

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL071719\
 Data File : VL034043.D
 Acq On : 17 Jul 2019 22:32
 Operator : SY/AP
 Sample : K3804-02DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jul 18 04:40:49 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL070219AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Jul 02 19:31:31 2019
 QLast Update : Tue Jul 02 19:31:31 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.72	49	1061535	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.25	114	3939529	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.19	117	2962259	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.52	95	2346875	9.29	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	92.90%

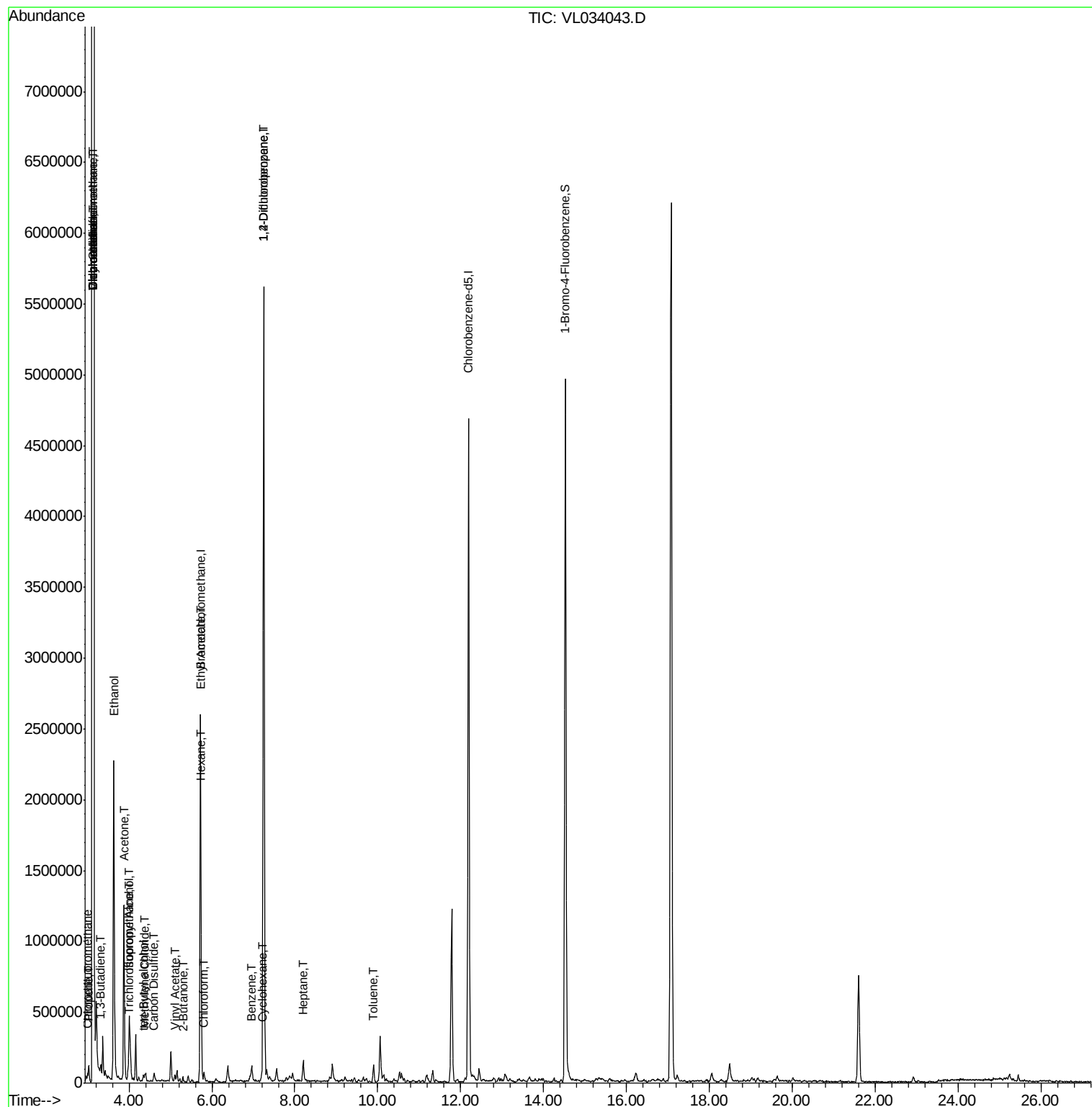
Target Compounds						Ovalue
2) Dichlorodifluoromethane	3.13	85	7716456	35.225	ppbv	93
3) Chlorodifluoromethane	2.99	51	56781	0.433	ppbv	97
4) Chloromethane	3.13	50	1150070	15.258	ppbv #	42
5) Vinyl Chloride	3.13	62	347564	4.101	ppbv #	1
7) Chloroethane	3.13	64	5803617	191.590	ppbv	97
8) Dichlorotetrafluoroethane	3.13	85	7716456	36.129	ppbv #	15
9) Propene	3.02	41	25312	0.525	ppbv #	79
10) Heptane	8.20	43	39537	0.327	ppbv	91
11) Trichlorofluoromethane	3.98	101	53650	0.218	ppbv	96
13) Ethanol	3.63	45	2496074	166.620	ppbv	92
15) Acetone	3.88	43	1197955	6.712	ppbv	99
16) 1,3-Butadiene	3.32	39	16610	0.264	ppbv #	19
17) tert-Butyl alcohol	4.34	59	7830	0.055	ppbv #	73
19) Isopropyl Alcohol	4.01	45	543110	4.533	ppbv	99
20) Methylene Chloride	4.38	84	10370	0.133	ppbv	93
23) Vinyl Acetate	5.11	43	13799	0.077	ppbv #	84
25) Ethyl Acetate	5.74	43	39882	0.163	ppbv #	96
26) Hexane	5.74	57	78763	0.705	ppbv #	49
27) Carbon Disulfide	4.59	76	7314	0.039	ppbv #	8
29) Chloroform	5.81	83	36304	0.173	ppbv	90
30) Cyclohexane	7.20	84	7853	0.091	ppbv #	1
34) 2-Butanone	5.30	43	17723	0.085	ppbv #	50
36) Benzene	6.96	78	51959	0.169	ppbv #	86
39) 1,2-Dichloropropane	7.25	63	1016594	8.869	ppbv #	23
53) Toluene	9.90	91	59167	0.168	ppbv #	63

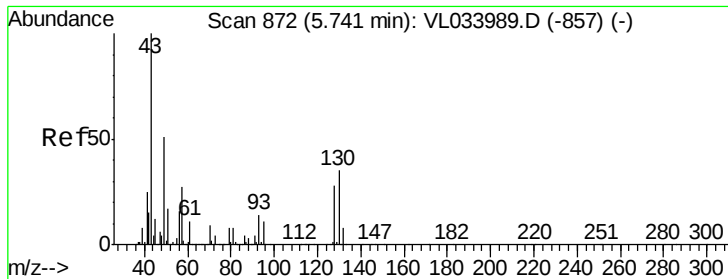
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.72 min Scan# 866

