14.57 min Scan# 3618
Delta R.T. -0.01 min
Lab File: VL033544.D
Acq: 4 Apr 2019 22:17

Tgt Ion: 95 Resp: 1751274
Ion Ratio Lower Upper
95 100
174 66.1 52.9 79.3
175 4.7 3.8 5.6



Abundance Ion 95.10 (94.80 to 95.80): VL0
Ion 174.00 (173.70 to 174.70): V
Ion 175.00 (174.70 to 175.70): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.036 ppbv
 RT: 16.92 min Scan# 4350
 Delta R.T. -0.01 min
 Lab File: VL033544.D
 Acq: 4 Apr 2019 22:17

Instrument :
 MSVOA_L
 ClientSampleId :
 A-5

Tgt Ion:	105	Resp:	10518
Ion	Ratio	Lower	Upper
105	100		
120	36.5	39.0	58.6#
91	11.2	40.0	60.0#
77	5.8	17.5	26.3#

