

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032919\
 Data File : VL033503.D
 Acq On : 29 Mar 2019 15:36
 Operator : SY/AP
 Sample : K2042-17DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

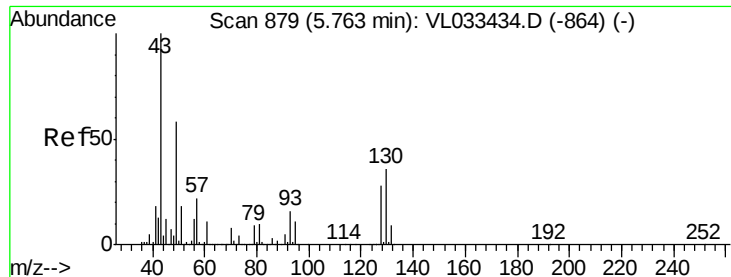
Quant Time: Mar 30 01:10:38 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 26 16:00:50 2019
 QLast Update : Tue Mar 26 16:00:50 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	851056	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1904601	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1904333	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.58	95	1481957	9.93	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	44555	0.36	ppbv	97
3) Chlorodifluoromethane	2.99	51	107499	1.10	ppbv #	70
4) Chloromethane	3.17	50	26949	0.52	ppbv	91
9) Propene	3.24	41	367215	8.92	ppbv	95
10) Heptane	8.24	43	6472	0.06	ppbv #	73
11) Trichlorofluoromethane	4.00	101	20631	0.13	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.55	101	4434	0.04	ppbv #	14
13) Ethanol	3.65	45	1089751	102.35	ppbv	65
15) Acetone	3.90	43	597194	5.84	ppbv	100
16) 1,3-Butadiene	3.35	39	2971	0.07	ppbv #	49
17) tert-Butyl alcohol	4.37	59	5388	0.29	ppbv #	73
19) Isopropyl Alcohol	4.03	45	118817	1.84	ppbv #	93
20) Methylene Chloride	4.41	84	300340	6.91	ppbv	93
21) Allyl Chloride	4.41	41	8622	0.13	ppbv #	19
23) Vinyl Acetate	5.15	43	23494	0.16	ppbv #	84
25) Ethyl Acetate	5.78	43	361608	1.90	ppbv #	80
26) Hexane	5.78	57	488315	5.78	ppbv #	41
29) Chloroform	5.84	83	22379	0.15	ppbv	94
34) 2-Butanone	5.33	43	33062	0.29	ppbv	98
35) Carbon Tetrachloride	7.13	117	8851	0.07	ppbv #	89
36) Benzene	7.00	78	33916	0.21	ppbv	99
39) 1,2-Dichloropropane	7.29	63	503612	8.04	ppbv #	23
41) Tetrahydrofuran	5.78	42	184483	2.93	ppbv #	51
44) 2,2,4-Trimethylpentane	7.99	57	20358	0.07	ppbv #	68
53) Toluene	9.94	91	802106	4.32	ppbv	99
60) o-Xylene	13.85	91	6687	0.03	ppbv	70

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.00 min

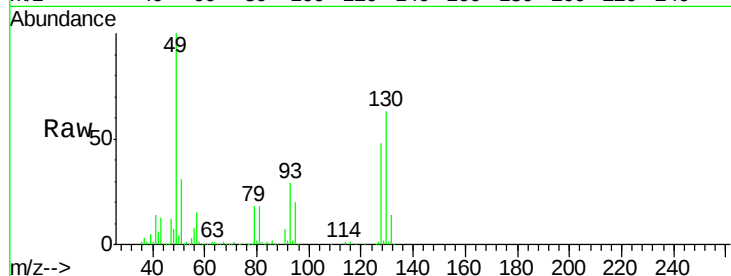
Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 49 Resp: 851056

Ion	Ratio	Lower	Upper
49	100		
128	48.3	24.0	72.0
130	62.6	31.2	93.6



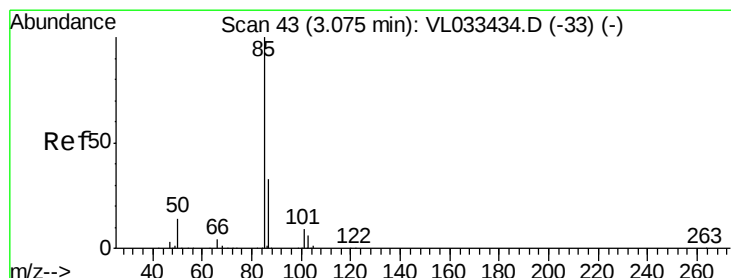
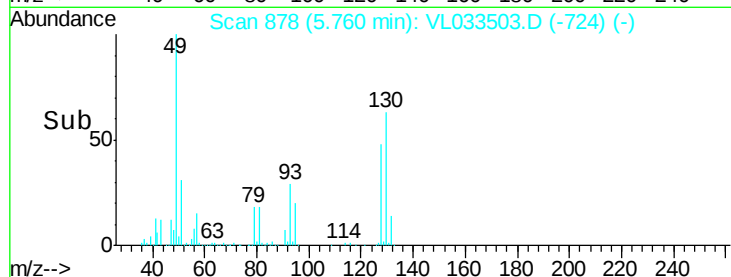
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

5.76

Time-->



#2

Dichlorodifluoromethane

Concen: 0.36 ppbv

RT: 3.08 min Scan# 44

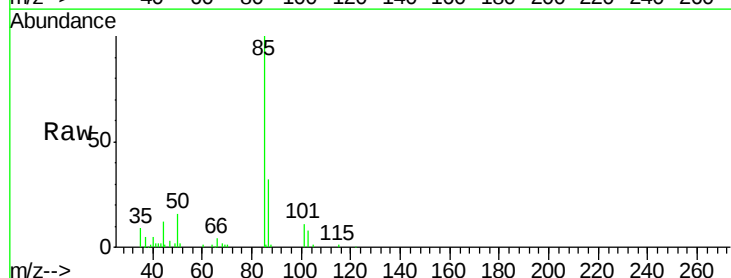
Delta R.T. 0.00 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Tgt Ion: 85 Resp: 44555

Ion	Ratio	Lower	Upper
85	100		
87	31.8	26.7	40.1

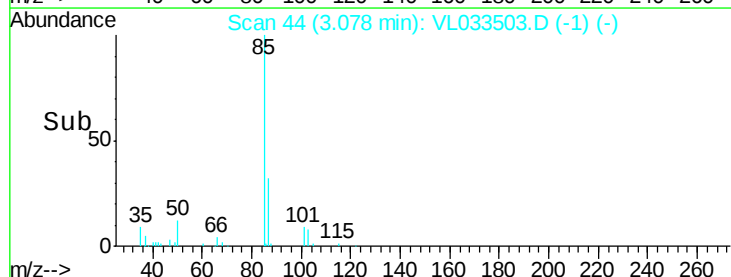


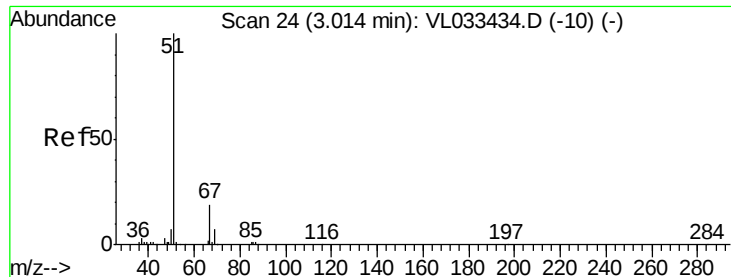
Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.08

Time-->

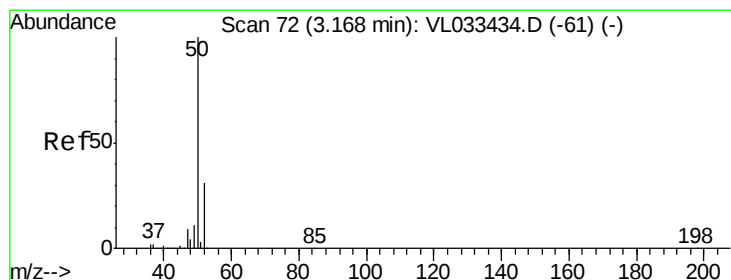
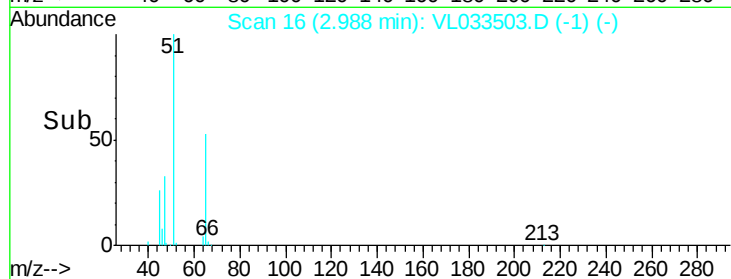
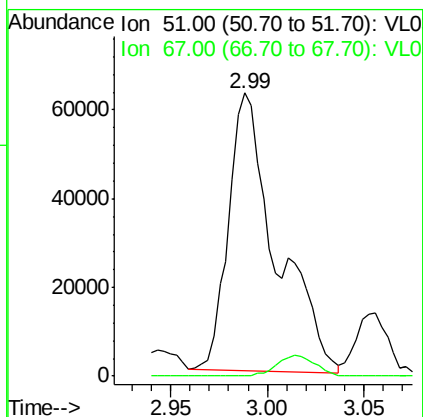
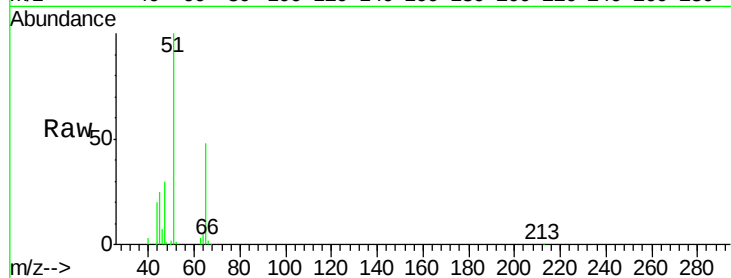




#3
Chlorodifluoromethane
Concen: 1.10 ppbv
RT: 2.99 min Scan# 16
Delta R.T. -0.03 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