Delta R.T. -0.02 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :
MSVOA_L
ClientSampleId :

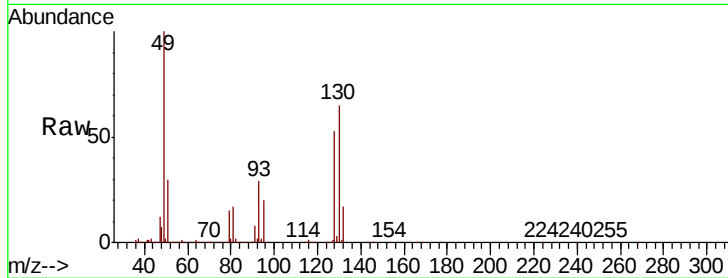
Tot Ion: 49 Resp: 1061535

Ion Ratio Lower Upper

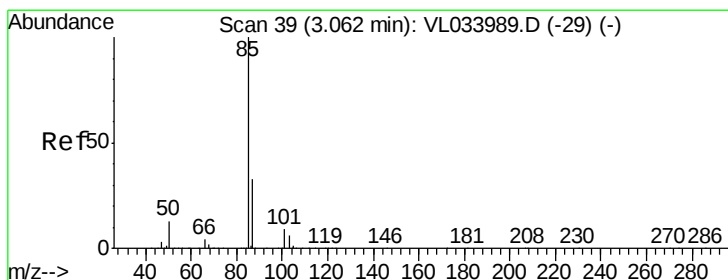
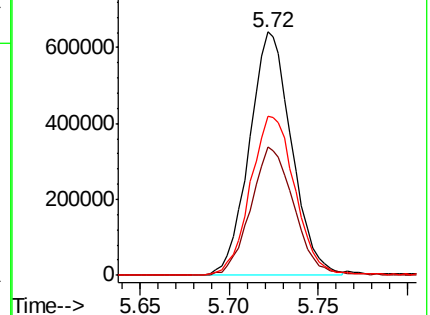
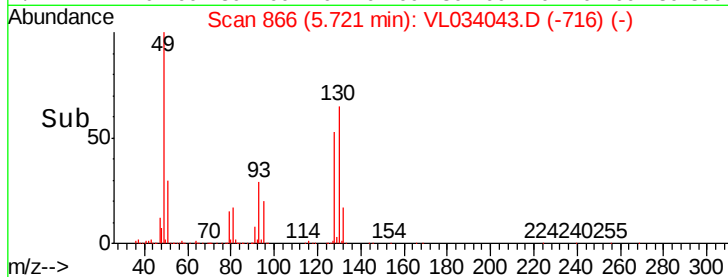
49 100

128 53.9 27.9 83.6

130 69.6 35.8 107.4



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: 35.225 ppbv

RT: 3.13 min Scan# 60

Delta R.T. 0.07 min

Lab File: VL034043.D

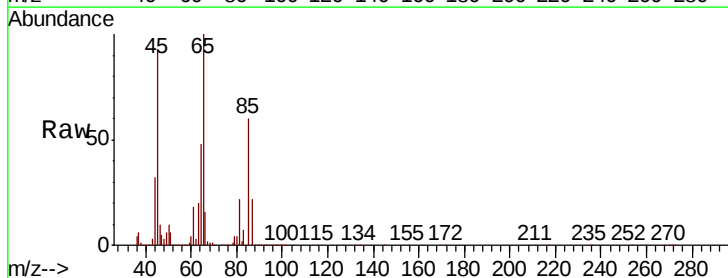
Acq: 17 Jul 2019 22:32

Tgt Ion: 85 Resp: 7716456

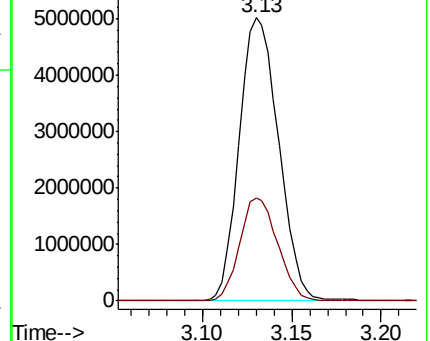
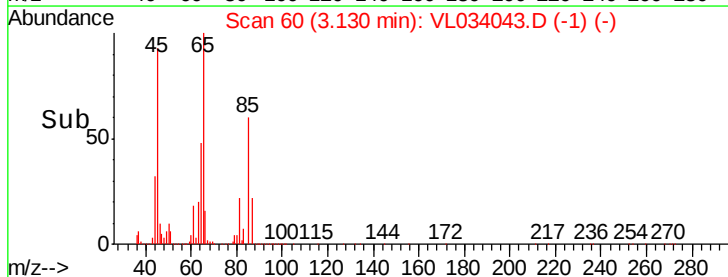
Ion Ratio Lower Upper

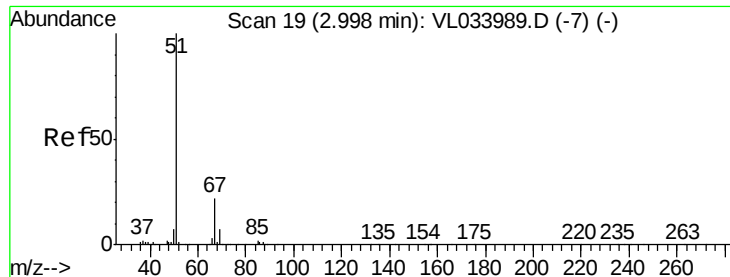
85 100

87 36.5 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0

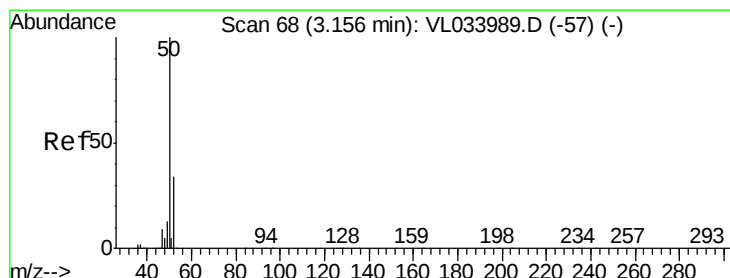
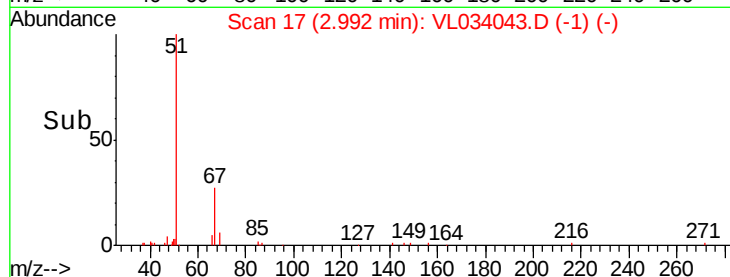
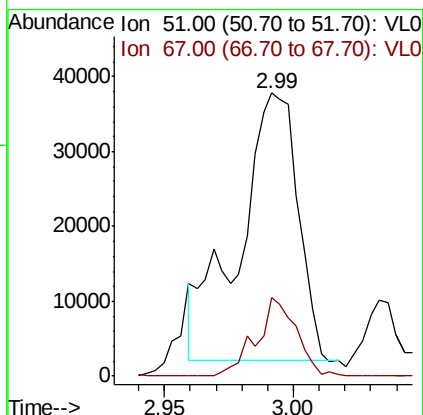
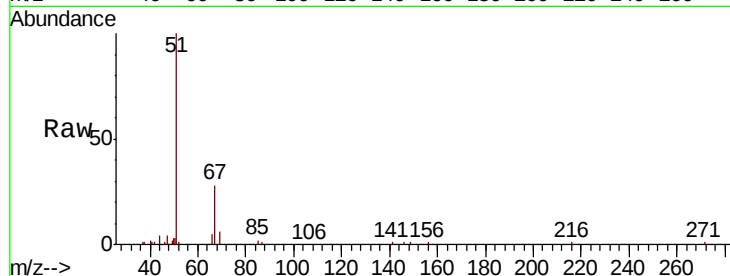




