

Data File : VL033583.D
Acq On : 11 Apr 2019 3:37
Operator : SY/AP
Sample : K2312-05
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
A-10

Quant Time: Apr 11 05:12:12 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	765885	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1765528	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1720071	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.57 95 1381862 10.25 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 102.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	34342	0.307	ppbv	97
3) Chlorodifluoromethane	2.99	51	3040411	34.482	ppbv #	58
4) Chloromethane	3.17	50	20836	0.447	ppbv	99
9) Propene	3.24	41	46726	1.262	ppbv	93
10) Heptane	8.25	43	19038	0.192	ppbv	94
11) Trichlorofluoromethane	4.00	101	30362	0.221	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.55	101	2890	0.031	ppbv #	14
13) Ethanol	3.65	45	898383	93.757	ppbv	66
15) Acetone	3.90	43	458669	4.981	ppbv	98
16) 1,3-Butadiene	3.34	39	2336	0.064	ppbv #	6
17) tert-Butyl alcohol	4.37	59	3603	0.213	ppbv #	73
19) Isopropyl Alcohol	4.03	45	304115	5.221	ppbv #	95
20) Methylene Chloride	4.41	84	180102	4.607	ppbv	96
21) Allyl Chloride	4.41	41	5134	0.088	ppbv #	18
23) Vinyl Acetate	5.14	43	14441	0.110	ppbv #	79
25) Ethyl Acetate	5.77	43	548561	3.211	ppbv #	90
26) Hexane	5.78	57	482647	6.353	ppbv #	56
31) cis-1,2-Dichloroethene	5.76	61	26752	0.354	ppbv #	29
34) 2-Butanone	5.33	43	28188	0.266	ppbv	98
35) Carbon Tetrachloride	7.13	117	4337	0.035	ppbv	97
36) Benzene	7.00	78	14796	0.100	ppbv #	89
39) 1,2-Dichloropropane	7.29	63	466426	8.038	ppbv #	24
41) Tetrahydrofuran	5.78	42	199245	3.415	ppbv #	50
44) 2,2,4-Trimethylpentane	7.99	57	9954	0.038	ppbv #	30
53) Toluene	9.94	91	512380	2.976	ppbv	99

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

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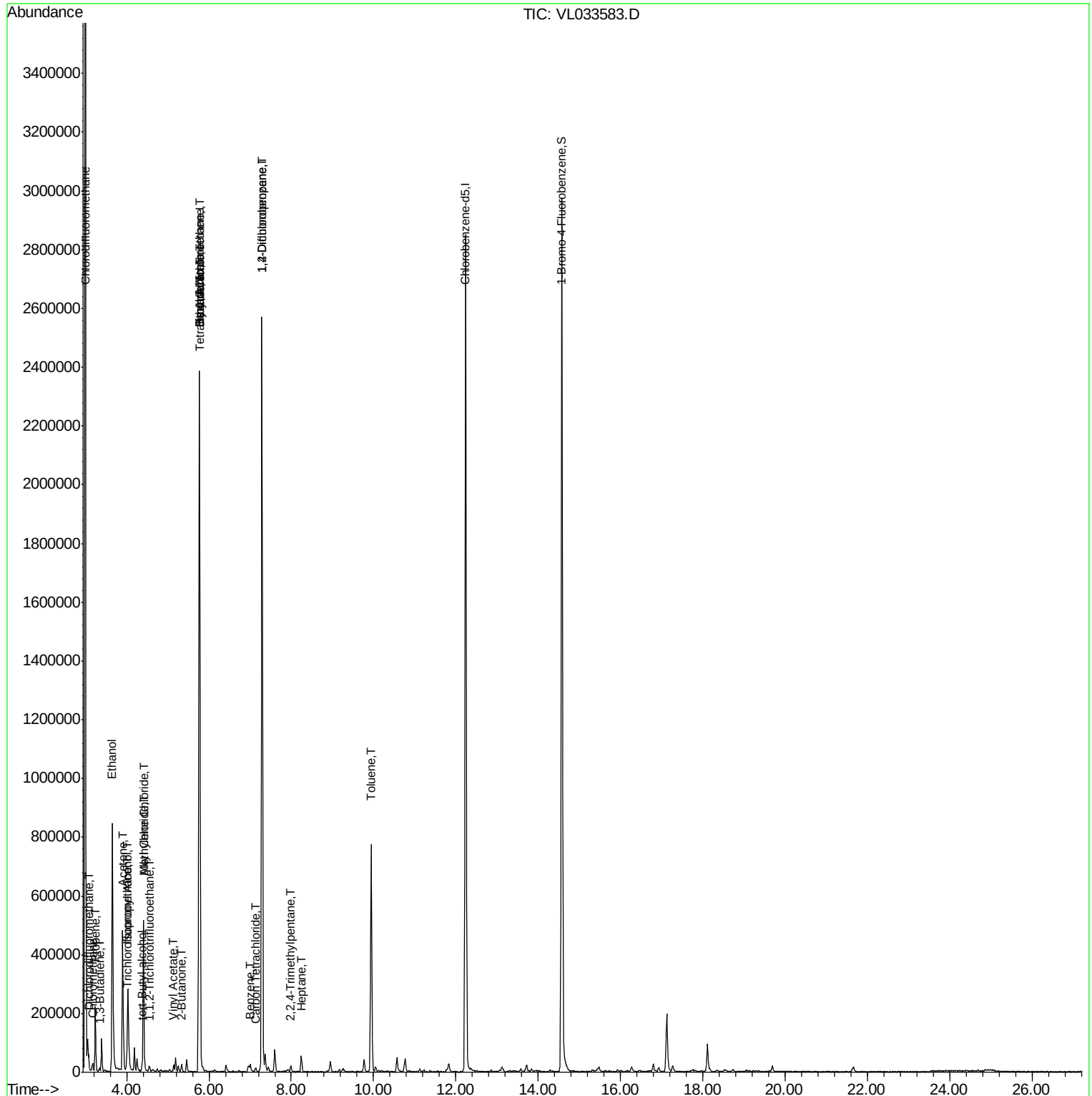
Quant Time: Apr 11 05:12:12 2019

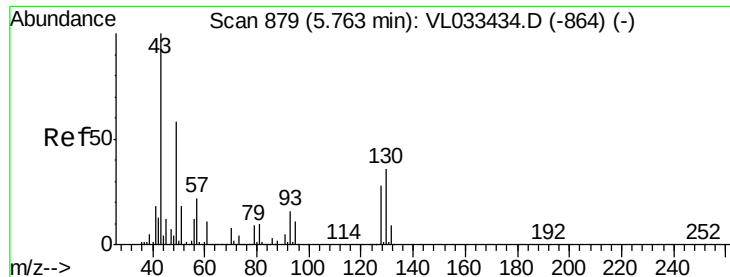
Quant Method : Z:\V0ASRV\HPCHEM1\MSV0A_L\METHODS\VL032519AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Mar 26 16:00:50 2019

QLast Update : Tue Mar 26 16:00:50 2019

Response via : Initial Calibration

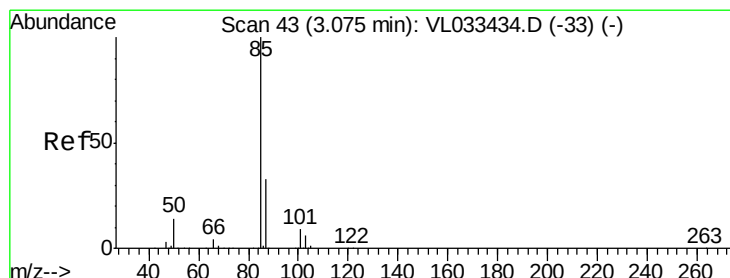
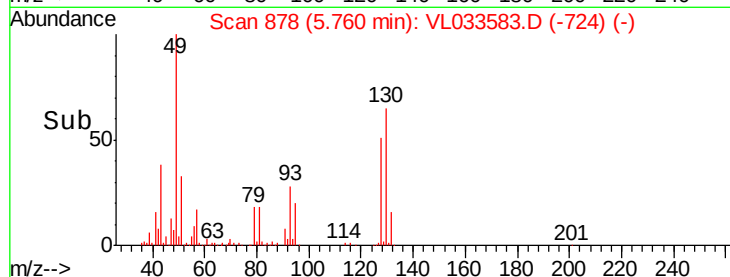
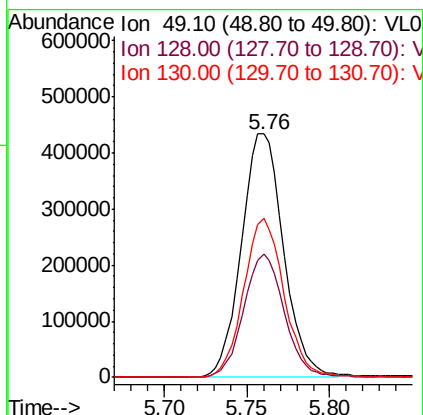
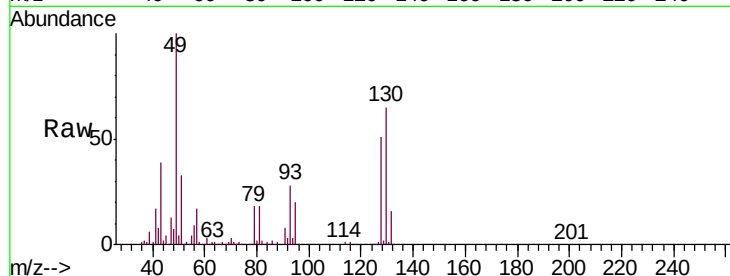




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.76 min Scan# 878
 Delta R.T. -0.00 min
 Lab File: VL033583.D
 Acq: 11 Apr 2019 3:37

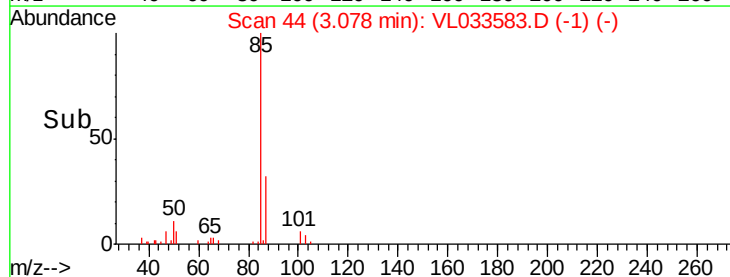
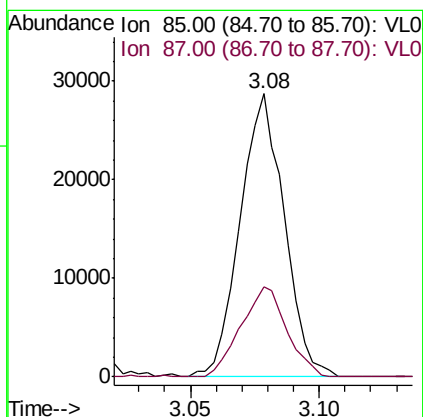
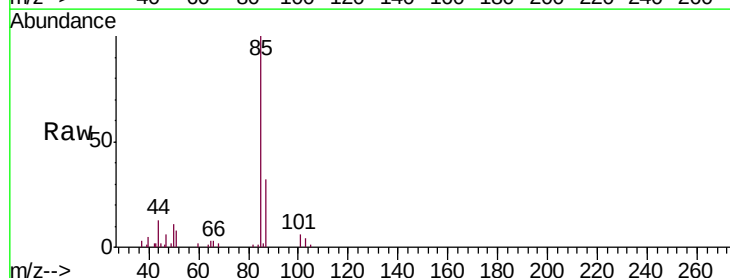
Instrument :
 MSVOA_L
 ClientSampleId :
 A-10