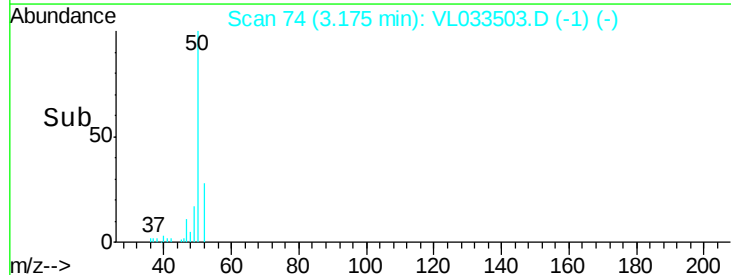
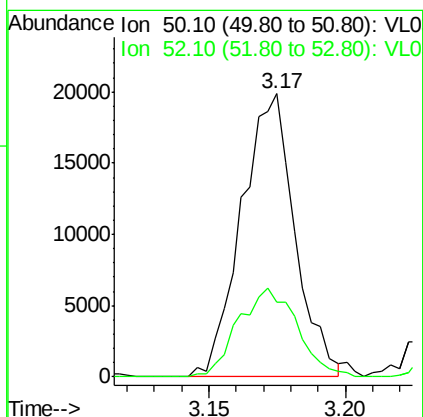
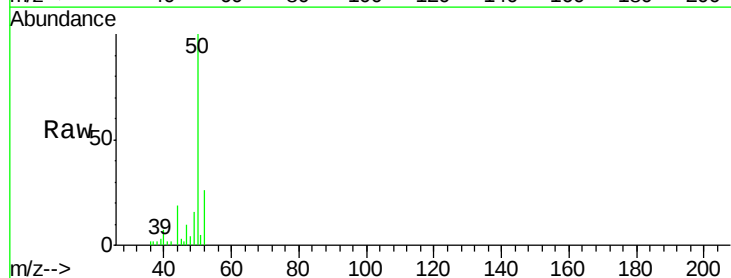
Instrument :
MSVOA_L
ClientSampled :

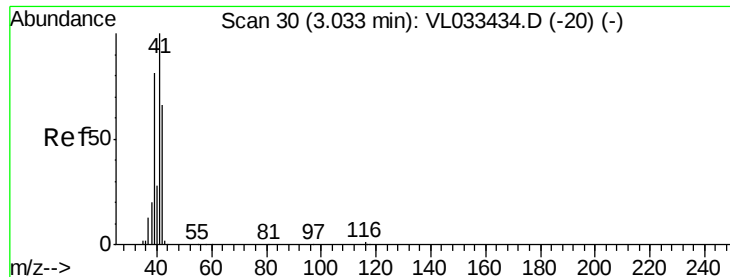
Tot Ion: 51 Resp: 107499
Ion Ratio Lower Upper
51 100
67 6.1 15.7 23.5#



#4
Chloromethane
Concen: 0.52 ppbv
RT: 3.17 min Scan# 74
Delta R.T. 0.01 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Tgt Ion: 50 Resp: 26949
Ion Ratio Lower Upper
50 100
52 26.3 25.0 37.6





#9

Propene

Concen: 8.92 ppbv

RT: 3.24 min Scan# 94

Delta R.T. 0.21 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :

MSVOA_L

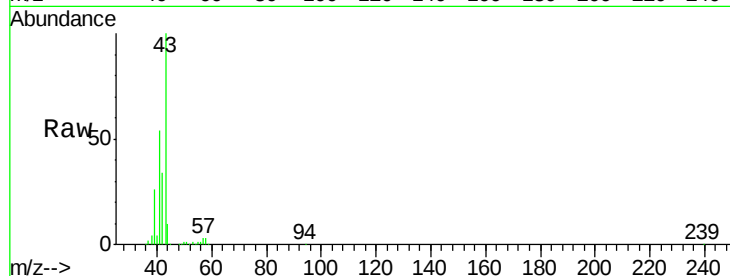
ClientSampleId :

Tot Ion: 41 Resp: 367215

Ion Ratio Lower Upper

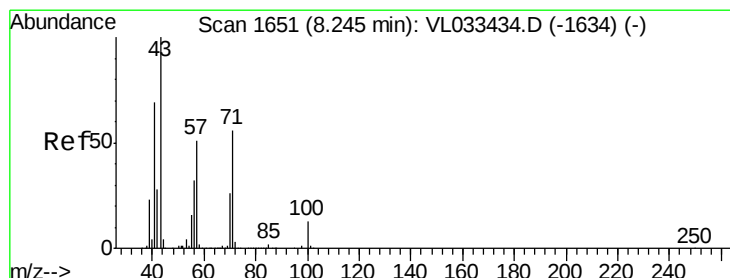
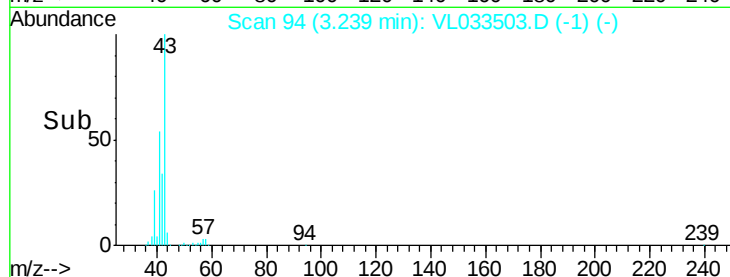
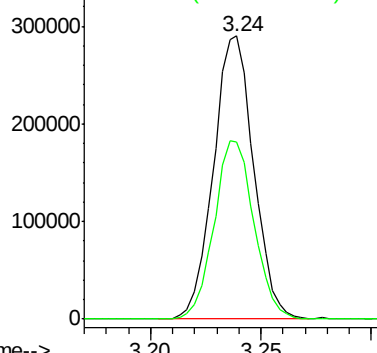
41 100

42 63.2 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: 0.06 ppbv

RT: 8.24 min Scan# 1650

Delta R.T. -0.00 min

Lab File: VL033503.D

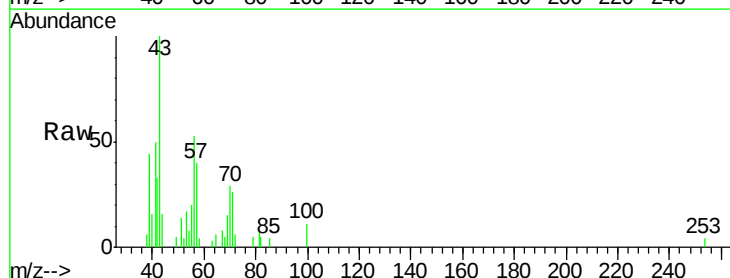
Acq: 29 Mar 2019 15:36

Tgt Ion: 43 Resp: 6472

Ion Ratio Lower Upper

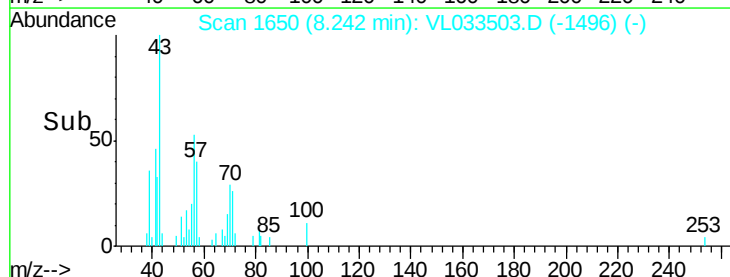
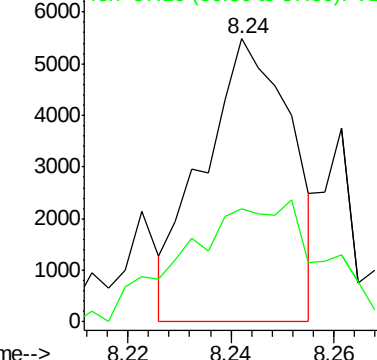
43 100

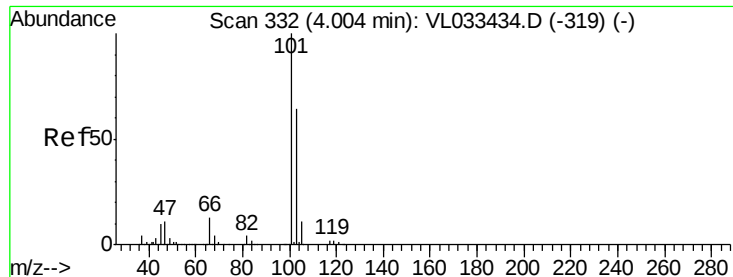
57 69.5 40.6 60.8#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

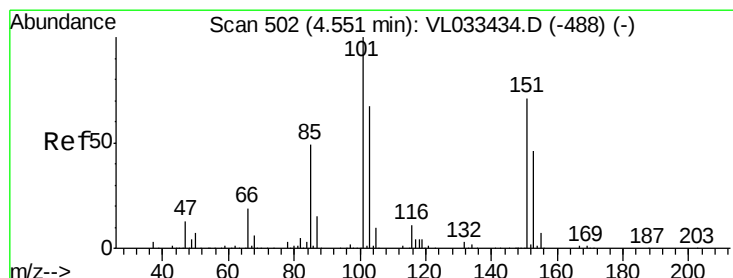
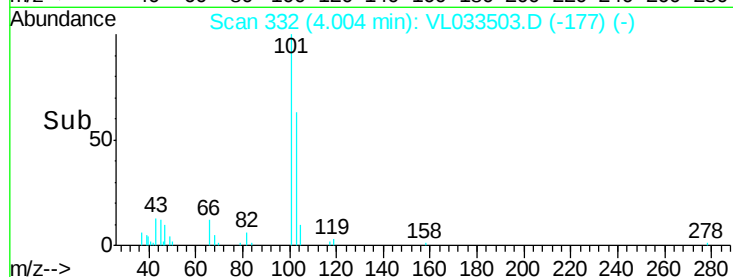
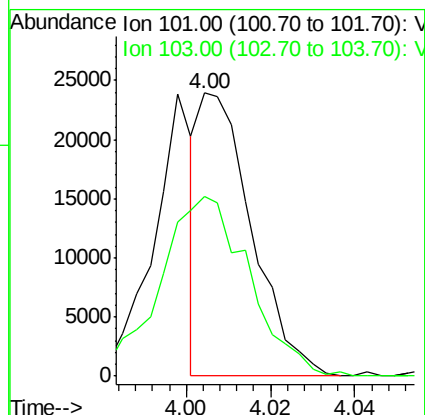
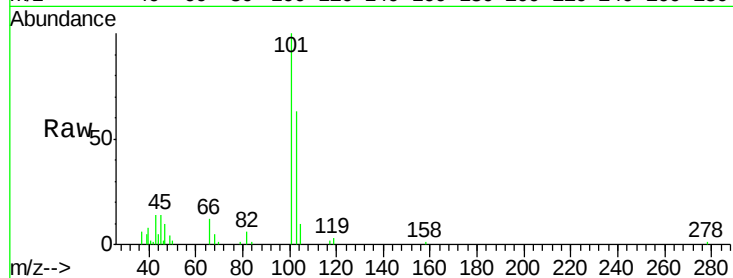