#3
 Chlorodifluoromethane
 Concen: 0.433 ppbv
 RT: 2.99 min Scan# 17
 Delta R.T. -0.01 min
 Lab File: VL034043.D
 Acq: 17 Jul 2019 22:32

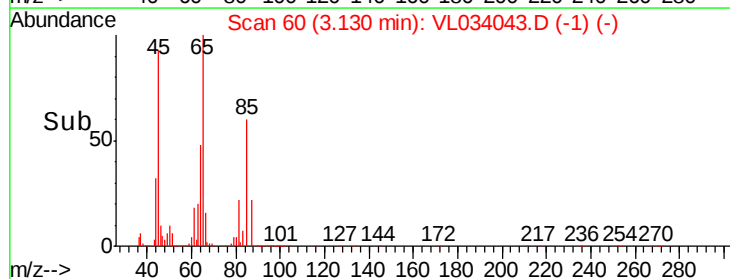
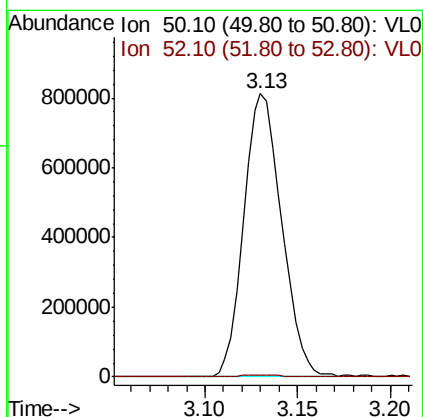
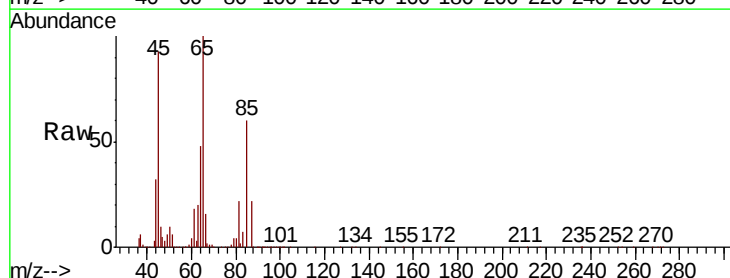
Instrument :
 MSVOA_L
 ClientSampled :

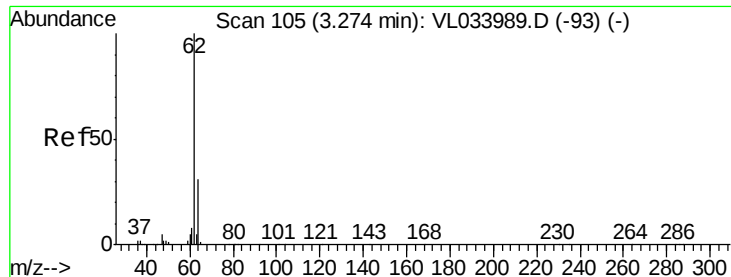
Tot Ion: 51 Resp: 56781
 Ion Ratio Lower Upper
 51 100
 67 20.1 17.3 25.9



#4
 Chloromethane
 Concen: 15.258 ppbv
 RT: 3.13 min Scan# 60
 Delta R.T. -0.03 min
 Lab File: VL034043.D
 Acq: 17 Jul 2019 22:32

Tgt Ion: 50 Resp: 1150070
 Ion Ratio Lower Upper
 50 100
 52 0.8 27.4 41.0#





#5

Vinyl Chloride

Concen: 4.101 ppbv

RT: 3.13 min Scan# 61

Delta R.T. -0.14 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

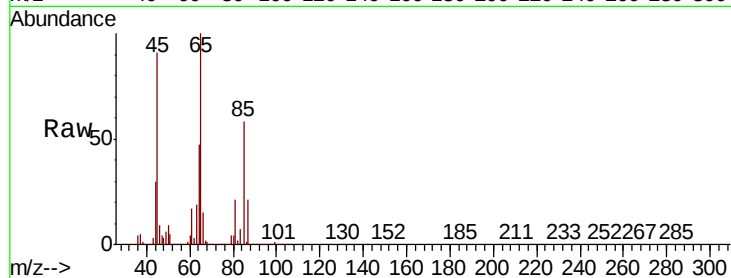
ClientSampleId :

Tot Ion: 62 Resp: 347564

Ion Ratio Lower Upper

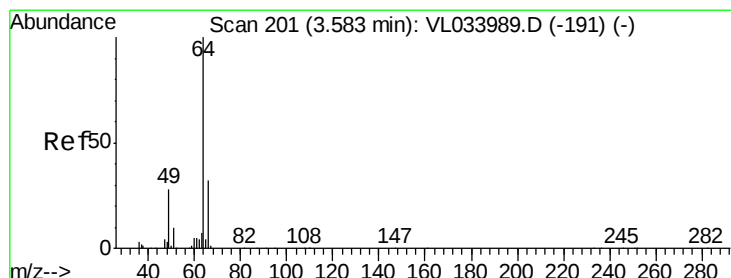
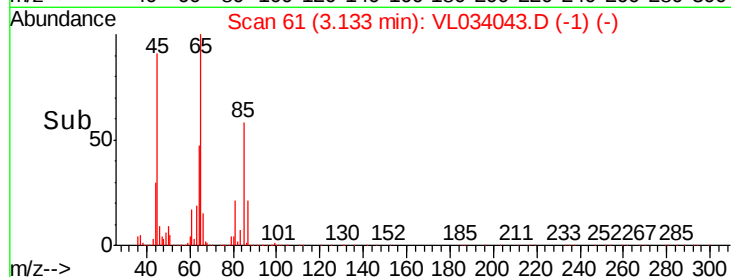
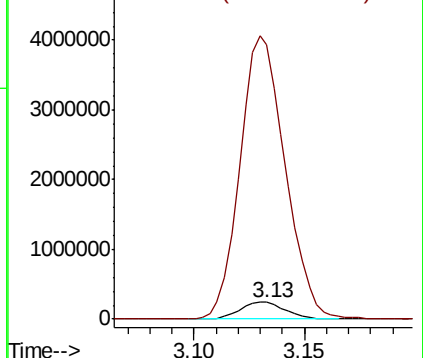
62 100