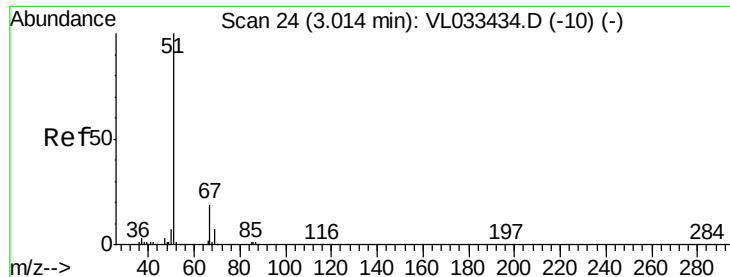
Tgt Ion: 49 Resp: 765885
 Ion Ratio Lower Upper
 49 100
 128 49.2 24.0 72.0
 130 62.9 31.2 93.6



#2
 Dichlorodifluoromethane
 Concen: 0.307 ppbv
 RT: 3.08 min Scan# 44
 Delta R.T. 0.00 min
 Lab File: VL033583.D
 Acq: 11 Apr 2019 3:37

Tgt Ion: 85 Resp: 34342
 Ion Ratio Lower Upper
 85 100
 87 31.7 26.7 40.1





#3

Chlorodifluoromethane

Concen: 34.482 ppbv

RT: 2.99 min Scan# 17

Delta R.T. -0.02 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampleId :

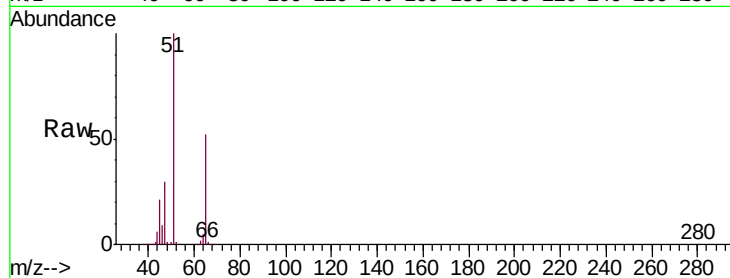
A-10

Tgt Ion: 51 Resp: 3040411

Ion Ratio Lower Upper

51 100

67 0.5 15.7 23.5#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

2.99

2500000

2000000

1500000

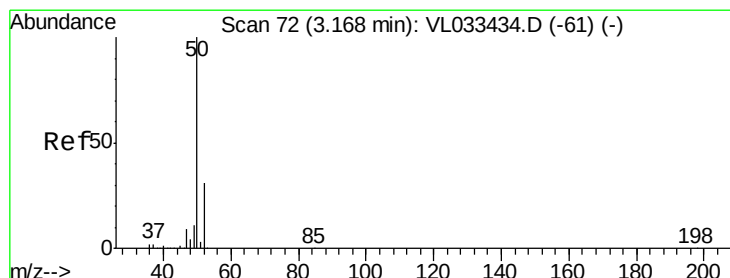
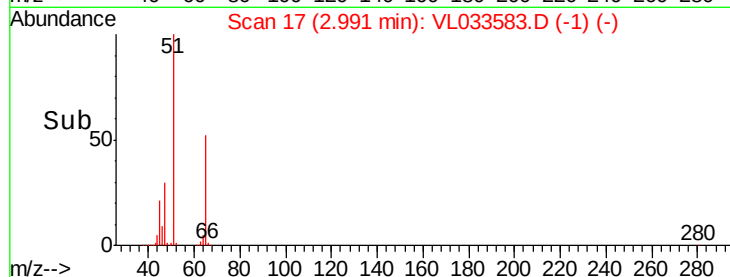
1000000

500000

0

Time-->

2.90 3.00 3.10



#4

Chloromethane

Concen: 0.447 ppbv

RT: 3.17 min Scan# 73

Delta R.T. 0.00 min

Lab File: VL033583.D

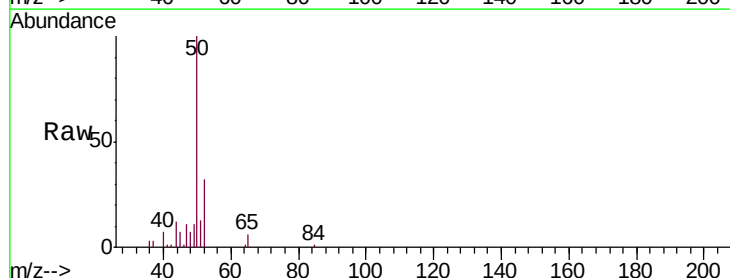
Acq: 11 Apr 2019 3:37

Tgt Ion: 50 Resp: 20836

Ion Ratio Lower Upper

50 100

52 31.6 25.0 37.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

3.17

15000

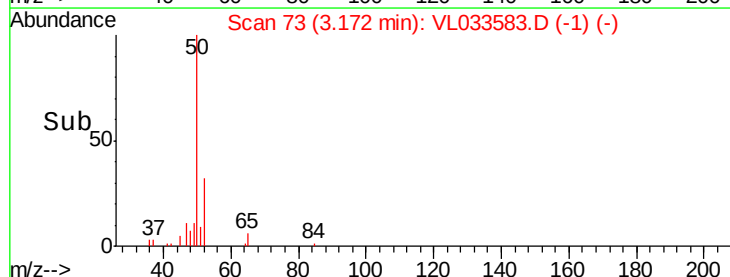
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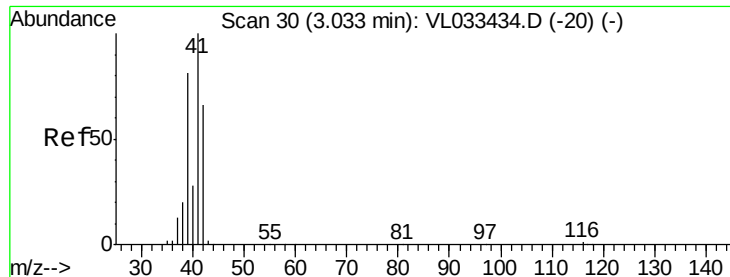
5000

0

Time-->

3.15 3.20





#9

Propene

Concen: 1.262 ppbv

RT: 3.24 min Scan# 93

Delta R.T. 0.20 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampleId :

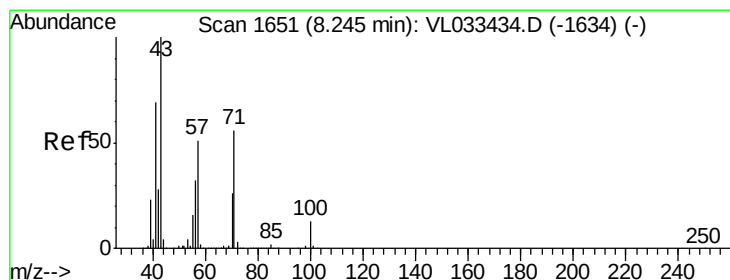
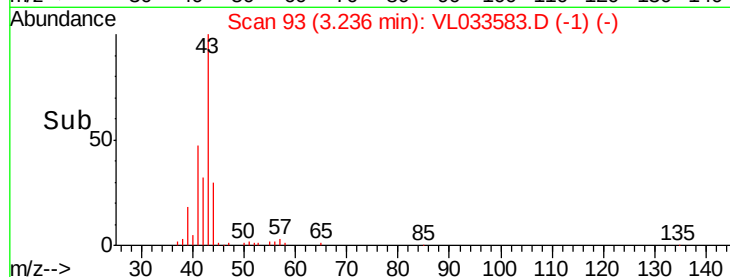
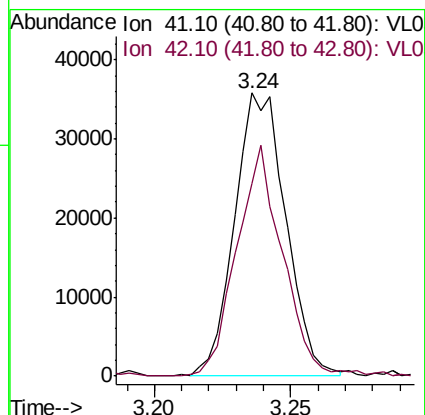
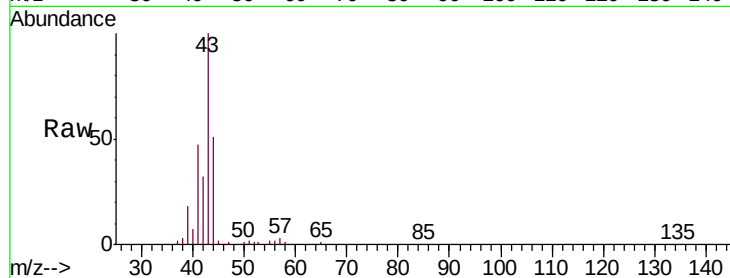
A-10

Tgt Ion: 41 Resp: 46726

Ion Ratio Lower Upper

41 100

42 73.2 53.9 80.9



#10

Heptane

Concen: 0.192 ppbv

RT: 8.25 min Scan# 1651

Delta R.T. -0.00 min

Lab File: VL033583.D

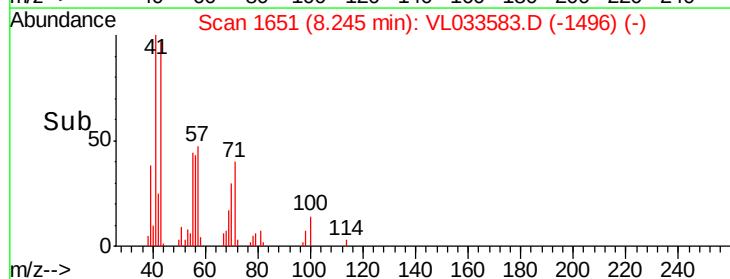
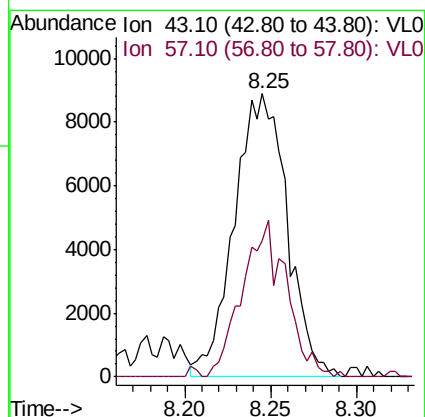
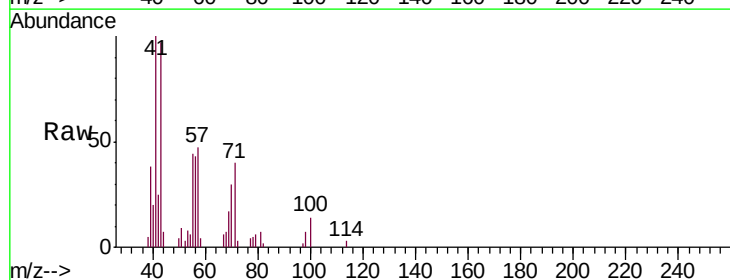
Acq: 11 Apr 2019 3:37