#11
 Trichlorofluoromethane
 Concen: 0.13 ppbv
 RT: 4.00 min Scan# 332
 Delta R.T. -0.00 min
 Lab File: VL033503.D
 Acq: 29 Mar 2019 15:36

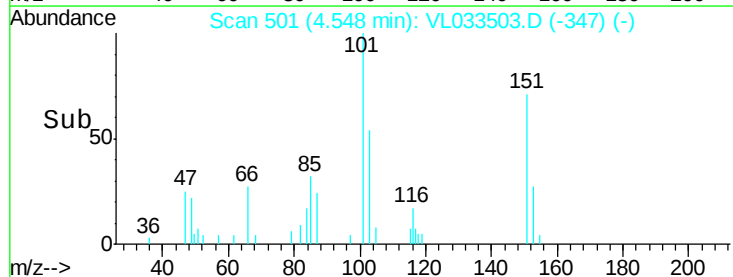
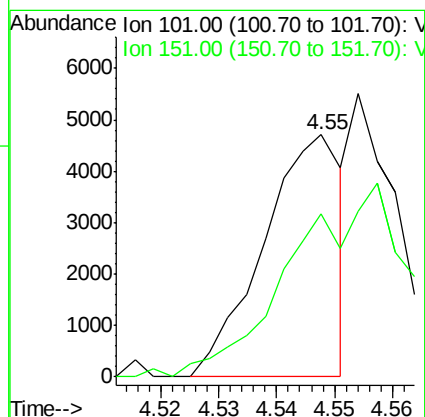
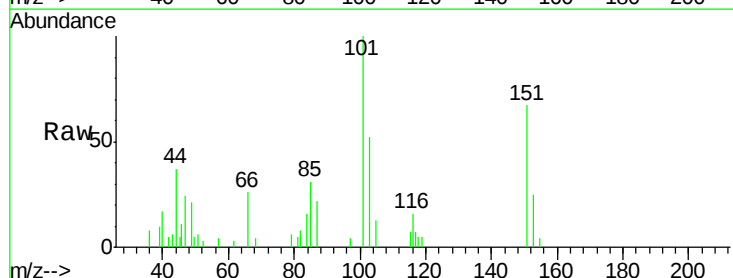
Instrument :
 MSVOA_L
 ClientSampleId :

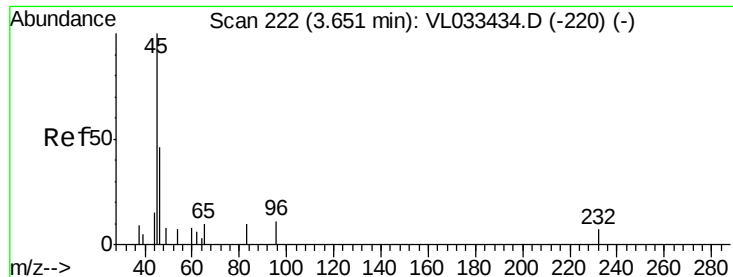
Tot Ion:101 Resp: 20631
 Ion Ratio Lower Upper
 101 100
 103 61.7 51.3 76.9



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.04 ppbv
 RT: 4.55 min Scan# 501
 Delta R.T. -0.00 min
 Lab File: VL033503.D
 Acq: 29 Mar 2019 15:36

Tgt Ion:101 Resp: 4434
 Ion Ratio Lower Upper
 101 100
 151 0.0 57.7 86.5#

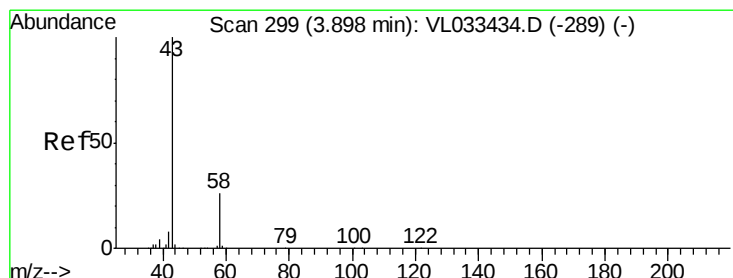
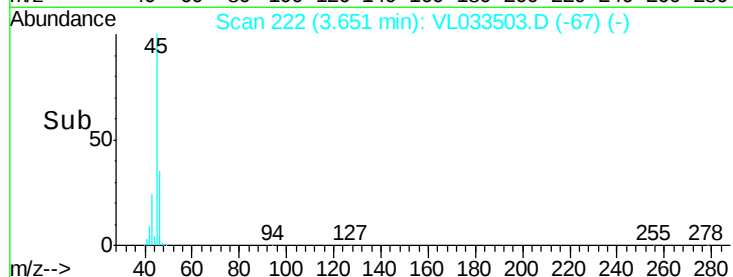
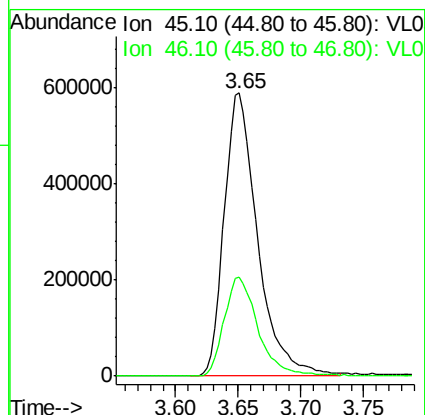
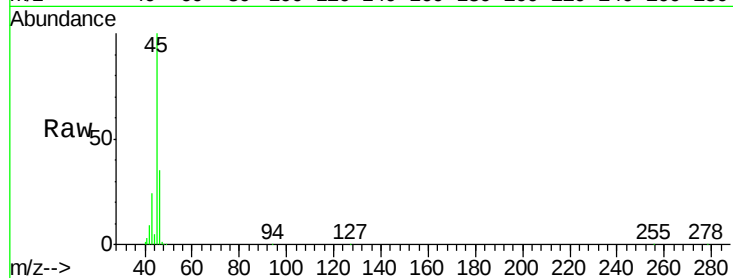




#13
Ethanol
Concen: 102.35 ppbv
RT: 3.65 min Scan# 222
Delta R.T. -0.00 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

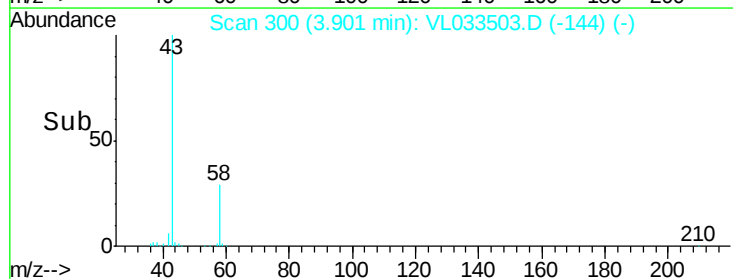
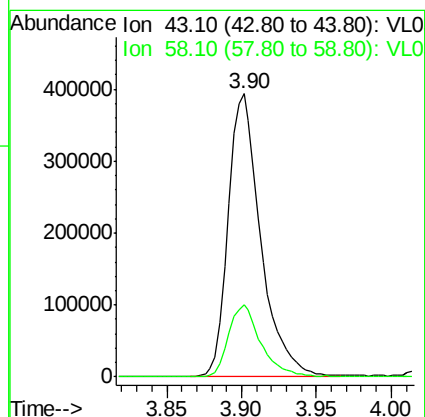
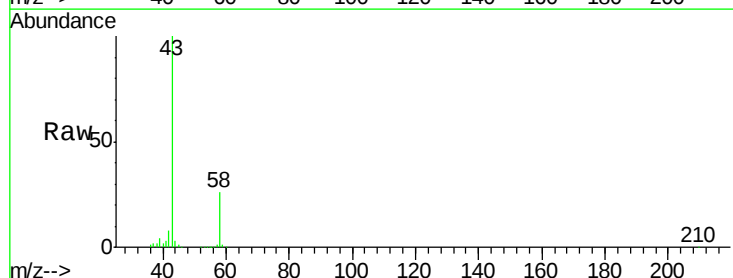
Instrument :
MSVOA_L
ClientSampleId :

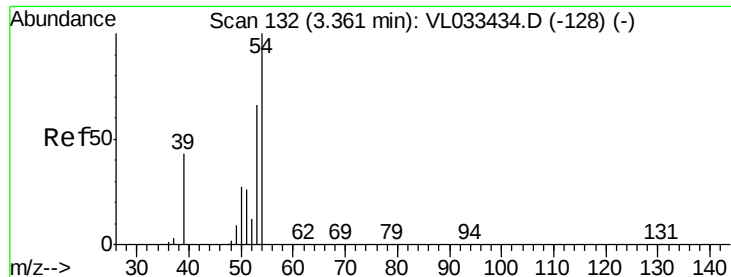
Tot Ion: 45 Resp: 1089751
Ion Ratio Lower Upper
45 100
46 36.1 25.4 101.8



#15
Acetone
Concen: 5.84 ppbv
RT: 3.90 min Scan# 300
Delta R.T. 0.00 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Tgt Ion: 43 Resp: 597194
Ion Ratio Lower Upper
43 100
58 25.6 20.5 30.7





#16

1,3-Butadiene

Concen: 0.07 ppbv

RT: 3.35 min Scan# 127

Delta R.T. -0.02 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :

MSVOA_L

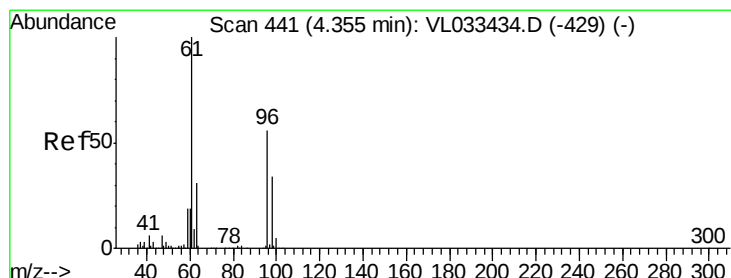
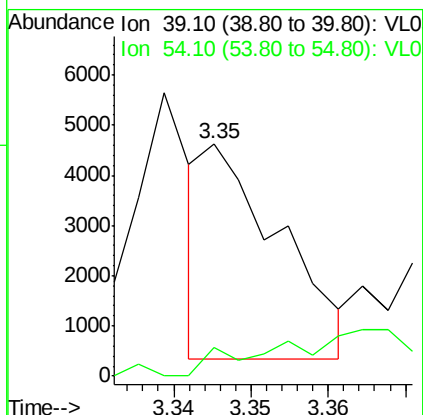
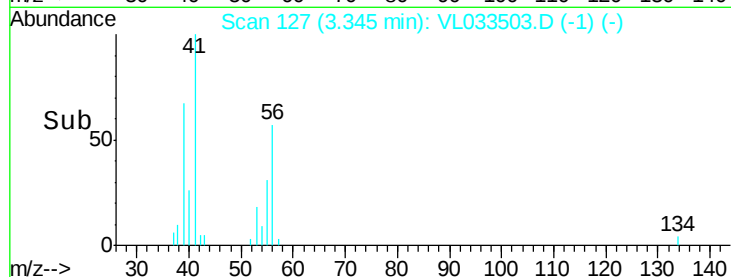
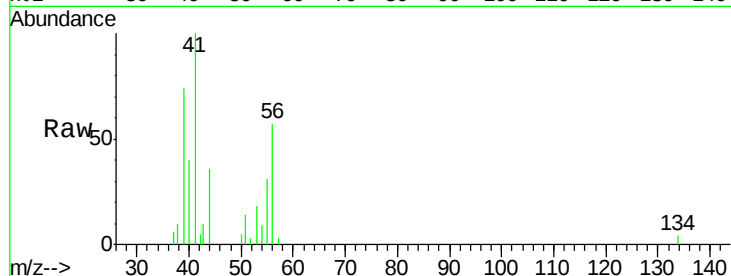
ClientSampleId :

Tot Ion: 39 Resp: 2971

Ion Ratio Lower Upper

39 100

54 39.9 69.4 104.2#



#17

tert-Butyl alcohol

Concen: 0.29 ppbv

RT: 4.37 min Scan# 447

Delta R.T. 0.02 min

Lab File: VL033503.D

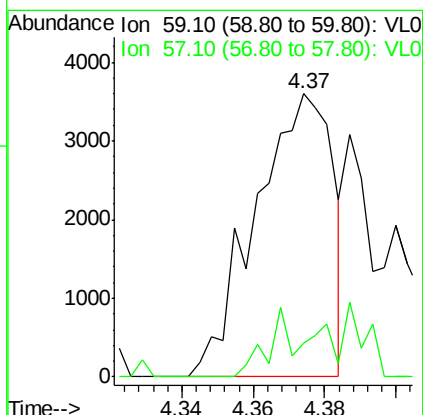
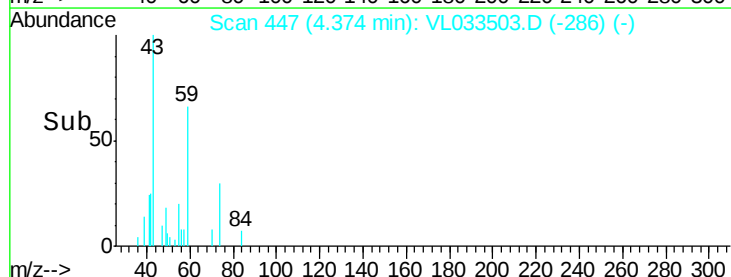
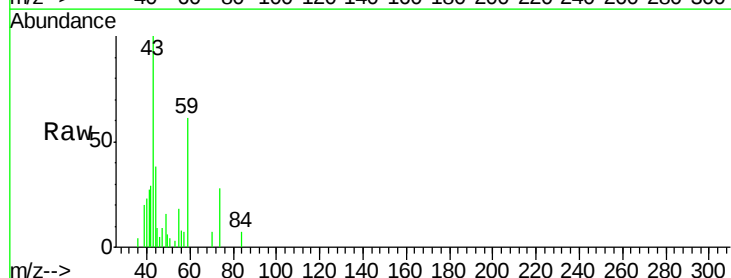
Acq: 29 Mar 2019 15:36

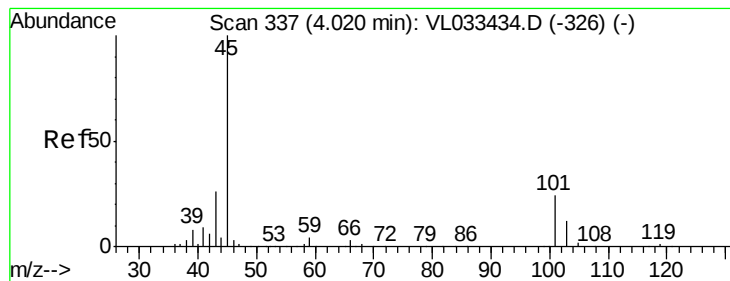
Tgt Ion: 59 Resp: 5388

Ion Ratio Lower Upper

59 100

57 0.0 7.8 11.8#





#19

Isopropyl Alcohol

Concen: 1.84 ppbv

RT: 4.03 min Scan# 340

Delta R.T. 0.01 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :

MSVOA_L

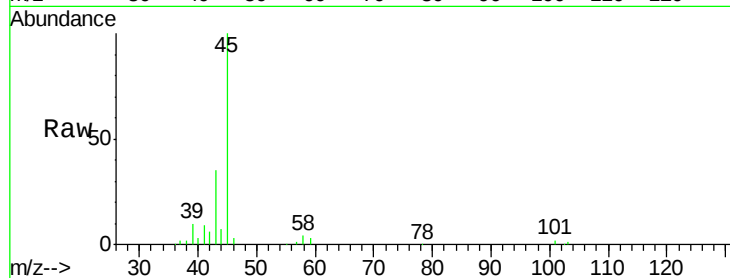
ClientSampleId :

Tot Ion: 45 Resp: 118817

Ion Ratio Lower Upper

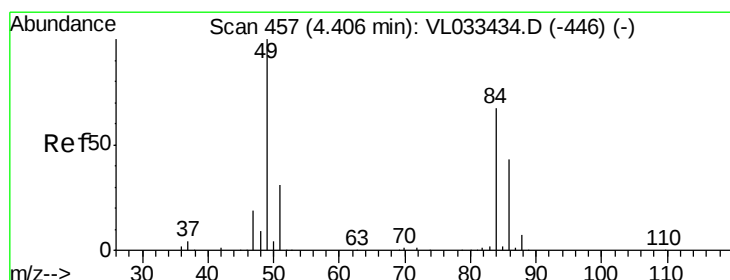
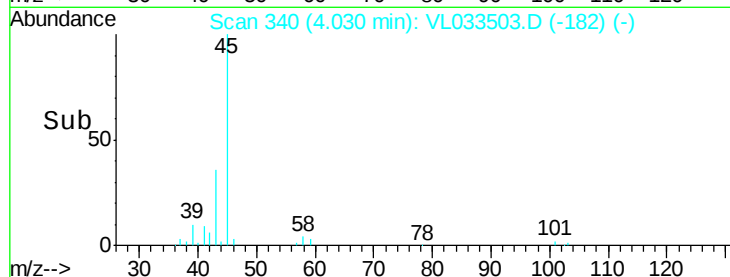
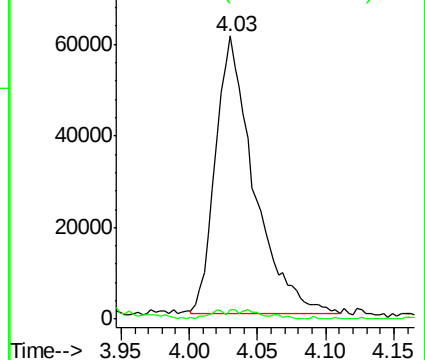
45 100

58 4.5 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: 6.91 ppbv

RT: 4.41 min Scan# 458

Delta R.T. 0.00 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Tgt Ion: 84 Resp: 300340

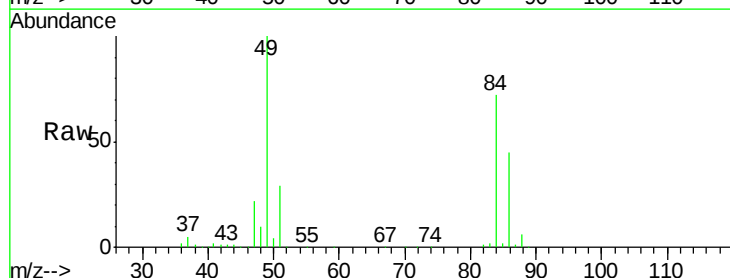
Ion Ratio Lower Upper

84 100

49 138.8 120.0 180.0

51 39.6 36.7 55.1

86 62.9 51.9 77.9

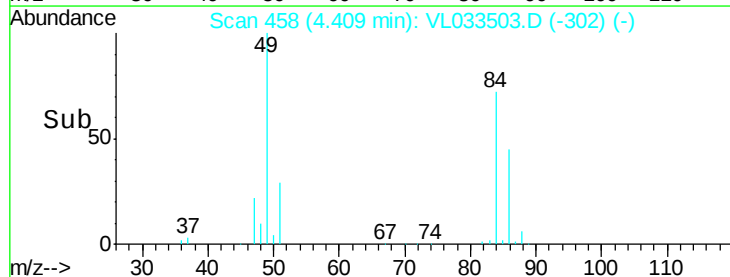
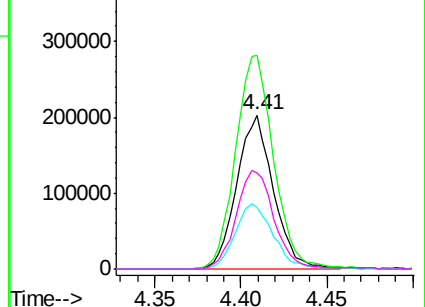


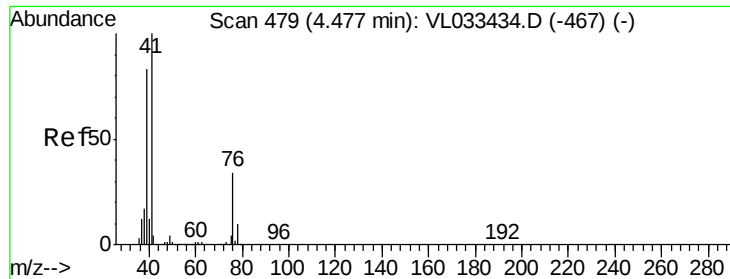
Abundance Ion 84.00 (83.70 to 84.70): VL0