64 1631.5 24.4 36.6#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#7

Chloroethane

Concen: 191.590 ppbv

RT: 3.13 min Scan# 60

Delta R.T. -0.45 min

Lab File: VL034043.D

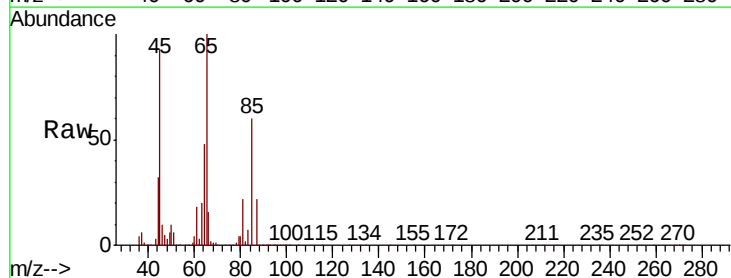
Acq: 17 Jul 2019 22:32

Tgt Ion: 64 Resp: 5803617

Ion Ratio Lower Upper

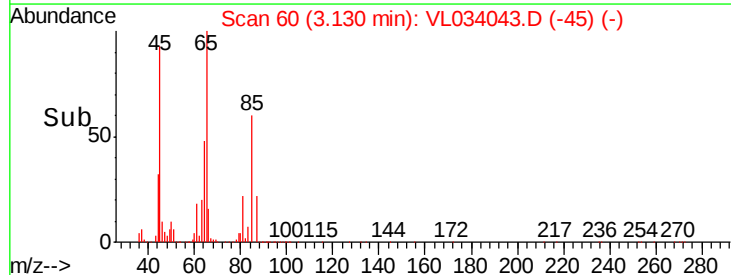
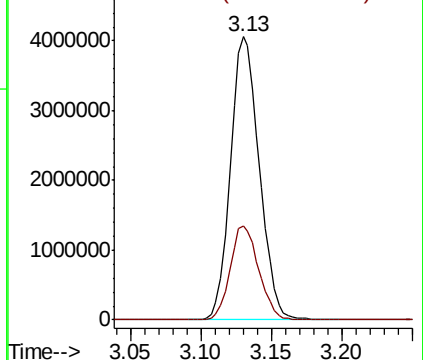
64 100

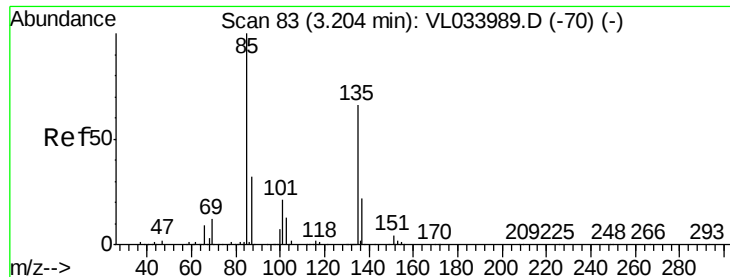
66 33.2 25.3 37.9



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#8

Dichlorotetrafluoroethane

Concen: 36.129 ppbv

RT: 3.13 min Scan# 60

Delta R.T. -0.07 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

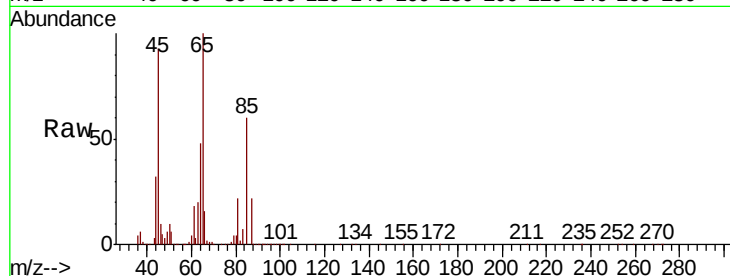
ClientSampleId :

Tot Ion: 85 Resp: 7716456

Ion Ratio Lower Upper

85 100

135 0.0 55.0 82.4#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V

3.13

5000000

4000000

3000000

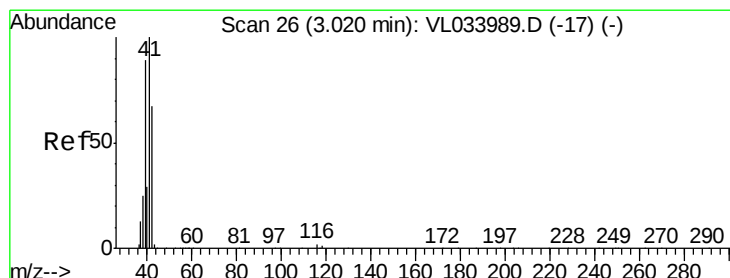
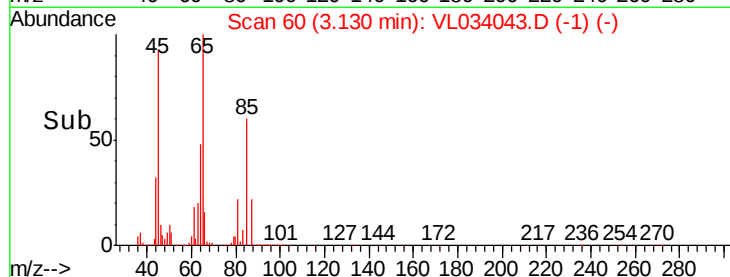
2000000