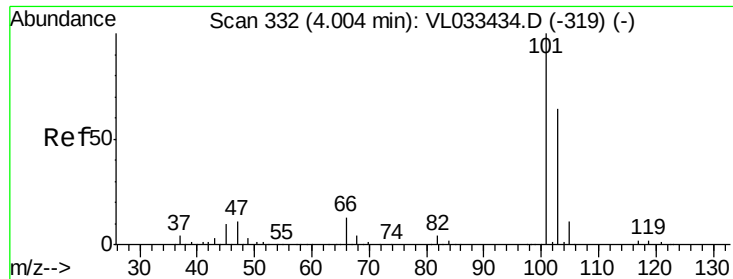
Tgt Ion: 43 Resp: 19038

Ion Ratio Lower Upper

43 100

57 46.6 40.6 60.8

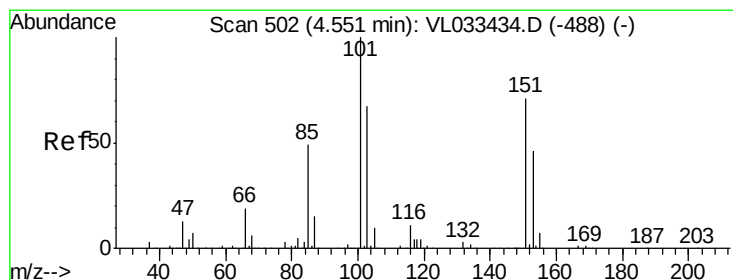
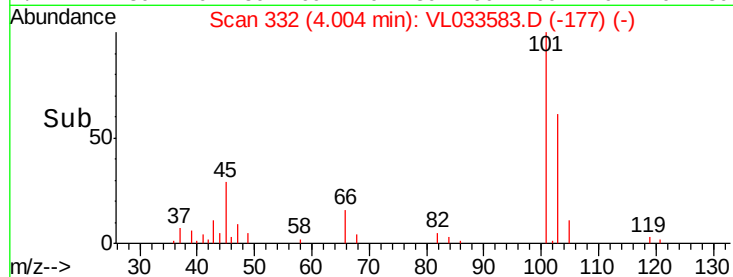
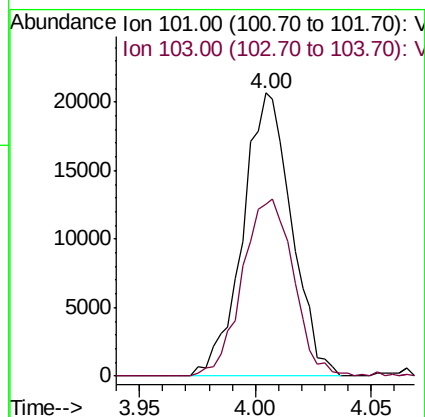
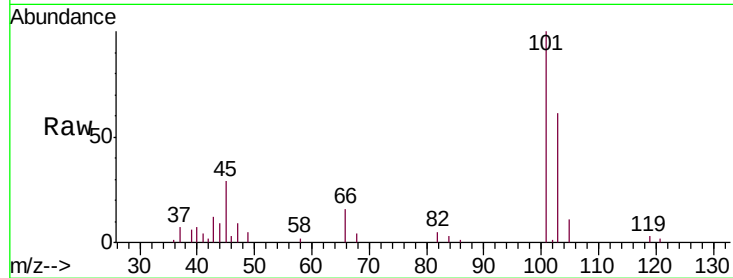




#11
 Trichlorofluoromethane
 Concen: 0.221 ppbv
 RT: 4.00 min Scan# 332
 Delta R.T. -0.00 min
 Lab File: VL033583.D
 Acq: 11 Apr 2019 3:37

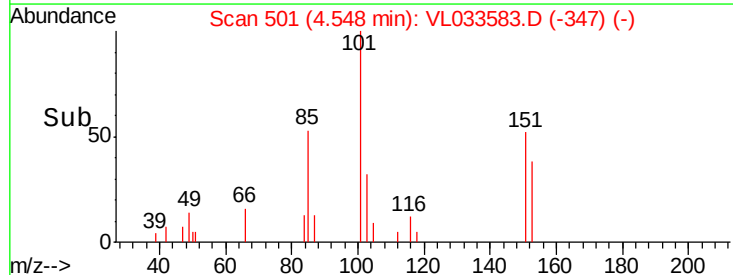
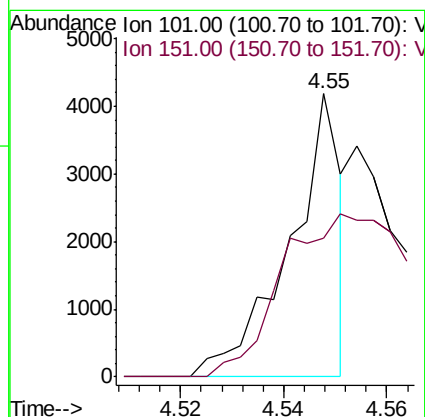
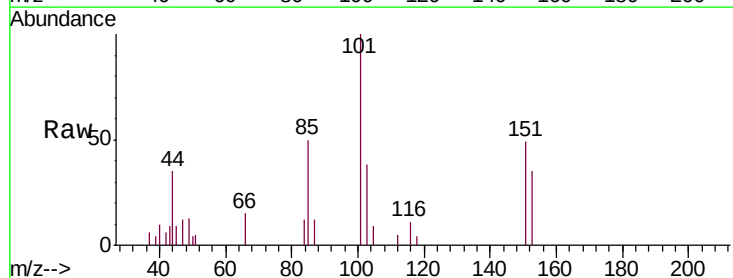
Instrument :
 MSVOA_L
 ClientSampleId :
 A-10

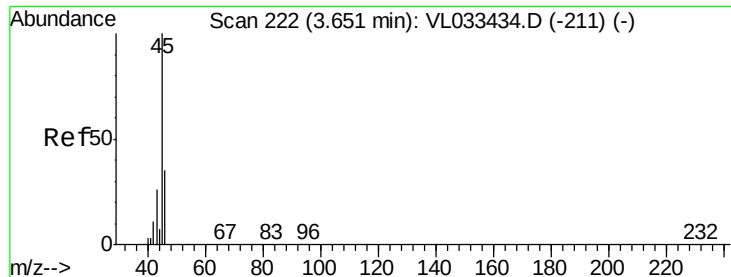
Tgt Ion:101 Resp: 30362
 Ion Ratio Lower Upper
 101 100
 103 60.7 51.3 76.9



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.031 ppbv
 RT: 4.55 min Scan# 501
 Delta R.T. -0.00 min
 Lab File: VL033583.D
 Acq: 11 Apr 2019 3:37

Tgt Ion:101 Resp: 2890
 Ion Ratio Lower Upper
 101 100
 151 0.0 57.7 86.5#





#13

Ethanol

Concen: 93.757 ppbv

RT: 3.65 min Scan# 222

Delta R.T. -0.00 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampled :

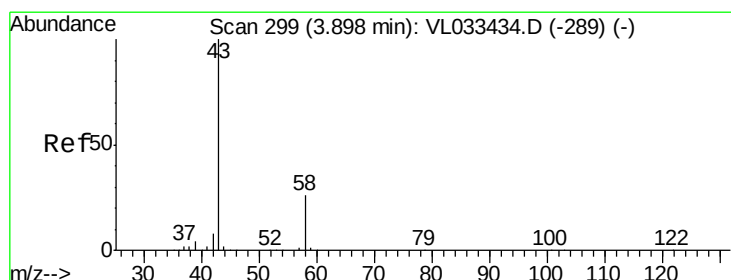
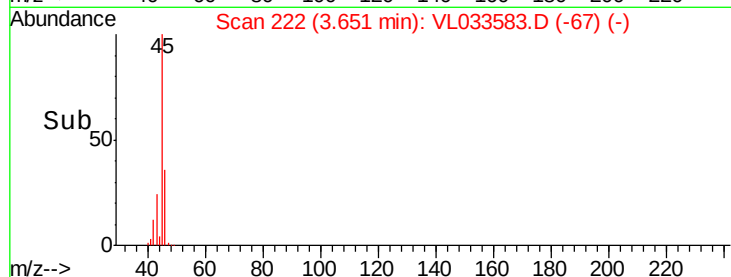
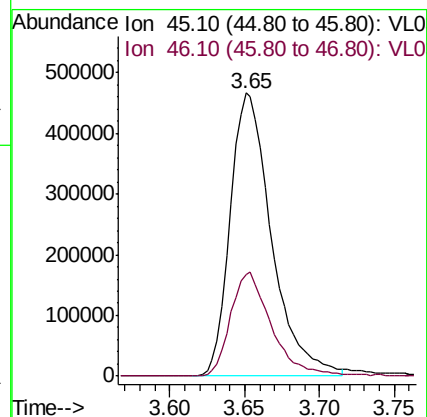
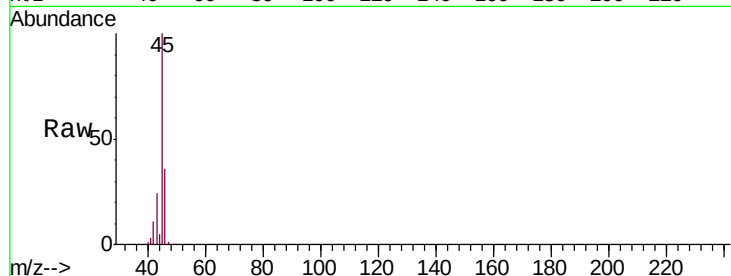
A-10