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

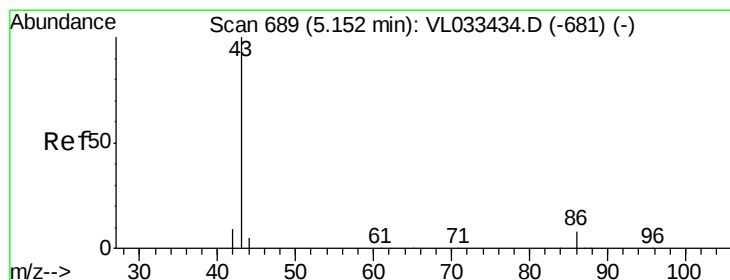
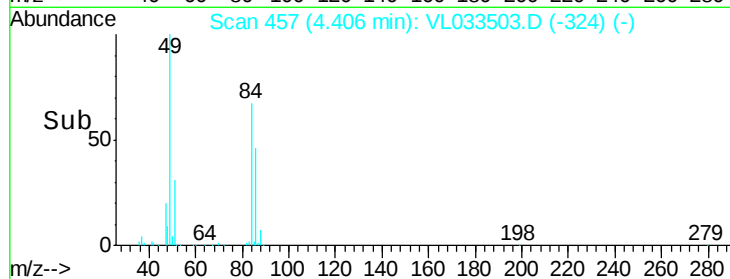
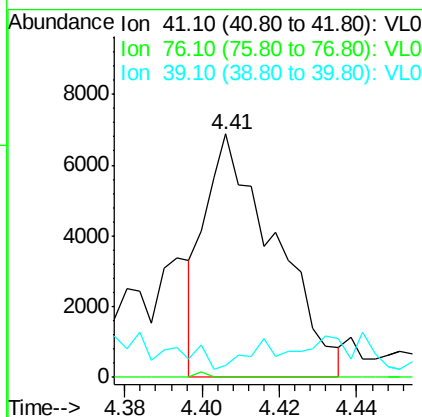
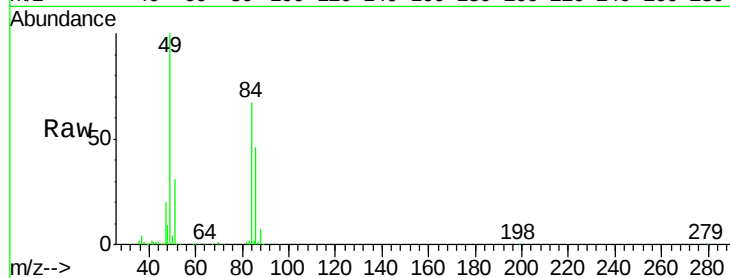




#21
Allvl Chloride
Concen: 0.13 ppbv
RT: 4.41 min Scan# 457
Delta R.T. -0.07 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

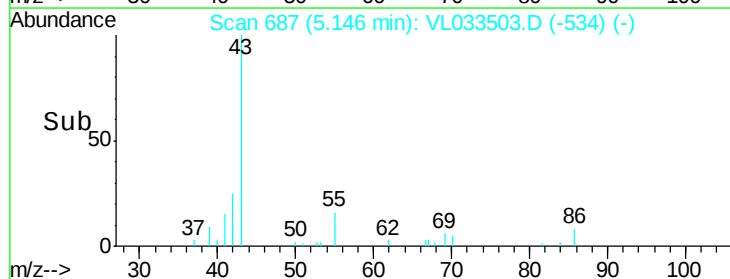
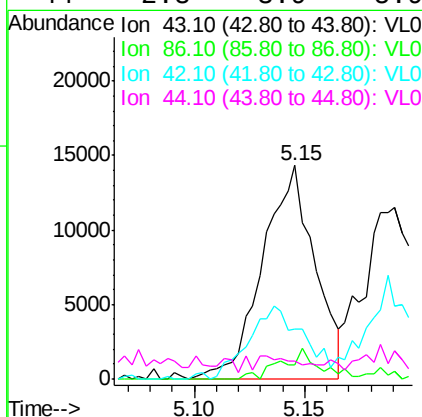
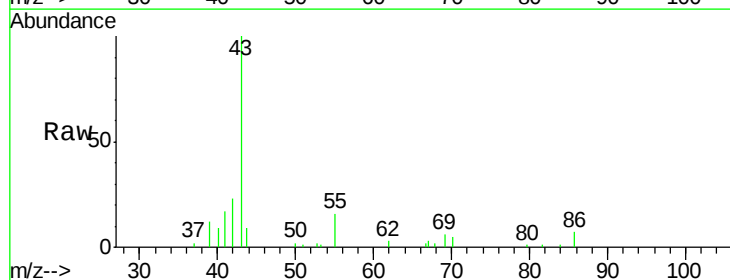
Instrument :
MSVOA_L
ClientSampleId :

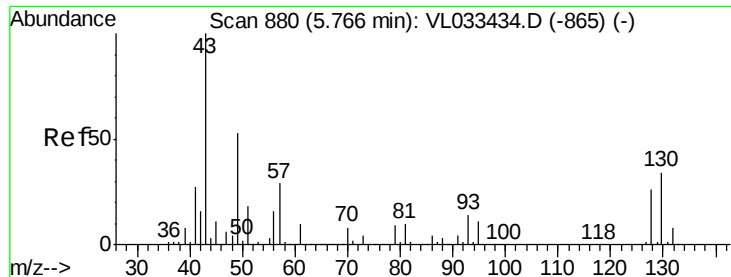
Tot Ion: 41 Resp: 8622
Ion Ratio Lower Upper
41 100
76 2.1 25.4 38.2#
39 0.0 65.3 97.9#



#23
Vinyl Acetate
Concen: 0.16 ppbv
RT: 5.15 min Scan# 687
Delta R.T. -0.01 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Tgt Ion: 43 Resp: 23494
Ion Ratio Lower Upper
43 100
86 6.3 5.6 8.4
42 21.6 8.0 12.0#
44 2.8 3.9 5.9#

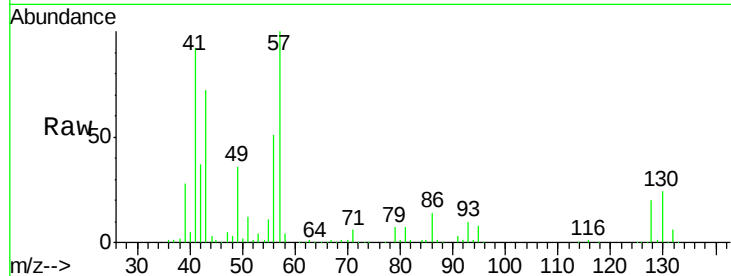




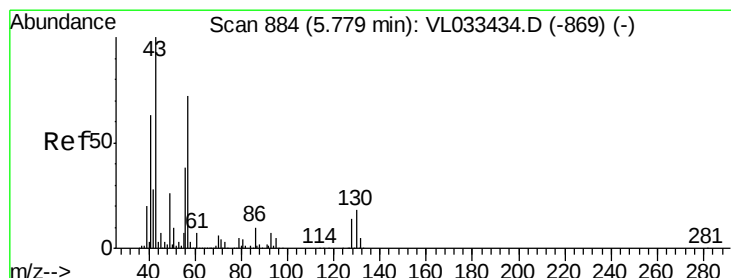
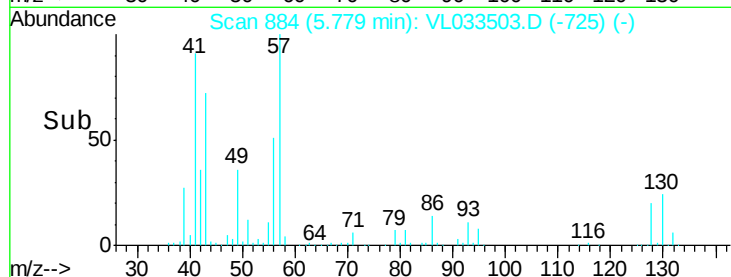
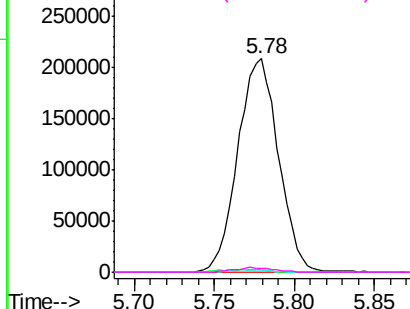
#25
Ethyl Acetate
Concen: 1.90 ppbv
RT: 5.78 min Scan# 884
Delta R.T. 0.01 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 361608
Ion Ratio Lower Upper
43 100
45 1.4 7.8 11.6#
61 1.2 7.3 10.9#
70 2.2 5.6 8.4#

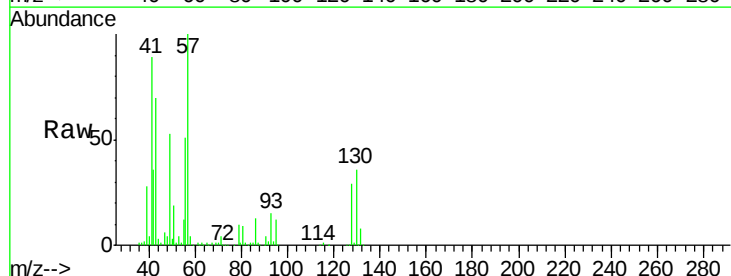


Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

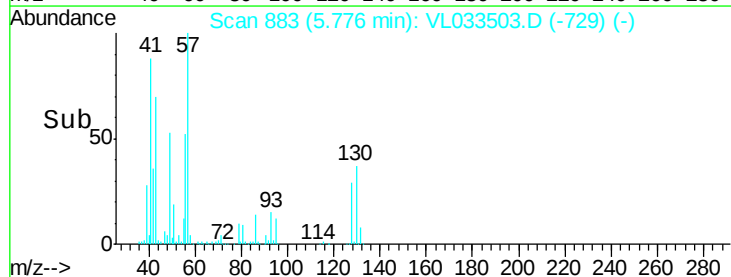
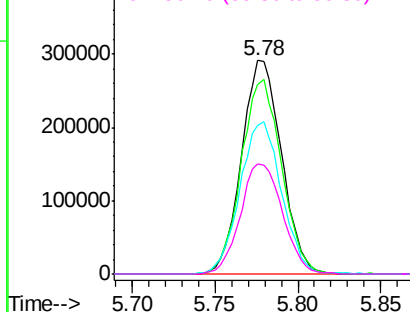