1000000

0

Time-->

3.10 3.15 3.20



#9

Propene

Concen: 0.525 ppbv

RT: 3.02 min Scan# 26

Delta R.T. 0.00 min

Lab File: VL034043.D

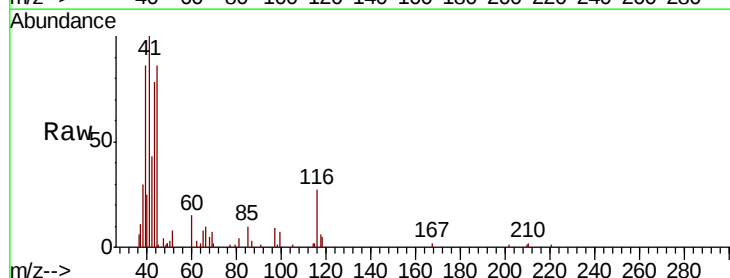
Acq: 17 Jul 2019 22:32

Tgt Ion: 41 Resp: 25312

Ion Ratio Lower Upper

41 100

42 54.1 57.1 85.7#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

3.02

15000

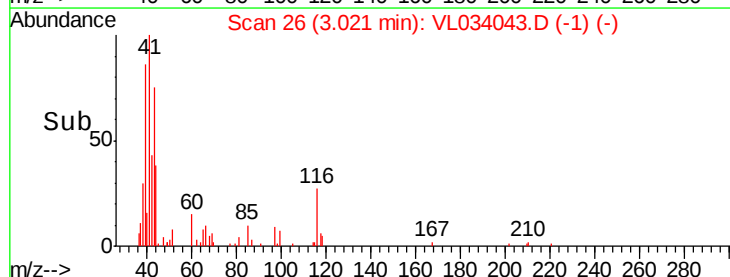
10000

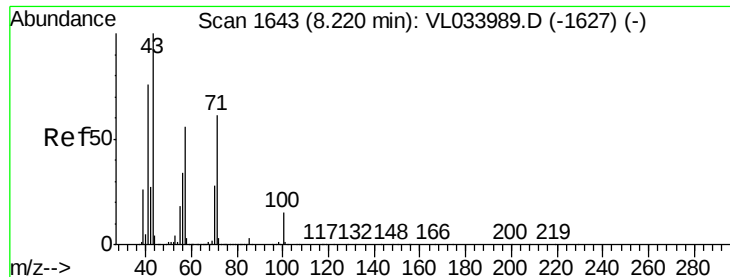
5000

0

Time-->

3.00 3.05

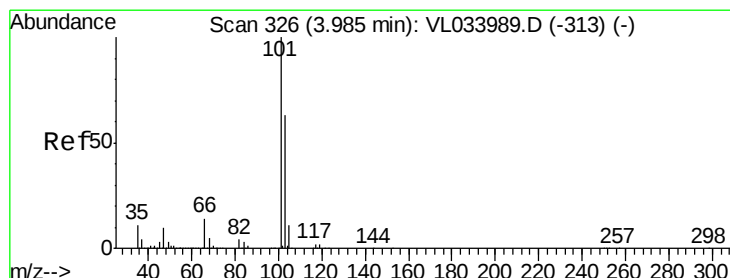
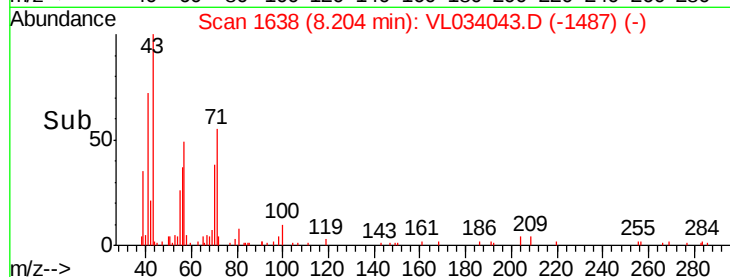
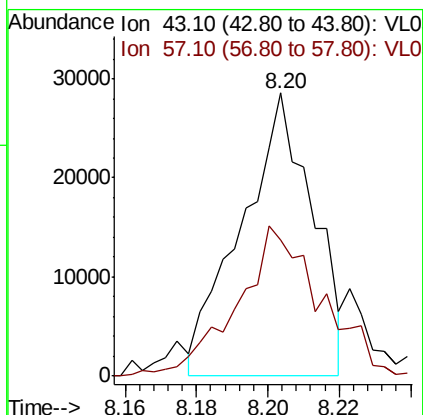
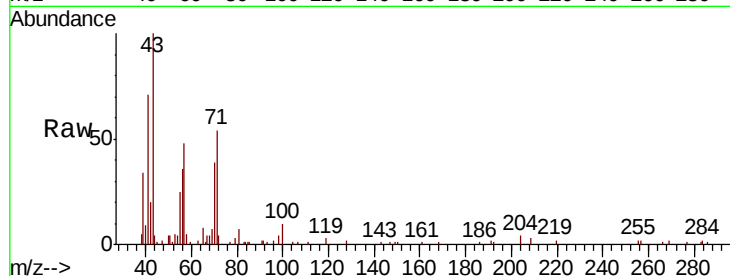




#10
Heptane
Concen: 0.327 ppbv
RT: 8.20 min Scan# 1638
Delta R.T. -0.02 min
Lab File: VL034043.D
Acq: 17 Jul 2019 22:32

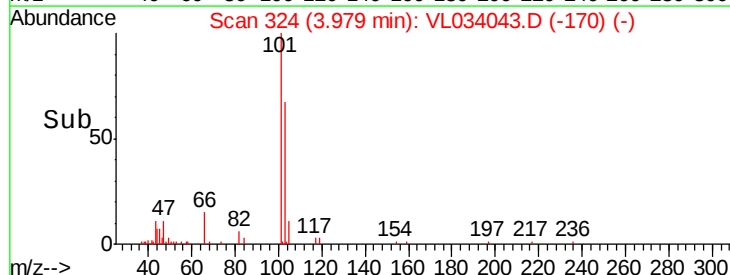
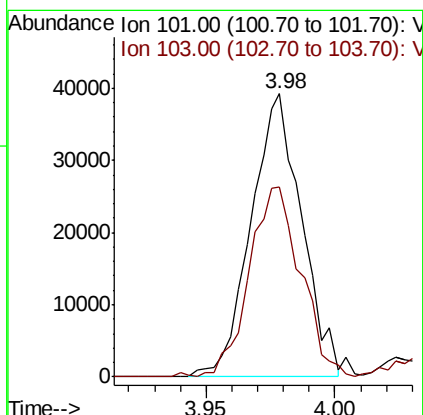
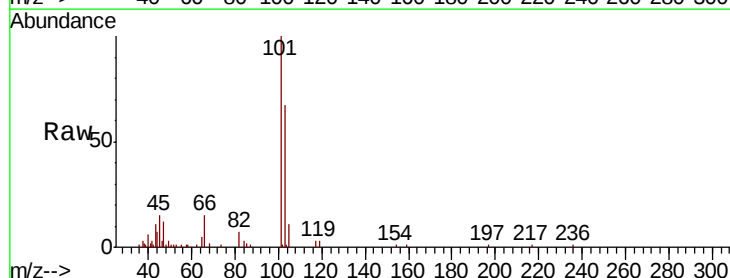
Instrument :
MSVOA_L
ClientSampleId :

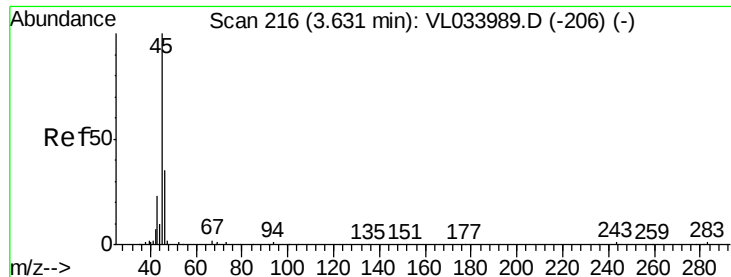
Tot Ion: 43 Resp: 39537
Ion Ratio Lower Upper
43 100
57 62.2 44.6 66.8