Tgt Ion: 45 Resp: 898383

Ion Ratio Lower Upper

45 100

46 36.7 25.4 101.8



#15

Acetone

Concen: 4.981 ppbv

RT: 3.90 min Scan# 300

Delta R.T. 0.00 min

Lab File: VL033583.D

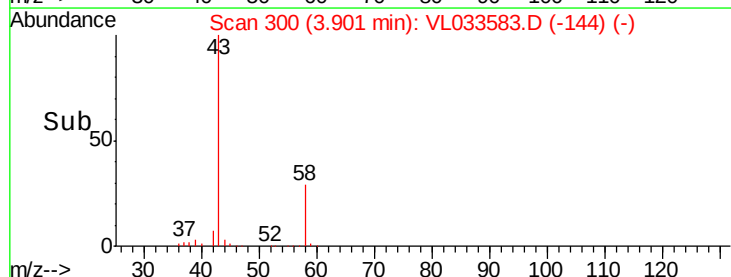
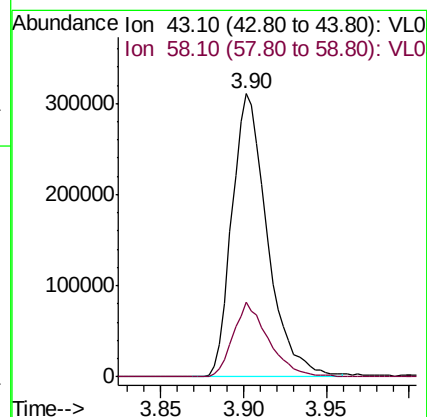
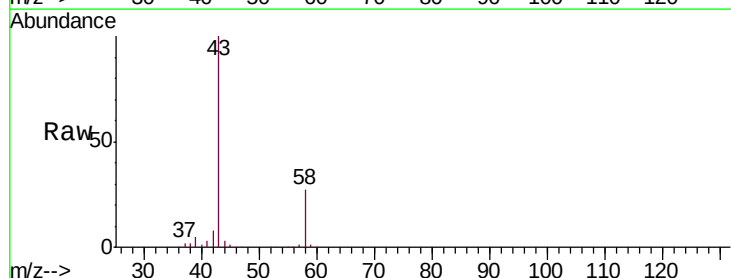
Acq: 11 Apr 2019 3:37

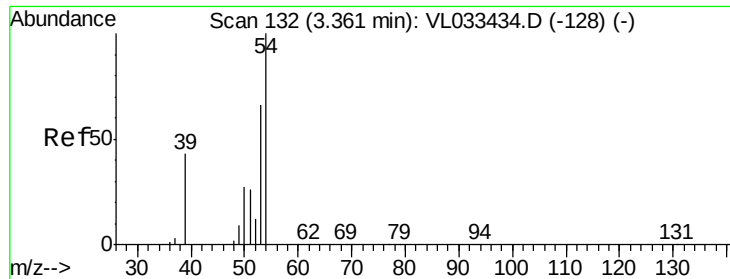
Tgt Ion: 43 Resp: 458669

Ion Ratio Lower Upper

43 100

58 26.5 20.5 30.7

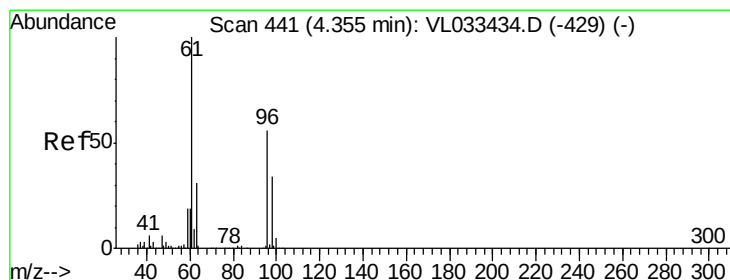
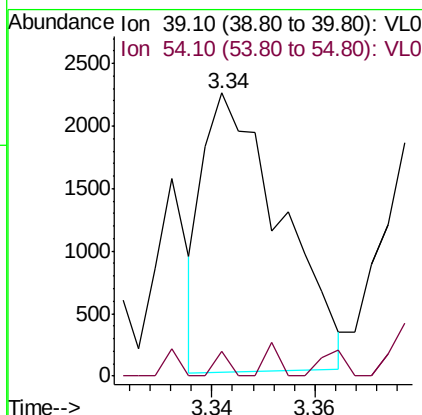
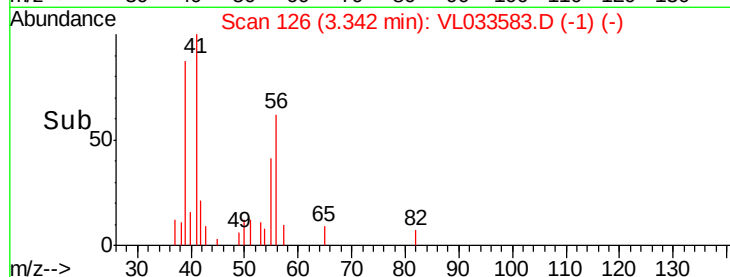
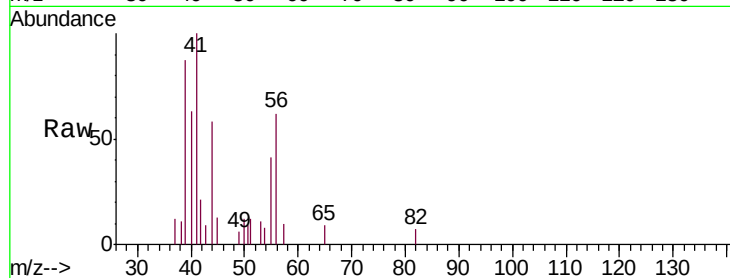




#16
1,3-Butadiene
Concen: 0.064 ppbv
RT: 3.34 min Scan# 126
Delta R.T. -0.02 min
Lab File: VL033583.D
Acq: 11 Apr 2019 3:37

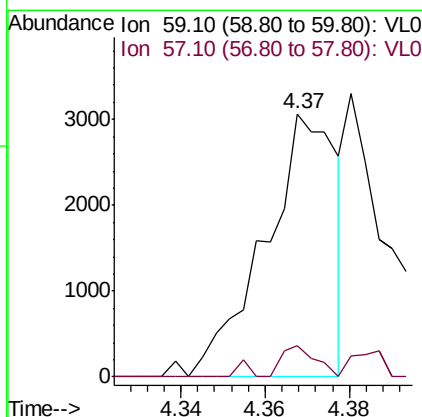
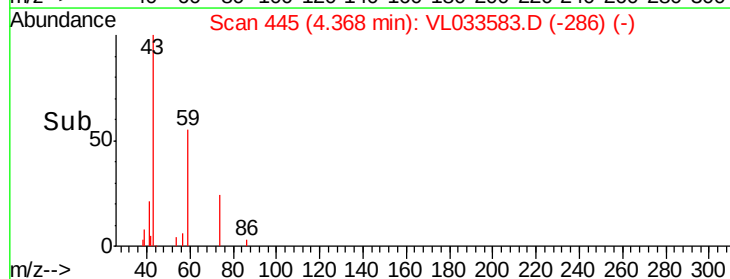
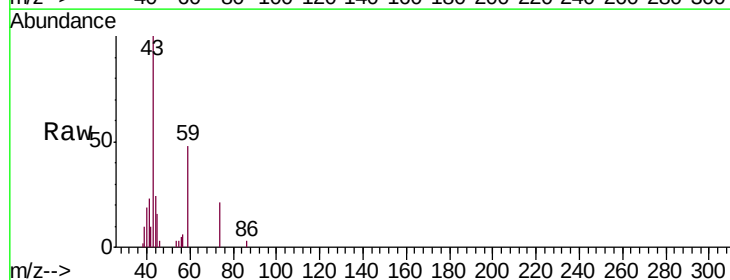
Instrument :
MSVOA_L
ClientSampleId :
A-10

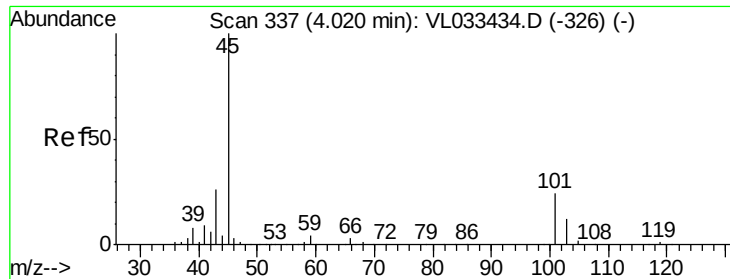
Tgt Ion: 39 Resp: 2336
Ion Ratio Lower Upper
39 100
54 0.0 69.4 104.2#



#17
tert-Butyl alcohol
Concen: 0.213 ppbv
RT: 4.37 min Scan# 445
Delta R.T. 0.01 min
Lab File: VL033583.D
Acq: 11 Apr 2019 3:37

Tgt Ion: 59 Resp: 3603
Ion Ratio Lower Upper
59 100
57 0.0 7.8 11.8#





#19

Isopropyl Alcohol

Concen: 5.221 ppbv

RT: 4.03 min Scan# 339

Delta R.T. 0.01 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampleId :

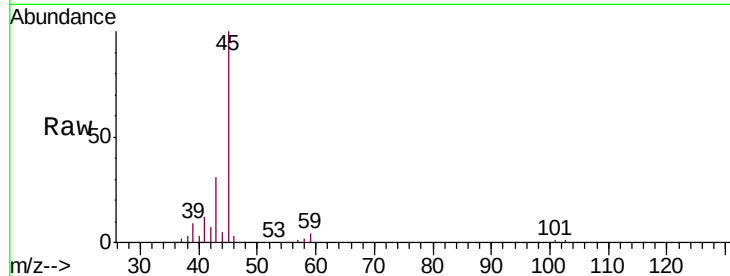
A-10

Tgt Ion: 45 Resp: 304115

Ion Ratio Lower Upper

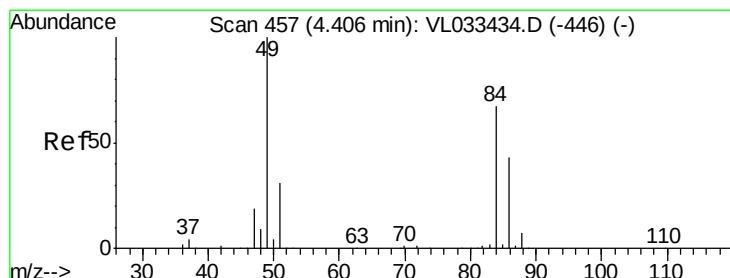
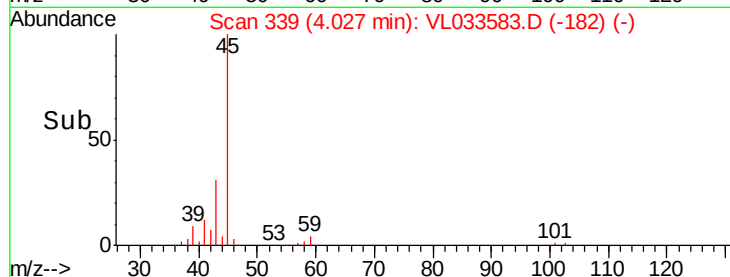
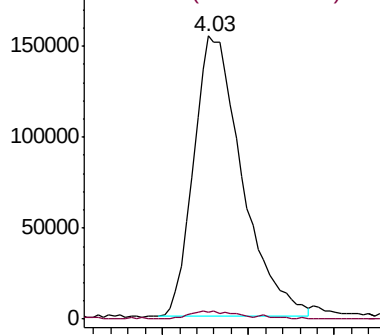
45 100

58 3.5 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: 4.607 ppbv

RT: 4.41 min Scan# 458

Delta R.T. 0.00 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Tgt Ion: 84 Resp: 180102