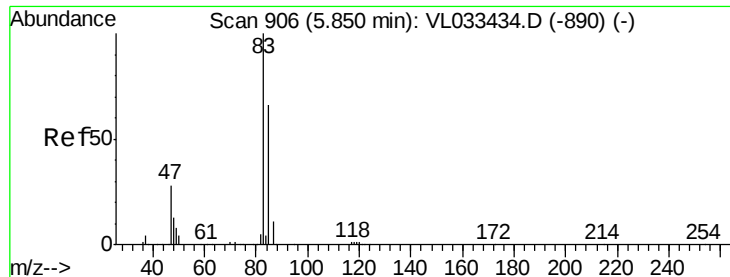
#26
Hexane
Concen: 5.78 ppbv
RT: 5.78 min Scan# 883
Delta R.T. -0.00 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Tgt Ion: 57 Resp: 488315
Ion Ratio Lower Upper
57 100
41 92.4 70.7 106.1
43 74.5 182.6 274.0#
56 54.5 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





#29

Chloroform

Concen: 0.15 ppbv

RT: 5.84 min Scan# 904

Delta R.T. -0.01 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :

MSVOA_L

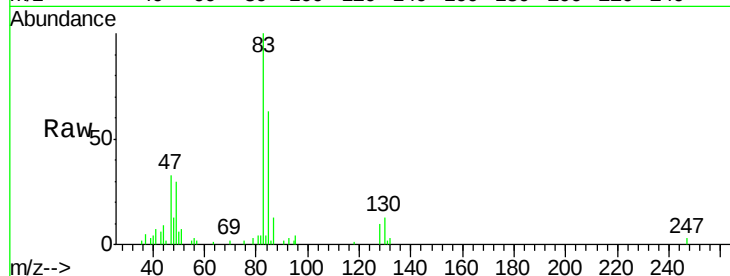
ClientSampleId :

Tot Ion: 83 Resp: 22379

Ion Ratio Lower Upper

83 100

85 61.0 52.6 79.0



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

5.84

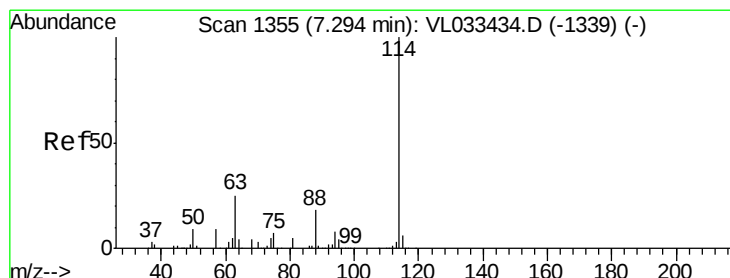
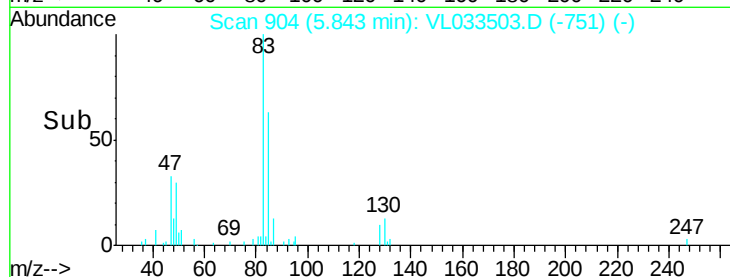
15000

10000

5000

0

Time-->



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.29 min Scan# 1353

Delta R.T. -0.01 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

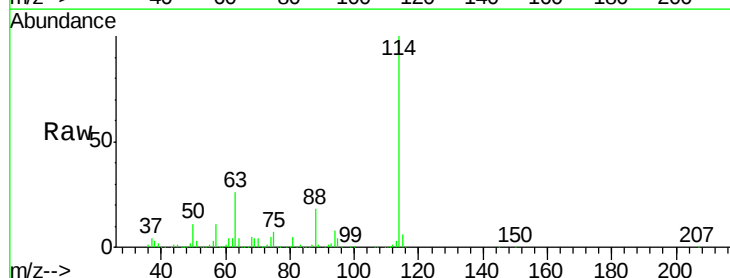
Tgt Ion: 114 Resp: 1904601

Ion Ratio Lower Upper

114 100

63 26.6 21.5 32.3

88 18.0 14.5 21.7



Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

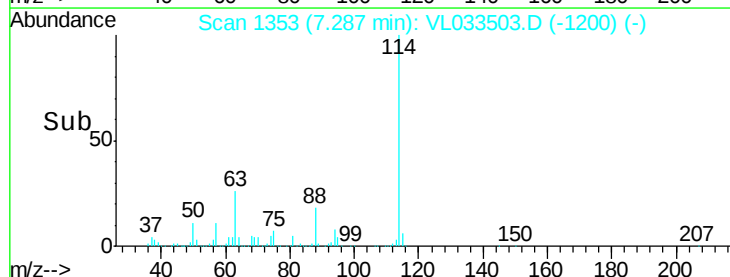
7.29

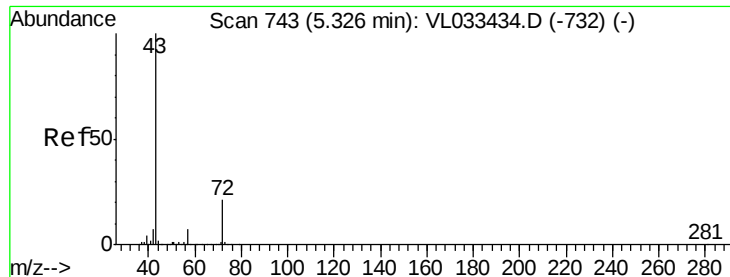
1000000

500000

0

Time-->





#34

2-Butanone

Concen: 0.29 ppbv

RT: 5.33 min Scan# 745

Delta R.T. 0.01 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :

MSVOA_L

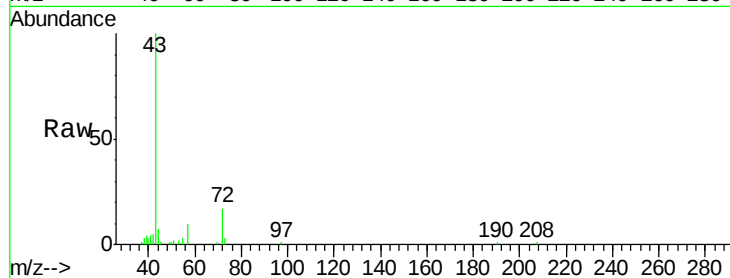
ClientSampleId :

Tot Ion: 43 Resp: 33062

Ion Ratio Lower Upper

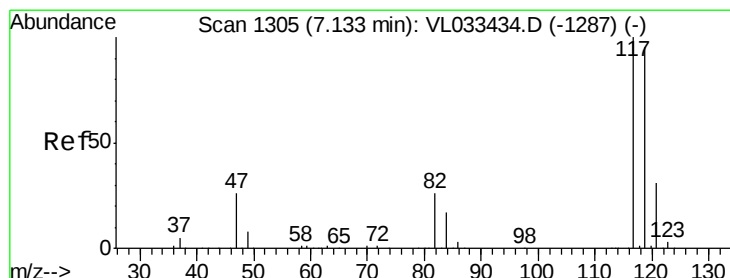
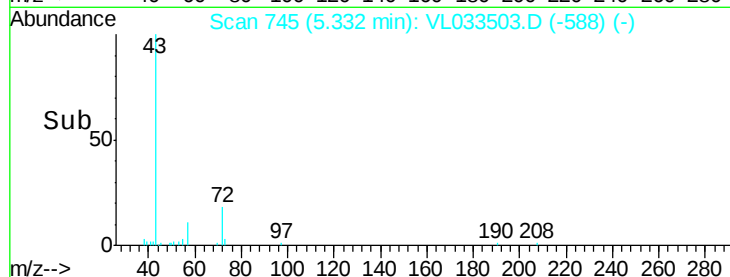
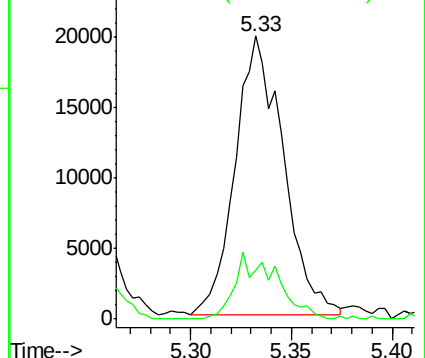
43 100

72 20.7 17.4 26.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#35

Carbon Tetrachloride

Concen: 0.07 ppbv

RT: 7.13 min Scan# 1305

Delta R.T. -0.00 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

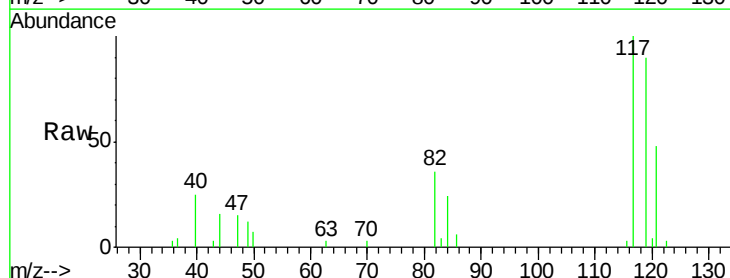
Tgt Ion: 117 Resp: 8851

Ion Ratio Lower Upper

117 100

119 90.1 75.8 113.8

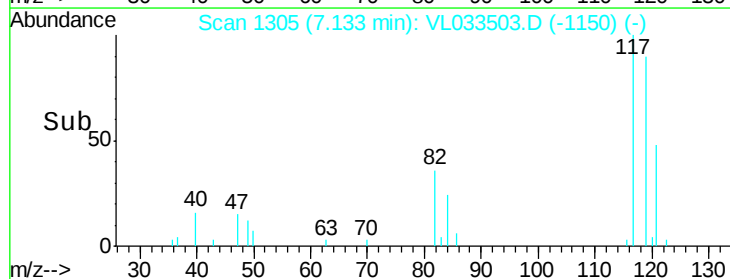
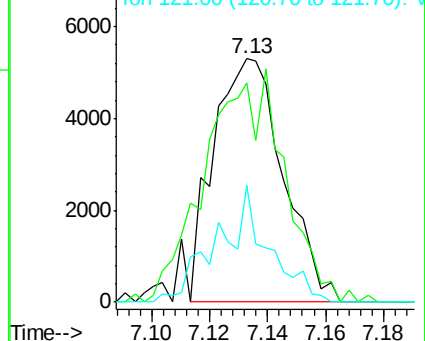
121 47.8 24.7 37.1#