#11
Trichlorofluoromethane
Concen: 0.218 ppbv
RT: 3.98 min Scan# 324
Delta R.T. -0.01 min
Lab File: VL034043.D
Acq: 17 Jul 2019 22:32

Tgt Ion: 101 Resp: 53650
Ion Ratio Lower Upper
101 100
103 66.7 50.8 76.2





#13

Ethanol

Concen: 166.620 ppbv

RT: 3.63 min Scan# 216

Delta R.T. 0.00 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

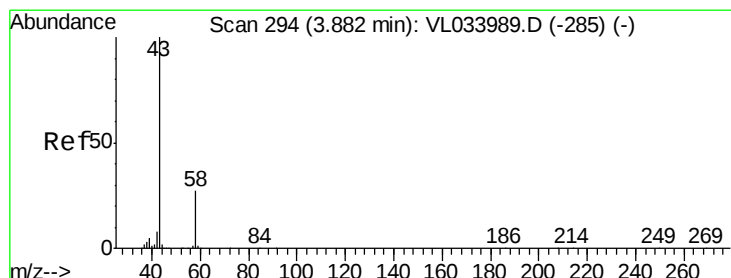
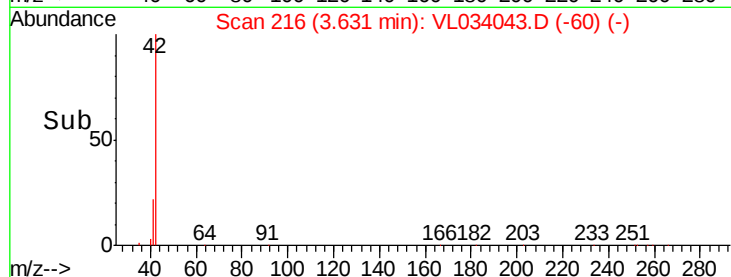
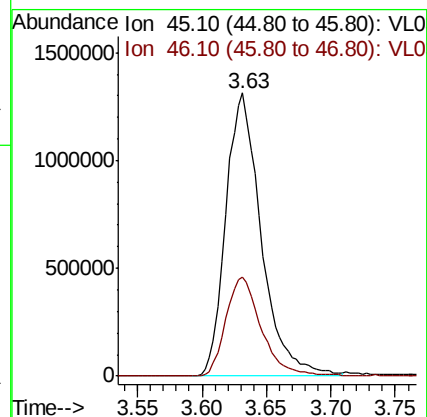
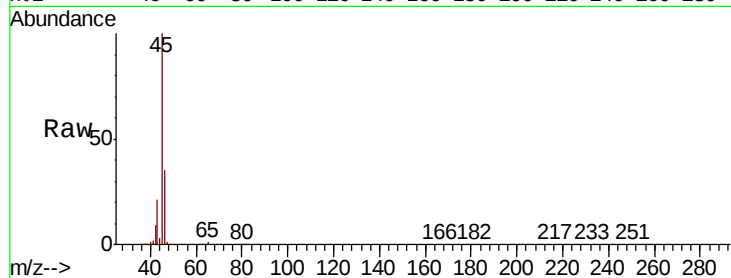
ClientSampled :

Tot Ion: 45 Resp: 2496074

Ion Ratio Lower Upper

45 100

46 35.6 16.2 64.6



#15

Acetone

Concen: 6.712 ppbv

RT: 3.88 min Scan# 292

Delta R.T. -0.01 min

Lab File: VL034043.D

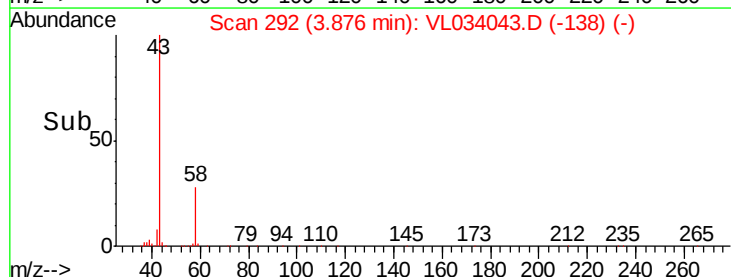
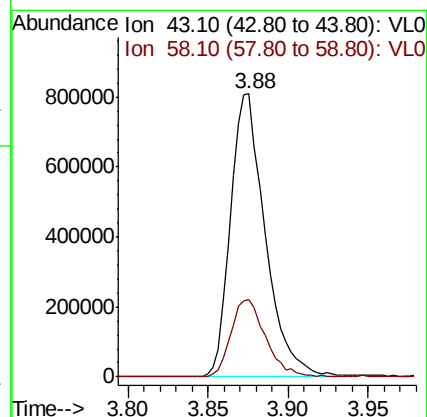
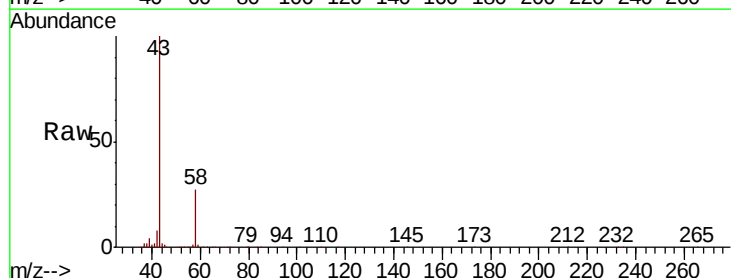
Acq: 17 Jul 2019 22:32