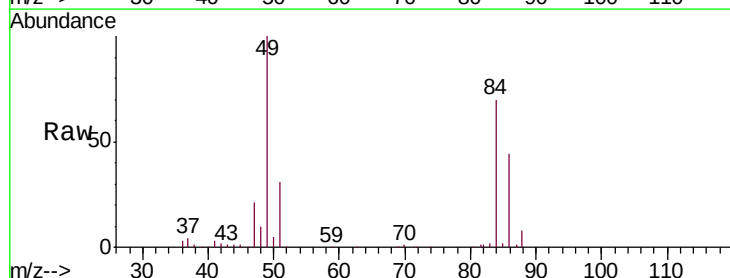
Ion Ratio Lower Upper

84 100

49 143.2 120.0 180.0

51 44.4 36.7 55.1

86 62.9 51.9 77.9

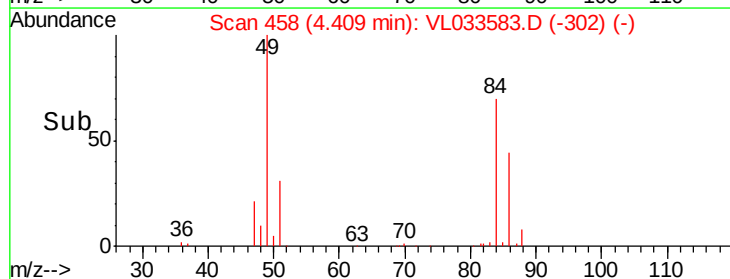
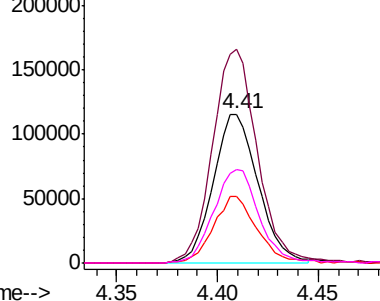


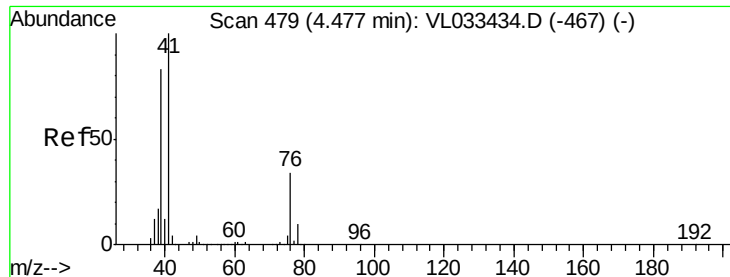
Abundance Ion 84.00 (83.70 to 84.70): VL0

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: 0.088 ppbv

RT: 4.41 min Scan# 458

Delta R.T. -0.07 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampleId :

A-10

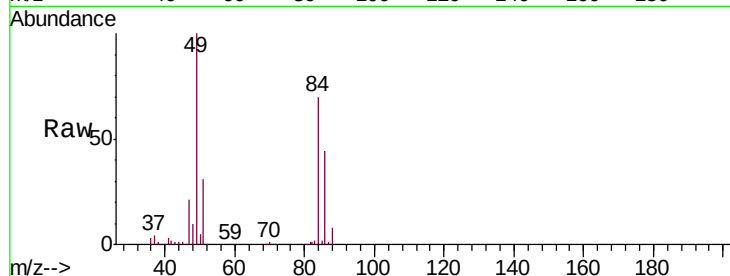
Tgt Ion: 41 Resp: 5134

Ion Ratio Lower Upper

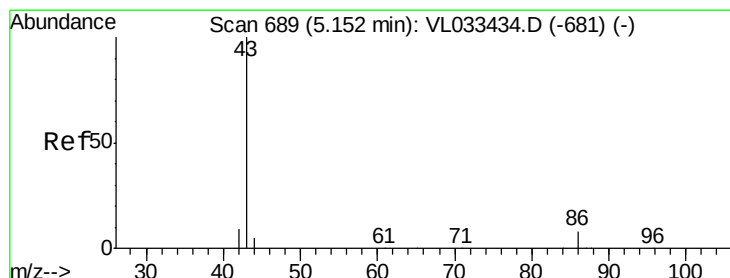
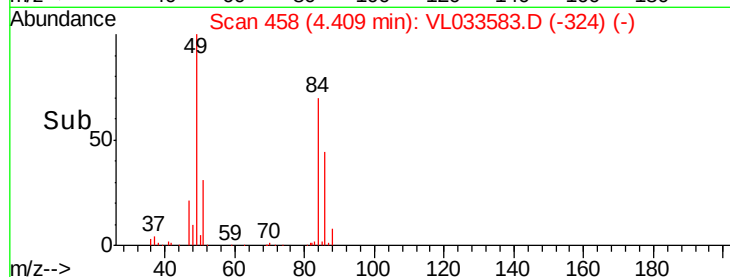
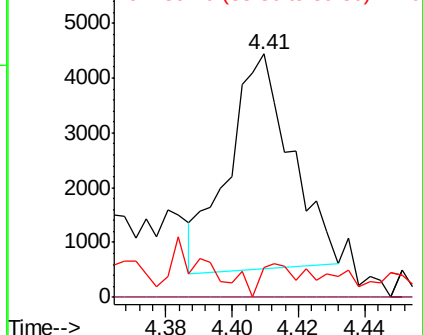
41 100

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: 0.110 ppbv

RT: 5.14 min Scan# 686

Delta R.T. -0.01 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Tgt Ion: 43 Resp: 14441

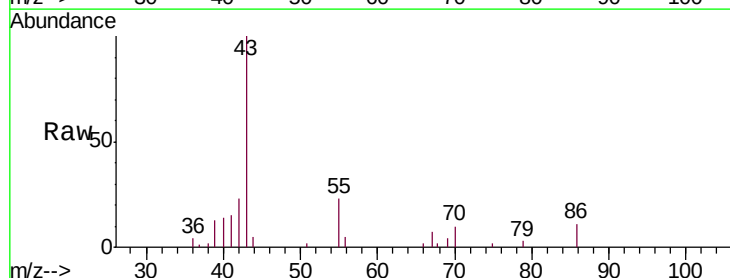
Ion Ratio Lower Upper

43 100

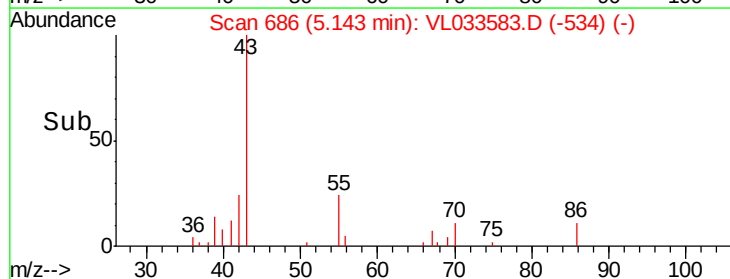
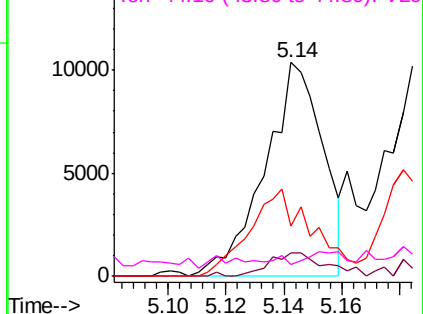
86 10.3 5.6 8.4#

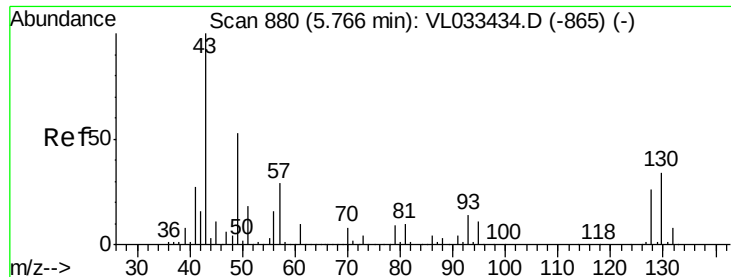
42 22.0 8.0 12.0#

44 0.0 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: 3.211 ppbv

RT: 5.77 min Scan# 882

Delta R.T. 0.01 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampleId :

A-10

Tgt Ion: 43 Resp: 548561

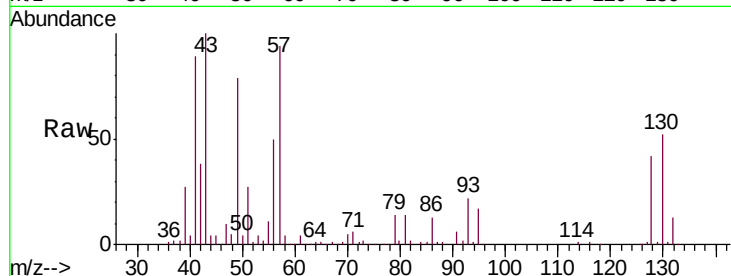
Ion Ratio Lower Upper

43 100

45 5.7 7.8 11.6#

61 4.9 7.3 10.9#

70 4.5 5.6 8.4#

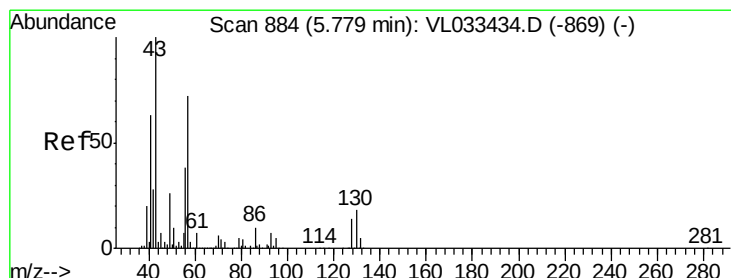
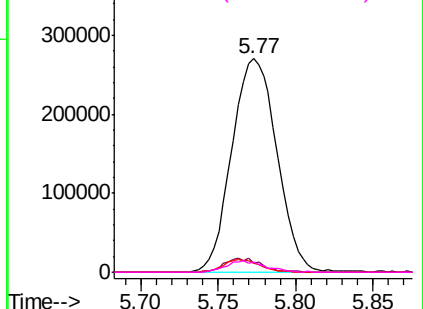
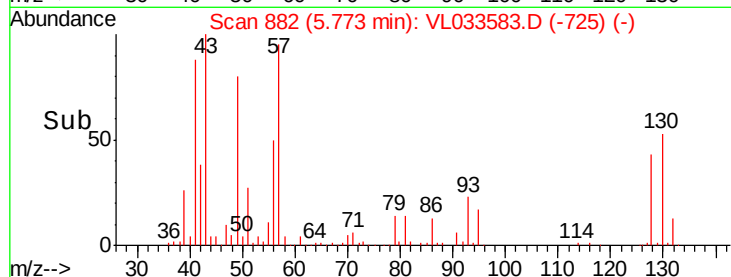


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 6.353 ppbv

RT: 5.78 min Scan# 883

Delta R.T. -0.00 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Tgt Ion: 57 Resp: 482647