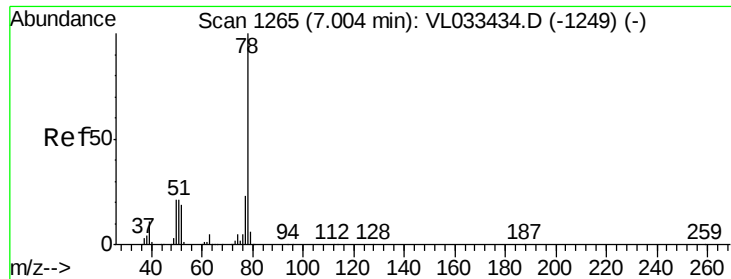


Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V

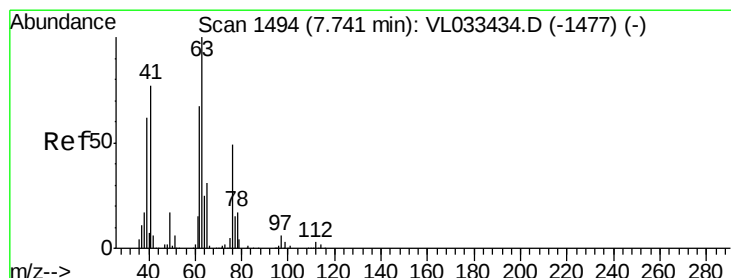
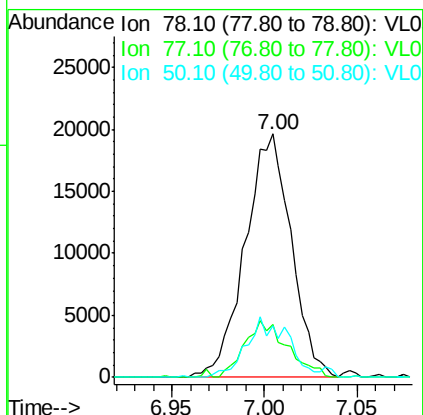
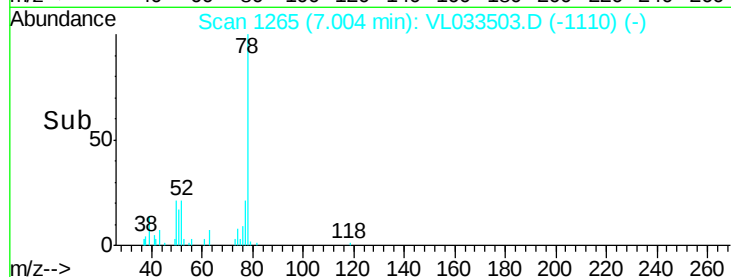
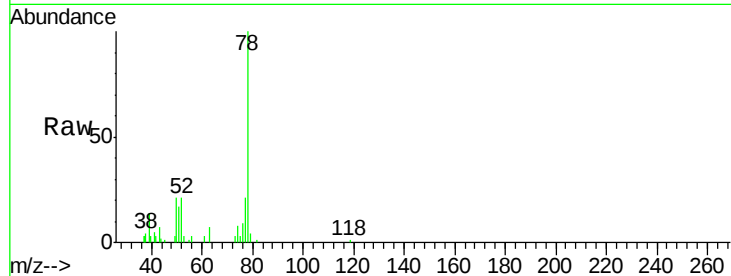




#36
Benzene
Concen: 0.21 ppbv
RT: 7.00 min Scan# 1265
Delta R.T. -0.00 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

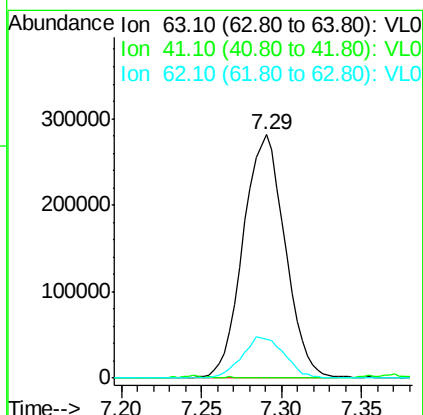
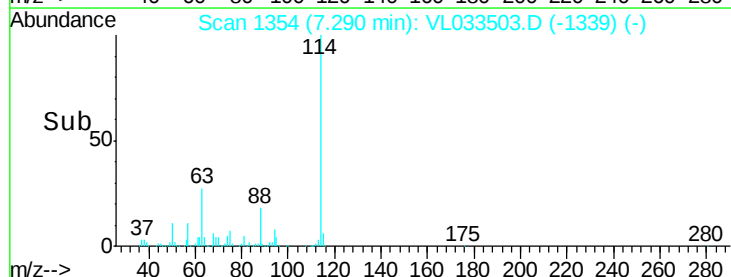
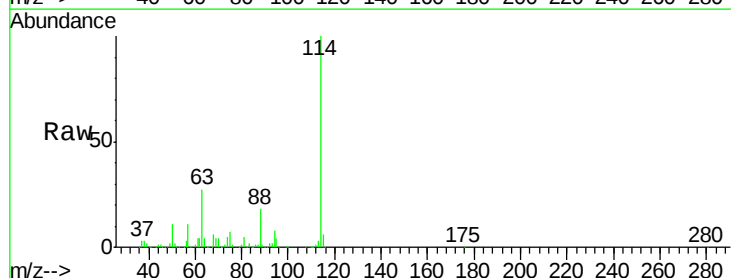
Instrument :
MSVOA_L
ClientSampled :

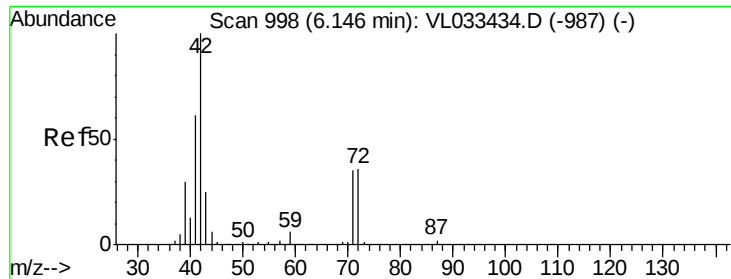
Tot Ion	Ratio	Lower	Upper
78	100		
77	21.5	18.1	27.1
50	21.2	16.7	25.1



#39
1,2-Dichloropropane
Concen: 8.04 ppbv
RT: 7.29 min Scan# 1354
Delta R.T. -0.45 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.0	61.2	91.8#
62	15.9	54.0	81.0#





#41

Tetrahydrofuran

Concen: 2.93 ppbv

RT: 5.78 min Scan# 884

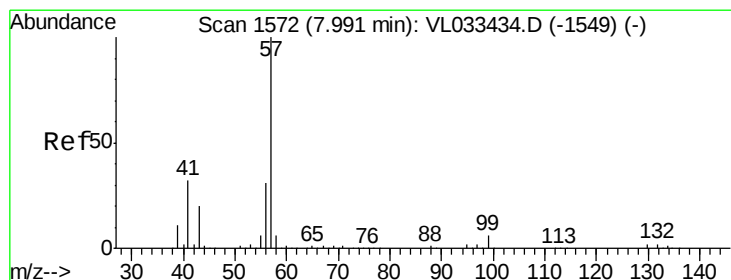
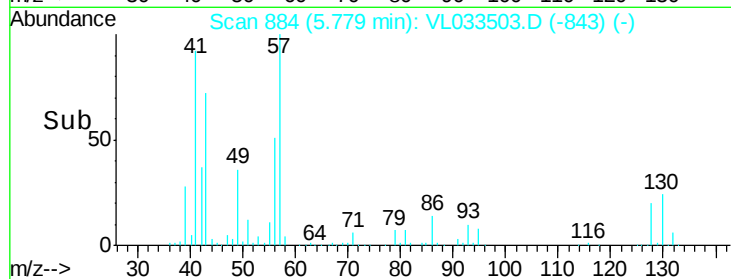
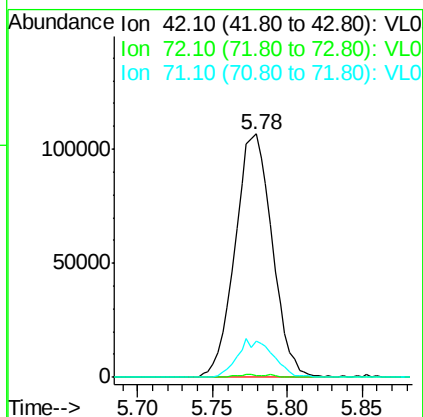
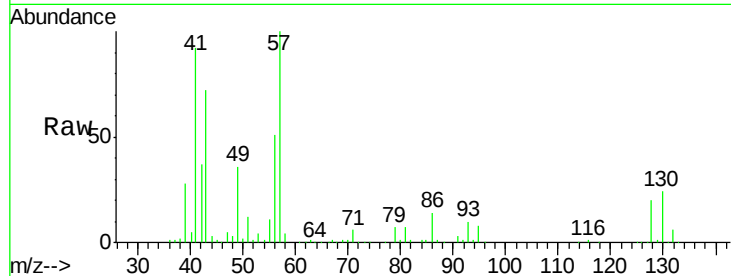
Delta R.T. -0.37 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	42	Resp:	184483
Ion	Ratio	Lower	Upper
42	100		
72	1.0	30.2	45.2#
71	15.2	29.4	44.2#



#44

2,2,4-Trimethylpentane

Concen: 0.07 ppbv

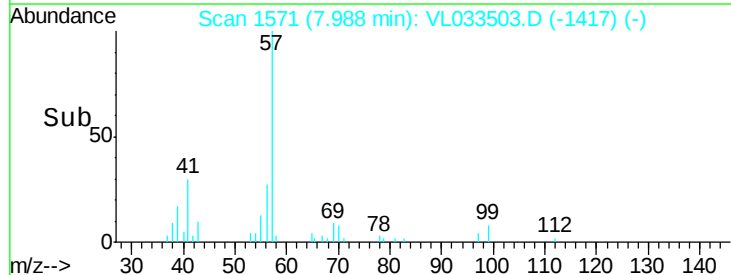
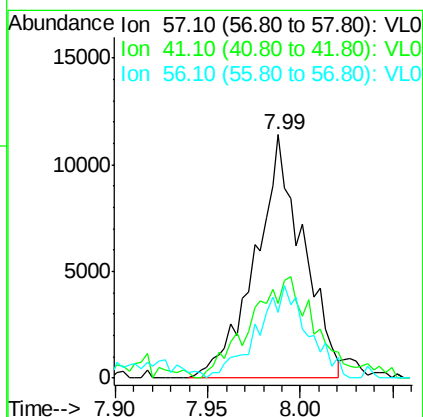
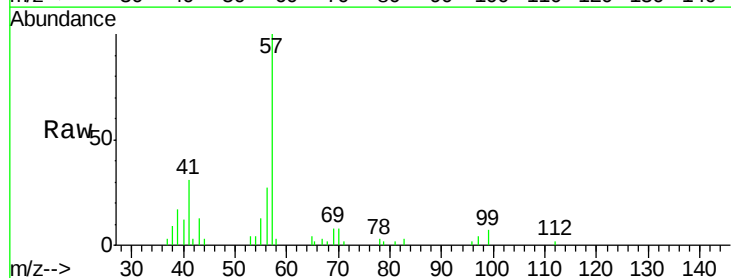
RT: 7.99 min Scan# 1571