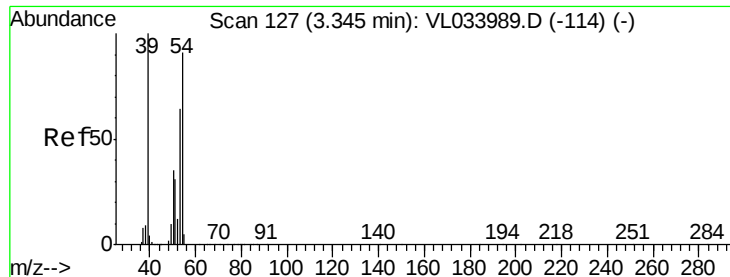
Tgt Ion: 43 Resp: 1197955

Ion Ratio Lower Upper

43 100

58 27.4 21.4 32.0





#16

1,3-Butadiene

Concen: 0.264 ppbv

RT: 3.32 min Scan# 118

Delta R.T. -0.03 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

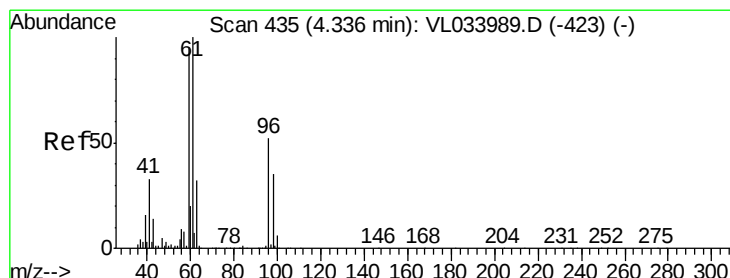
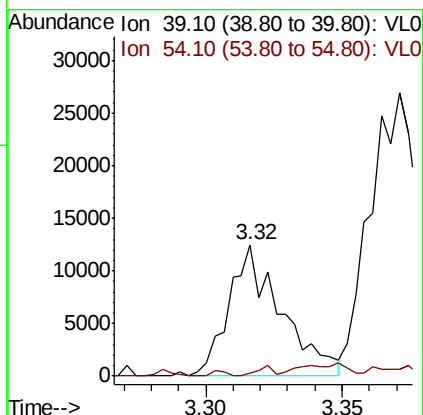
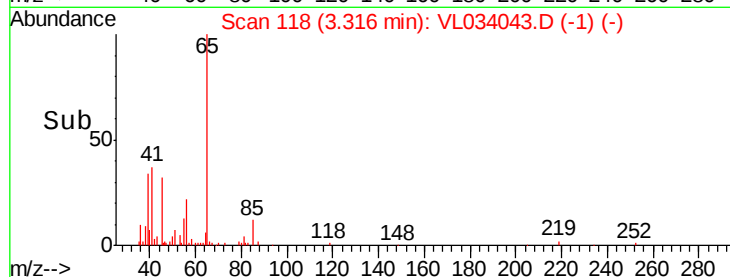
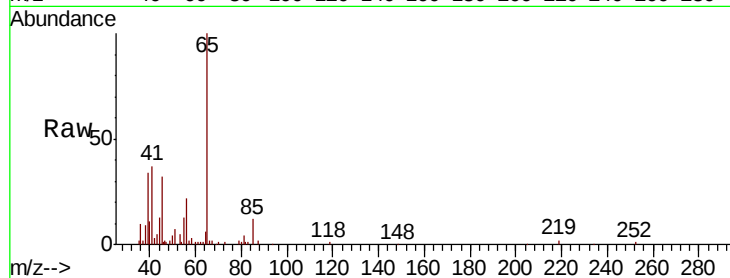
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 39 Resp: 16610

Ion Ratio Lower Upper

39 100

54 13.5 71.4 107.2#



#17

tert-Butyl alcohol

Concen: 0.055 ppbv

RT: 4.34 min Scan# 435

Delta R.T. 0.00 min

Lab File: VL034043.D

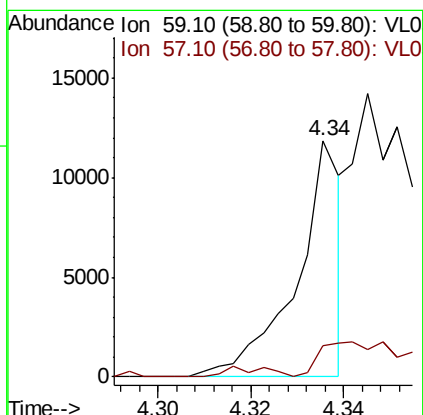
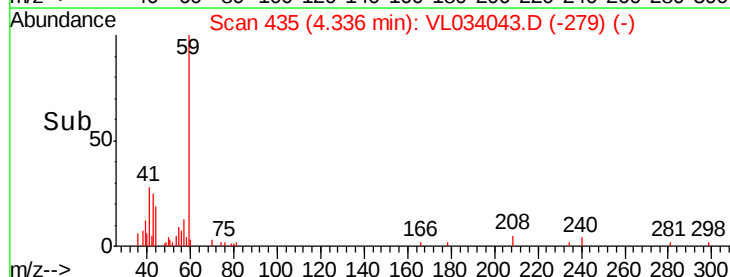
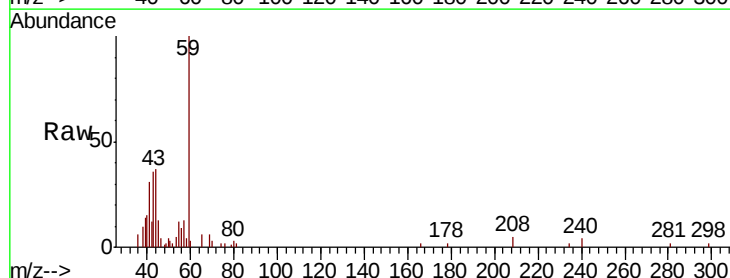
Acq: 17 Jul 2019 22:32

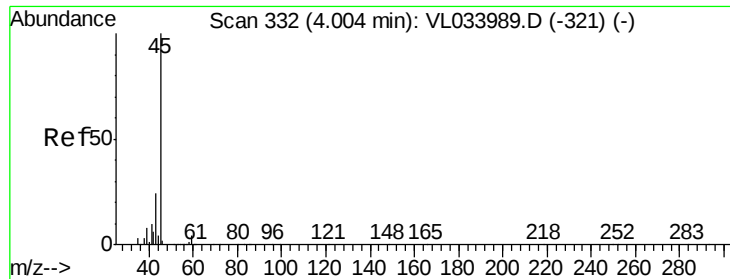
Tgt Ion: 59 Resp: 7830

Ion Ratio Lower Upper

59 100

57 0.0 8.2 12.2#





#19

Isopropyl Alcohol

Concen: 4.533 ppbv

RT: 4.01 min Scan# 333

Delta R.T. 0.00 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

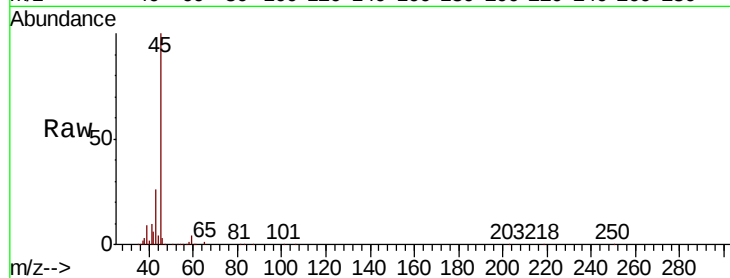
ClientSampleId :