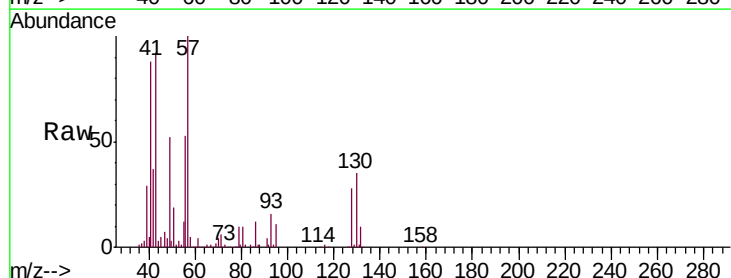
Ion Ratio Lower Upper

57 100

41 91.8 70.7 106.1

43 114.4 182.6 274.0#

56 54.0 42.0 63.0

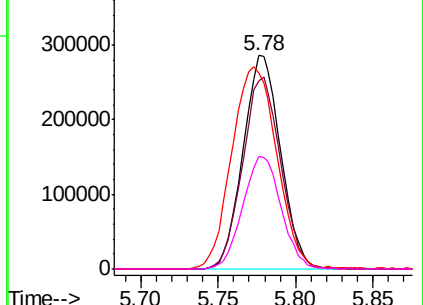
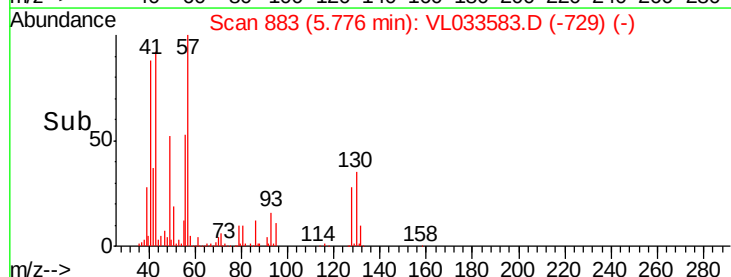


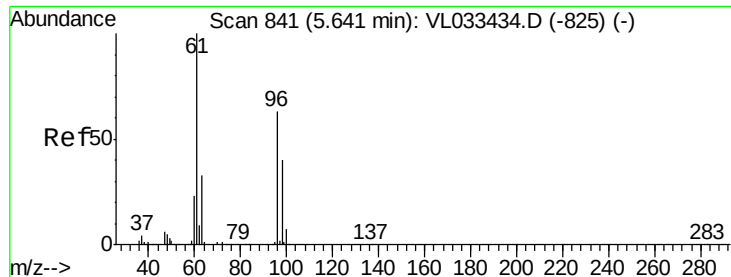
Abundance Ion 57.10 (56.80 to 57.80): VL0

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



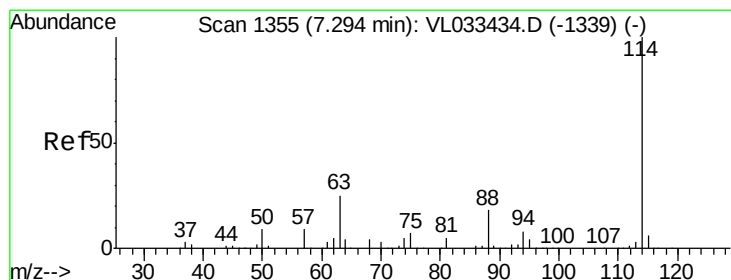
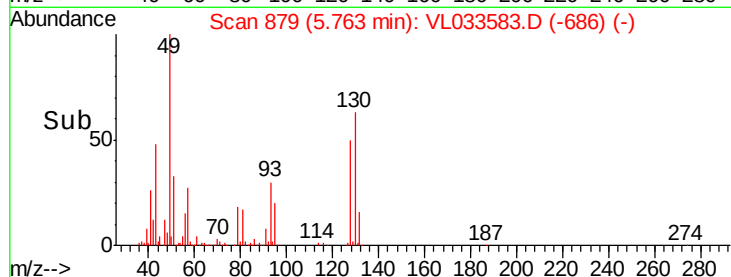
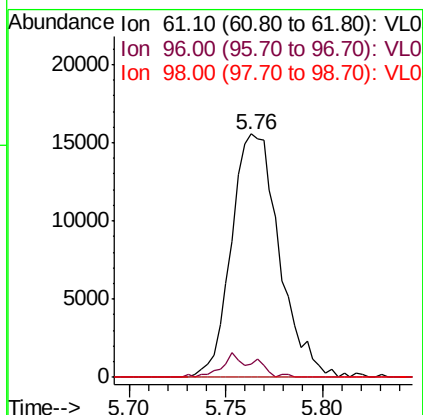
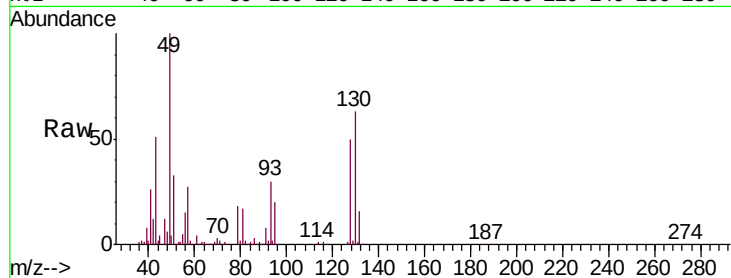


#31

cis-1,2-Dichloroethene
 Concen: 0.354 ppbv
 RT: 5.76 min Scan# 879
 Delta R.T. 0.12 min
 Lab File: VL033583.D
 Acq: 11 Apr 2019 3:37

Instrument :
 MSVOA_L
 ClientSampled :
 A-10

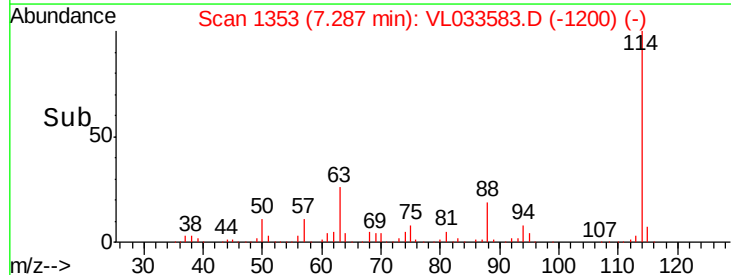
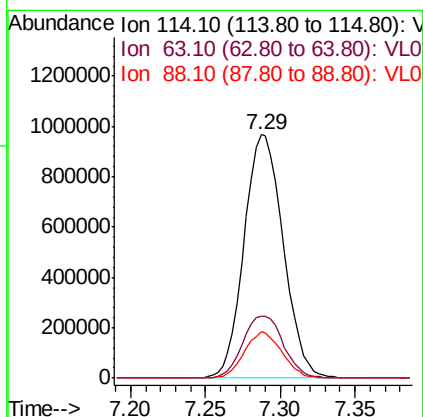
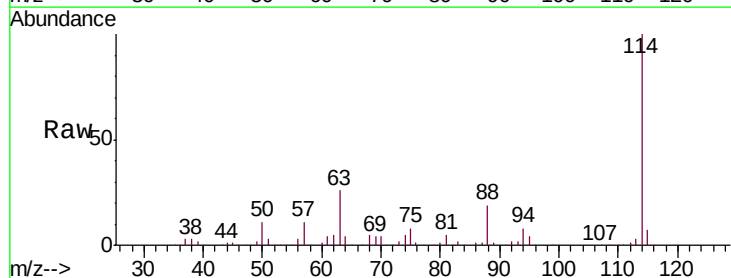
Tgt Ion: 61 Resp: 26752
 Ion Ratio Lower Upper
 61 100
 96 5.2 50.6 76.0#
 98 0.0 32.2 48.2#

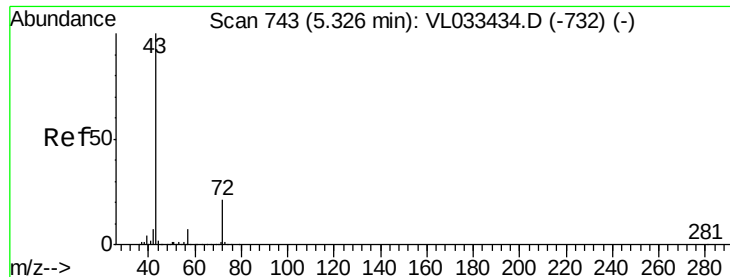


#33

1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.29 min Scan# 1353
 Delta R.T. -0.01 min
 Lab File: VL033583.D
 Acq: 11 Apr 2019 3:37

Tgt Ion: 114 Resp: 1765528
 Ion Ratio Lower Upper
 114 100
 63 26.5 21.5 32.3
 88 18.3 14.5 21.7

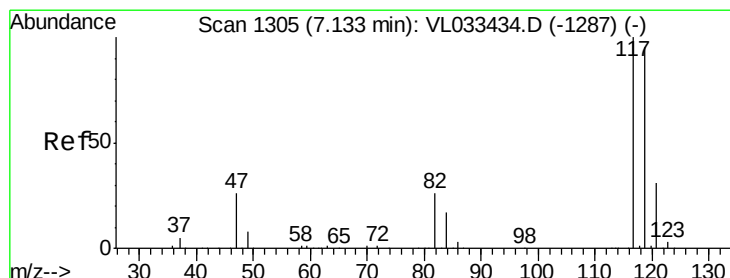
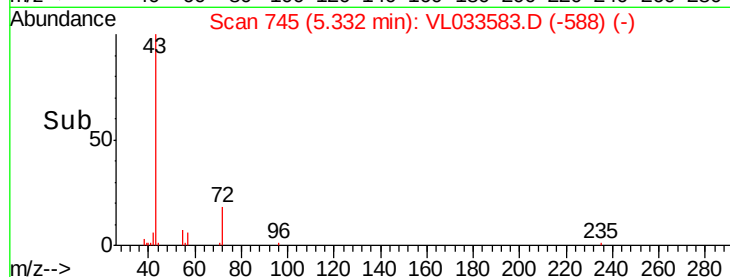
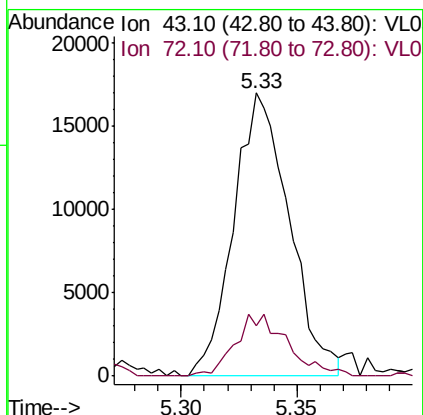
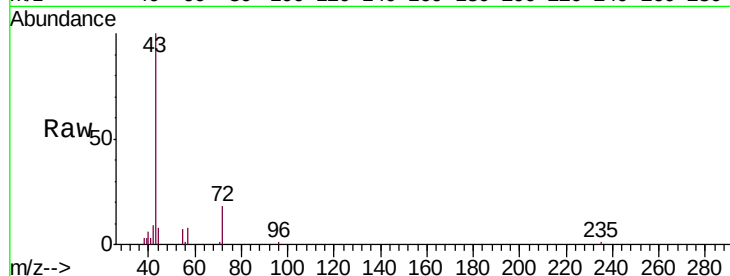