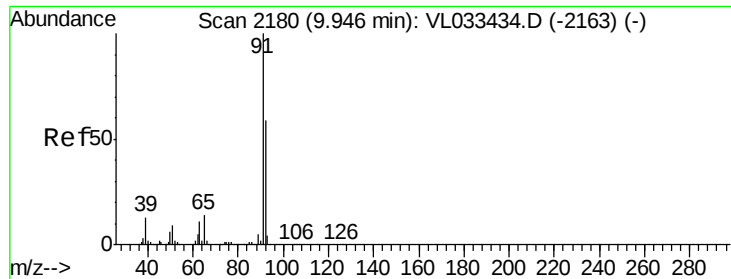
Delta R.T. -0.00 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Tgt Ion:	57	Resp:	20358
Ion	Ratio	Lower	Upper
57	100		
41	58.3	26.0	39.0#
56	40.4	24.6	37.0#





#53

Toluene

Concen: 4.32 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.00 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

Instrument :

MSVOA_L

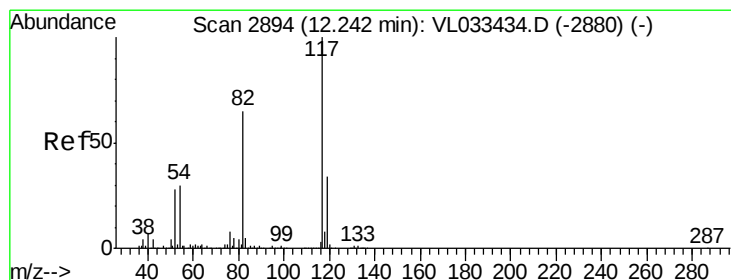
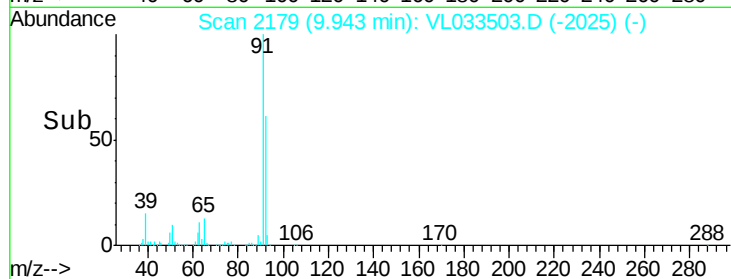
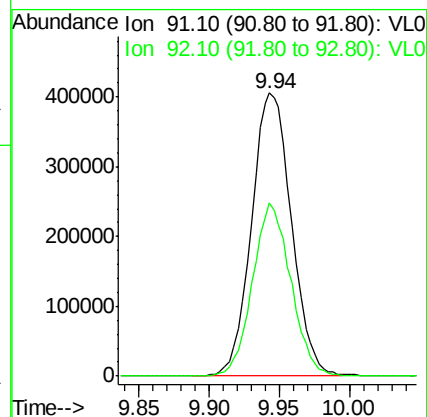
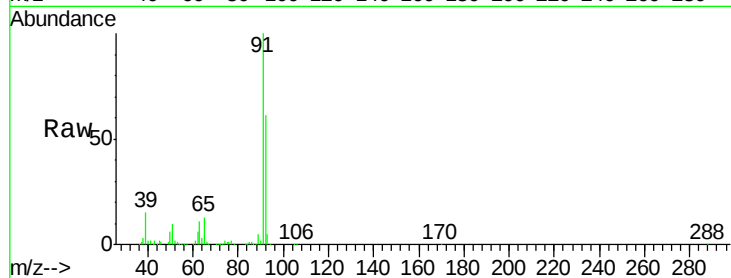
ClientSampleId :

Tot Ion: 91 Resp: 802106

Ion Ratio Lower Upper

91 100

92 58.8 47.4 71.0



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.24 min Scan# 2892

Delta R.T. -0.01 min

Lab File: VL033503.D

Acq: 29 Mar 2019 15:36

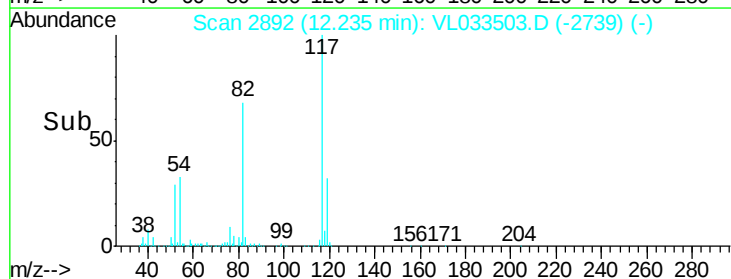
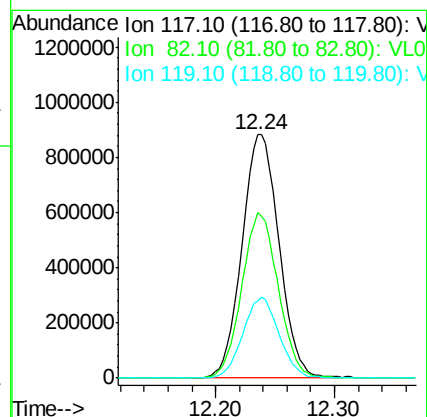
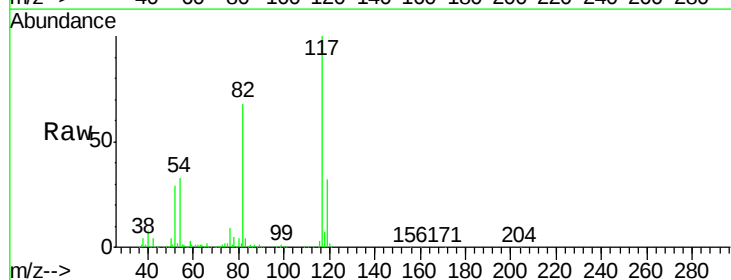
Tgt Ion: 117 Resp: 1904333

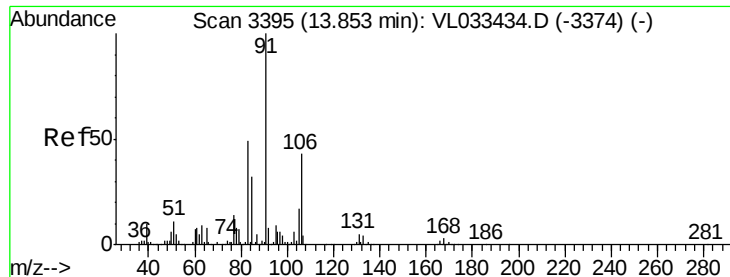
Ion Ratio Lower Upper

117 100

82 67.0 51.5 77.3

119 32.6 25.5 38.3

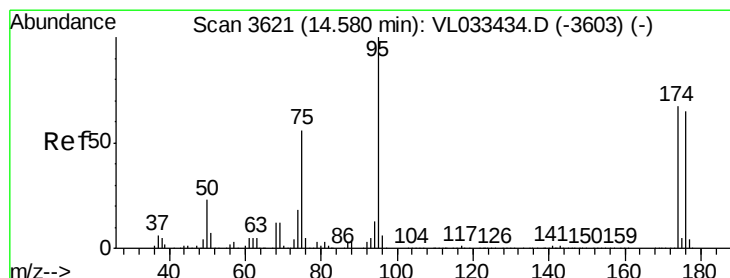
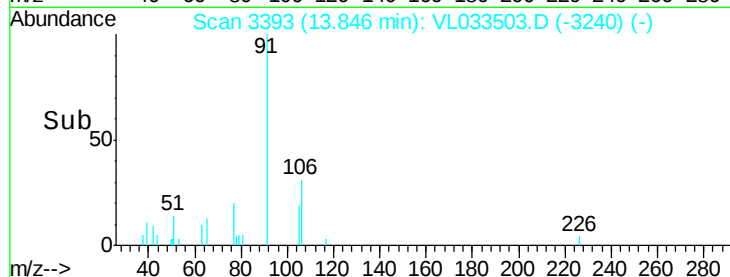
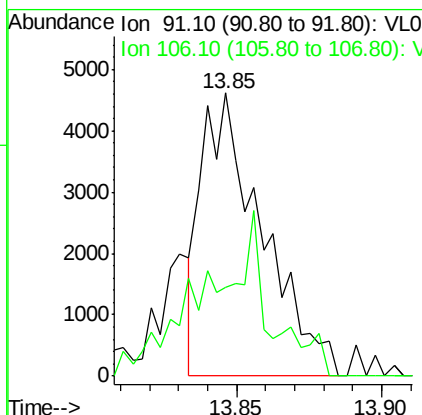
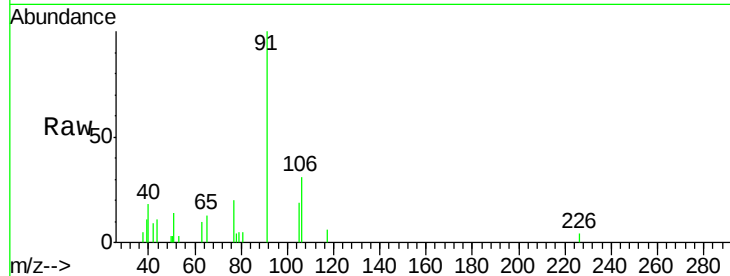




#60
o-Xylene
Concen: 0.03 ppbv
RT: 13.85 min Scan# 3393
Delta R.T. -0.01 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 91 Resp: 6687
Ion Ratio Lower Upper
91 100
106 61.8 21.4 64.3



#68
1-Bromo-4-Fluorobenzene
Concen: 9.93 ppbv
RT: 14.58 min Scan# 3620
Delta R.T. -0.00 min
Lab File: VL033503.D
Acq: 29 Mar 2019 15:36

Tgt Ion: 95 Resp: 1481957
Ion Ratio Lower Upper
95 100
174 66.5 52.9 79.3
175 4.7 3.8 5.6