#34
2-Butanone
Concen: 0.266 ppbv
RT: 5.33 min Scan# 745
Delta R.T. 0.01 min
Lab File: VL033583.D
Acq: 11 Apr 2019 3:37

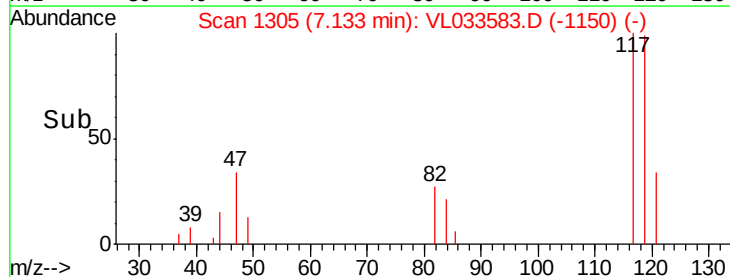
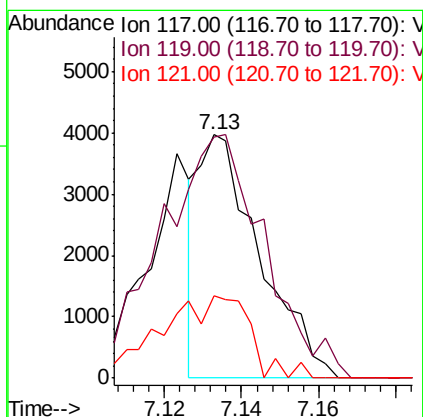
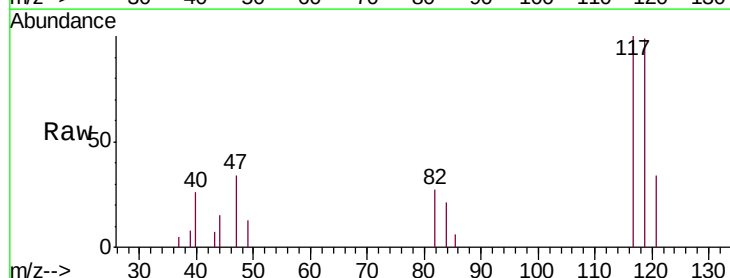
Instrument :
MSVOA_L
ClientSampleId :
A-10

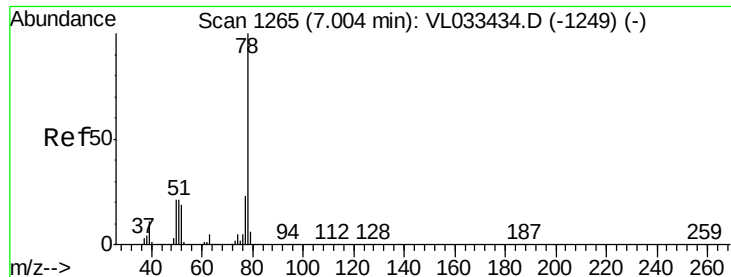
Tgt Ion: 43 Resp: 28188
Ion Ratio Lower Upper
43 100
72 20.6 17.4 26.2



#35
Carbon Tetrachloride
Concen: 0.035 ppbv
RT: 7.13 min Scan# 1305
Delta R.T. -0.00 min
Lab File: VL033583.D
Acq: 11 Apr 2019 3:37

Tgt Ion: 117 Resp: 4337
Ion Ratio Lower Upper
117 100
119 92.8 75.8 113.8
121 33.9 24.7 37.1





#36

Benzene

Concen: 0.100 ppbv

RT: 7.00 min Scan# 1264

Delta R.T. -0.00 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampleId :

A-10

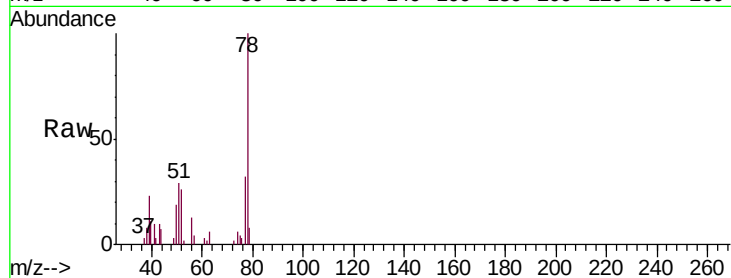
Tgt Ion: 78 Resp: 14796

Ion Ratio Lower Upper

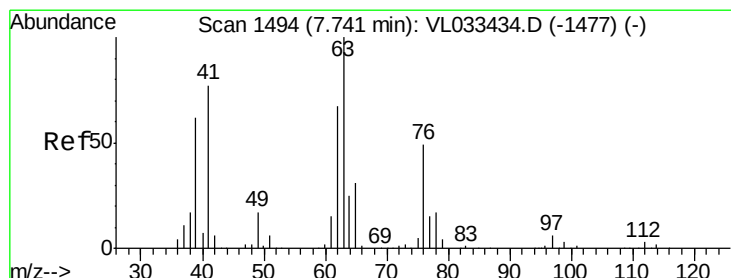
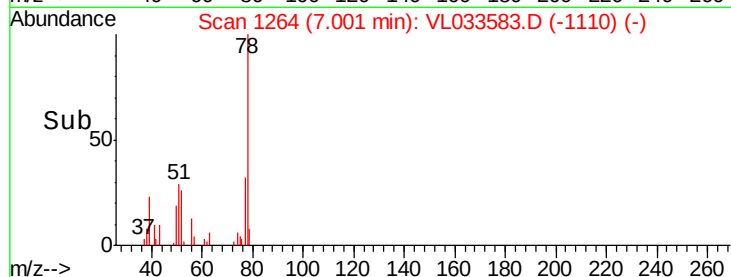
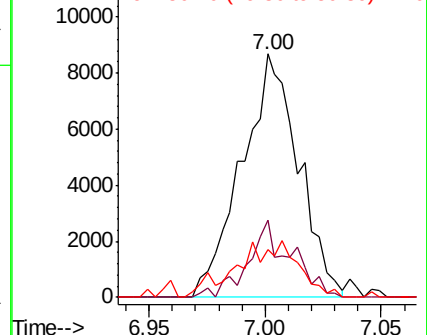
78 100

77 31.5 18.1 27.1#

50 19.4 16.7 25.1



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 8.038 ppbv

RT: 7.29 min Scan# 1354

Delta R.T. -0.45 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

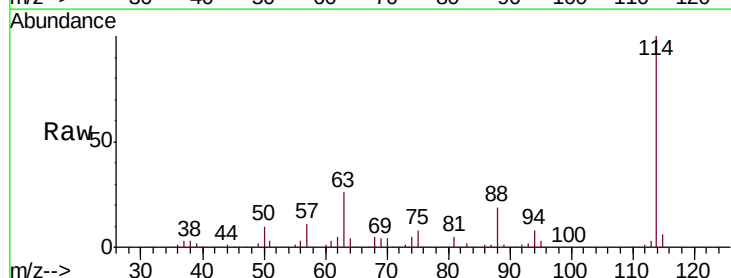
Tgt Ion: 63 Resp: 466426

Ion Ratio Lower Upper

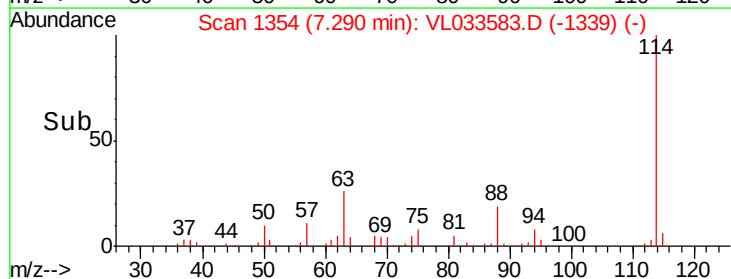
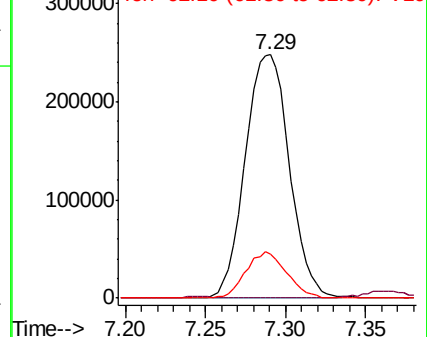
63 100

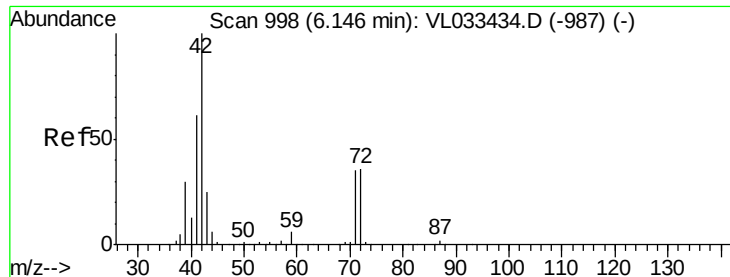
41 0.0 61.2 91.8#

62 18.0 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: 3.415 ppbv

RT: 5.78 min Scan# 884

Delta R.T. -0.37 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampled :

A-10

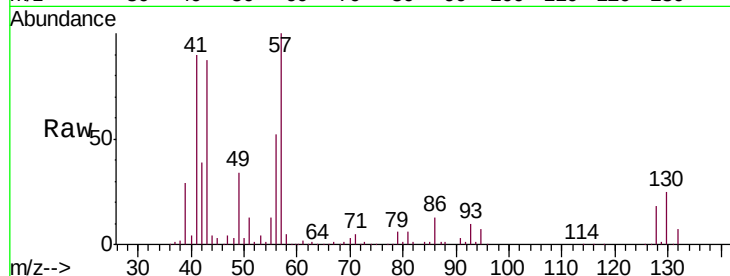
Tgt Ion: 42 Resp: 199245

Ion Ratio Lower Upper

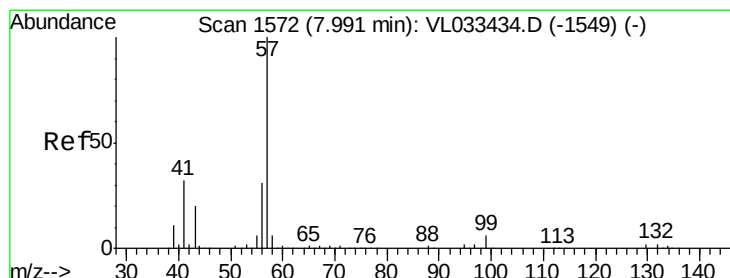
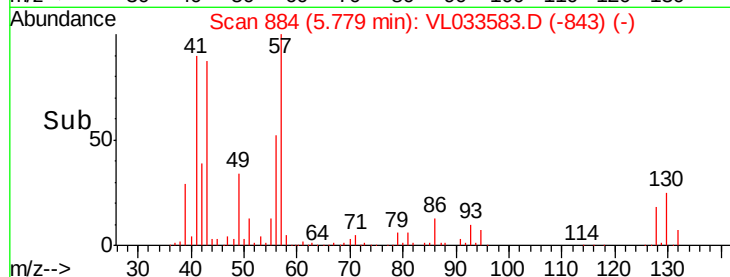
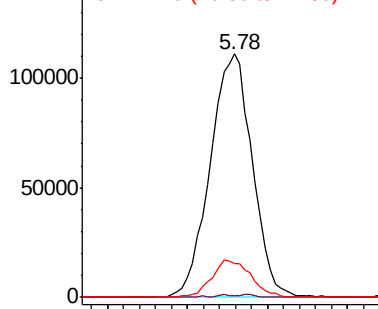
42 100

72 1.0 30.2 45.2#

71 14.3 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: 0.038 ppbv

RT: 7.99 min Scan# 1572

Delta R.T. -0.00 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

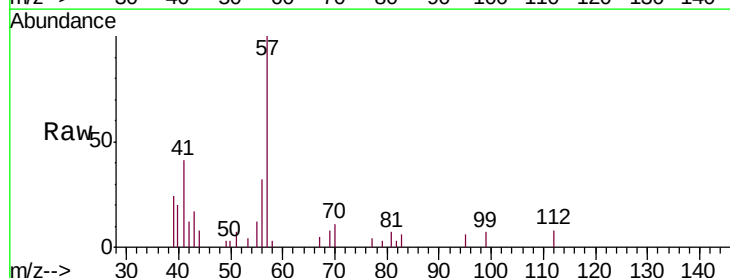
Tgt Ion: 57 Resp: 9954

Ion Ratio Lower Upper

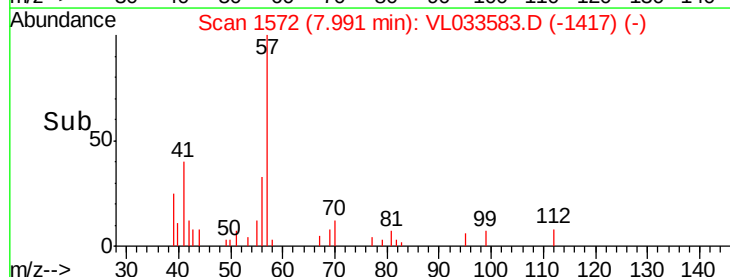
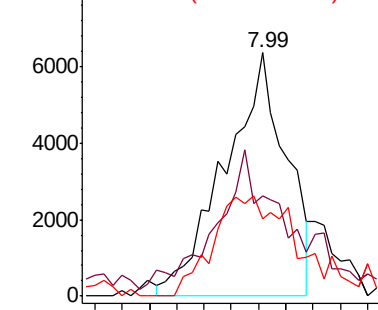
57 100

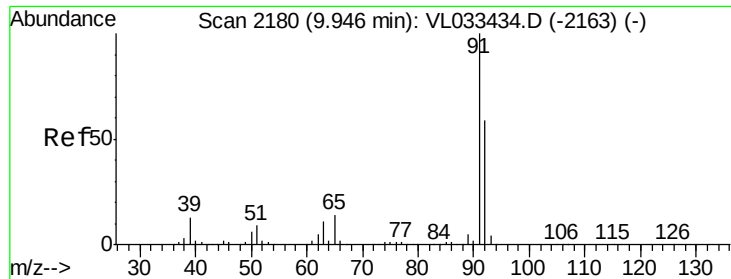
41 79.5 26.0 39.0#

56 61.1 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: 2.976 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.00 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampled :

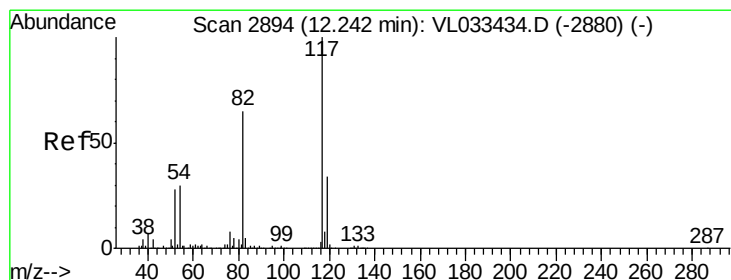
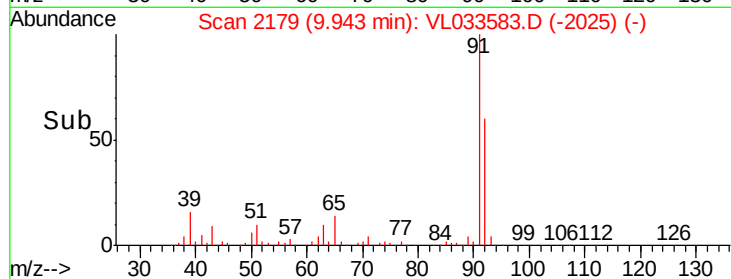
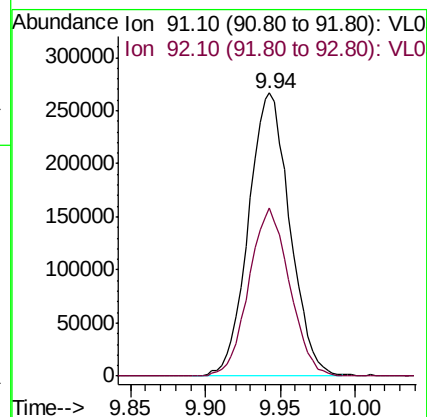
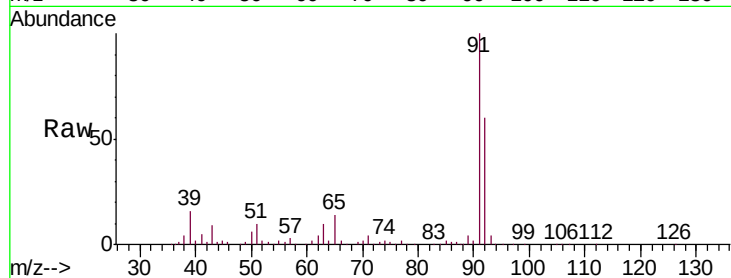
A-10

Tgt Ion: 91 Resp: 512380

Ion Ratio Lower Upper

91 100

92 58.7 47.4 71.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2892

Delta R.T. -0.01 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

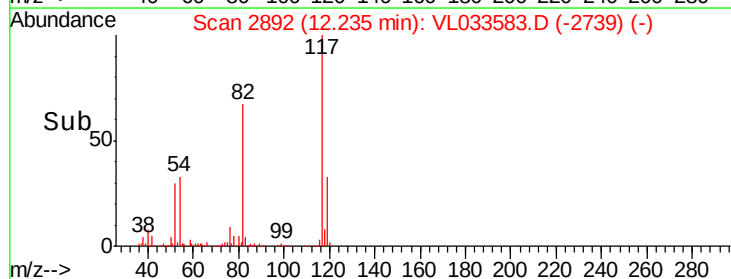
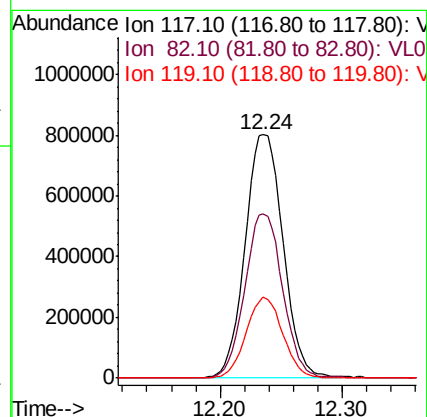
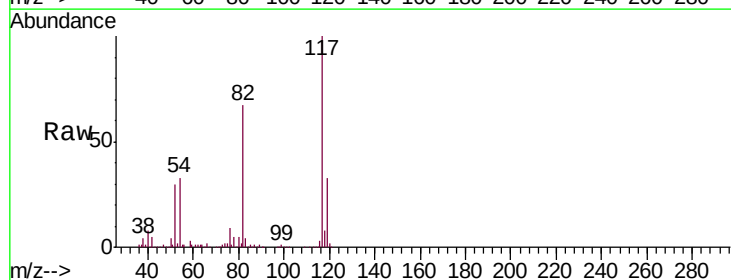
Tgt Ion: 117 Resp: 1720071

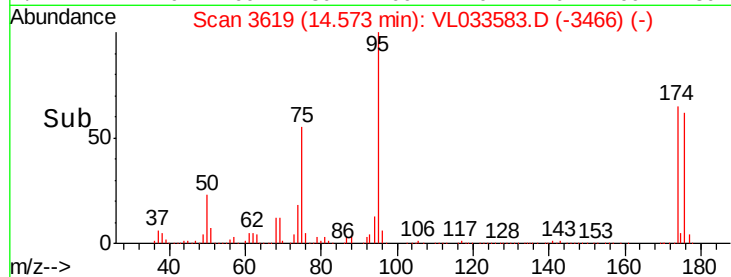
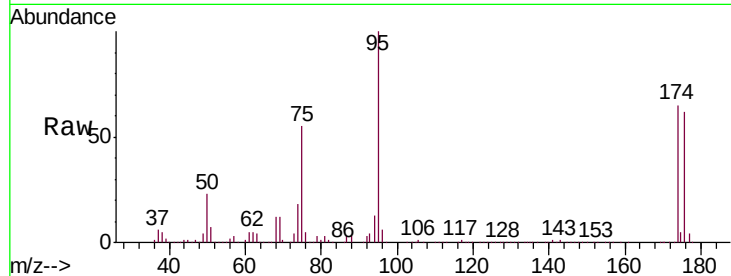
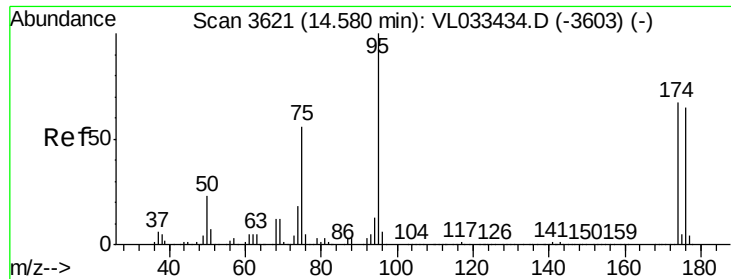
Ion Ratio Lower Upper

117 100

82 67.7 51.5 77.3

119 32.3 25.5 38.3





#68

1-Bromo-4-Fluorobenzene

Concen: 10.248 ppbv

RT: 14.57 min Scan# 3619

Delta R.T. -0.01 min

Lab File: VL033583.D

Acq: 11 Apr 2019 3:37

Instrument :

MSVOA_L

ClientSampleId :

A-10

Tgt Ion: 95 Resp: 1381862

Ion Ratio Lower Upper

95 100

174 66.9 52.9 79.3

175 4.9 3.8 5.6