Tot Ion: 45 Resp: 543110

Ion Ratio Lower Upper

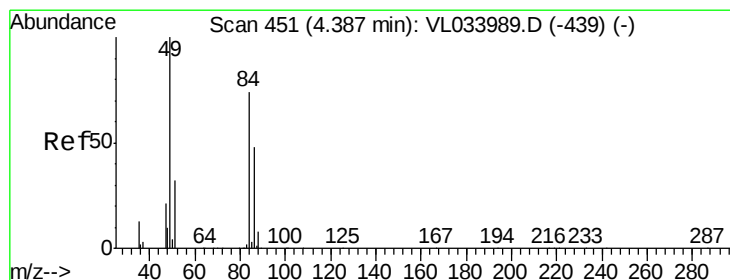
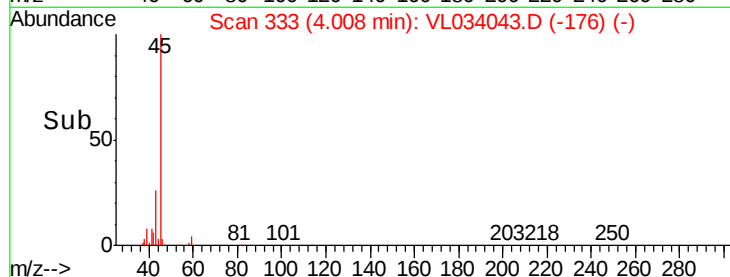
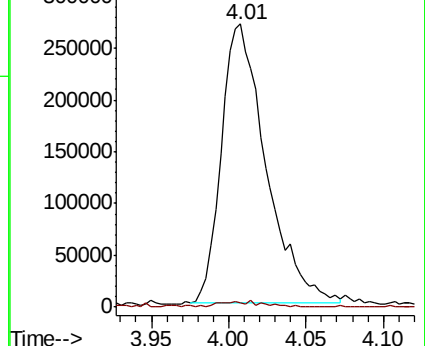
45 100

58 2.3 1.7 2.5



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 0.133 ppbv

RT: 4.38 min Scan# 448

Delta R.T. -0.01 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Tgt Ion: 84 Resp: 10370

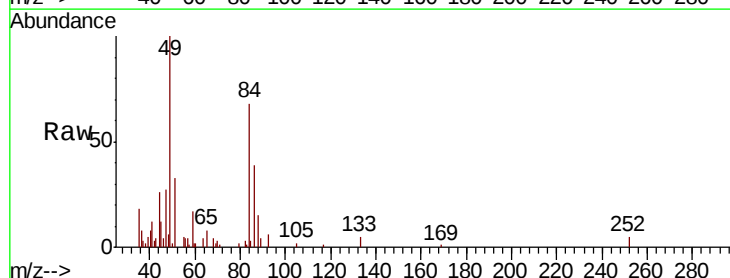
Ion Ratio Lower Upper

84 100

49 128.5 107.6 161.4

51 39.9 35.0 52.6

86 55.1 52.1 78.1

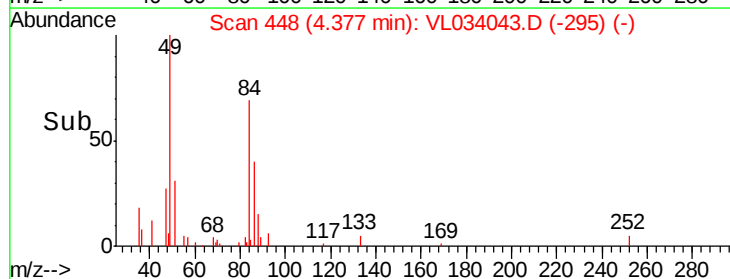
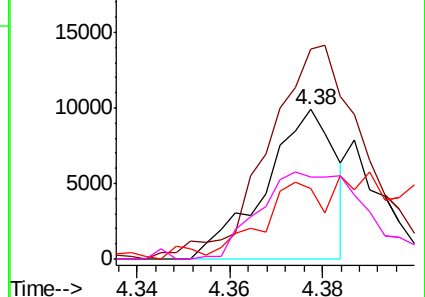


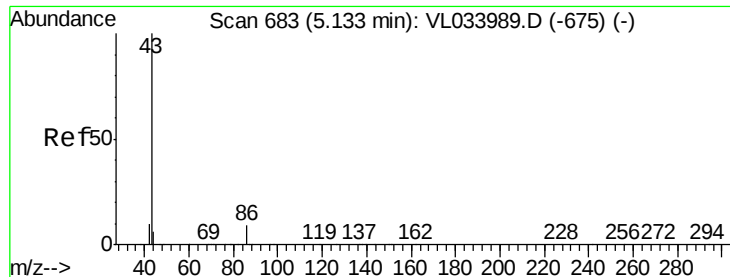
Abundance Ion 84.00 (83.70 to 84.70): VL0

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





#23

Vinyl Acetate

Concen: 0.077 ppbv

RT: 5.11 min Scan# 677

Delta R.T. -0.02 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 13799

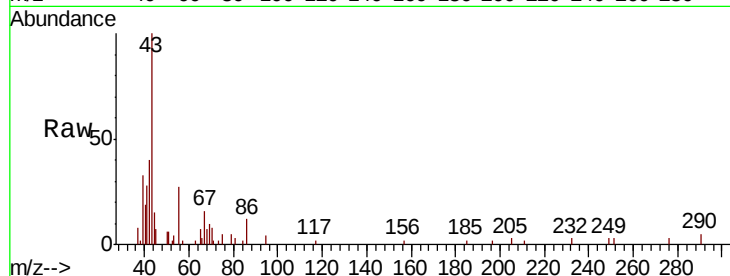
Ion Ratio Lower Upper

43 100

86 14.5 6.6 9.8#

42 16.2 8.3 12.5#

44 0.0 4.3 6.5#

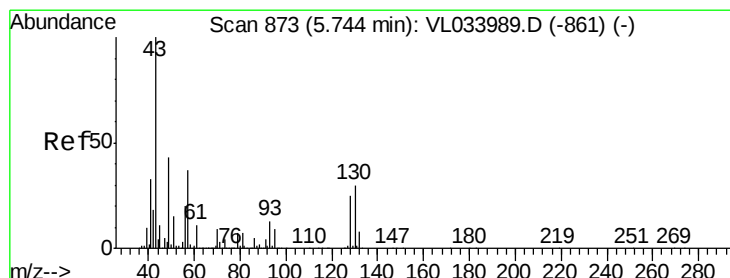
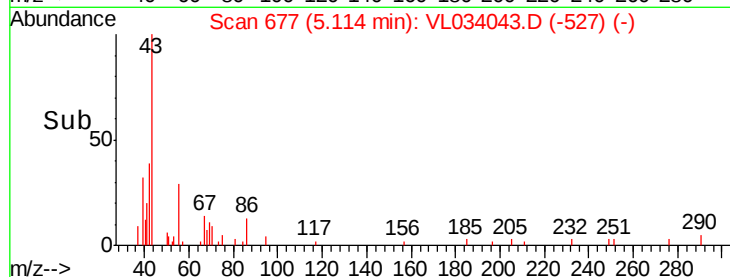
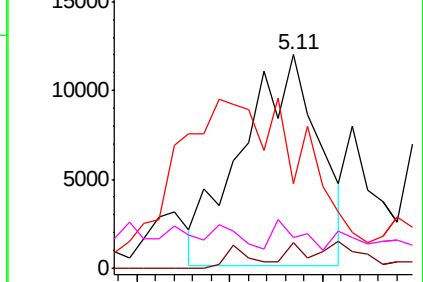


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.163 ppbv

RT: 5.74 min Scan# 871

Delta R.T. -0.01 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Tgt Ion: 43 Resp: 39882

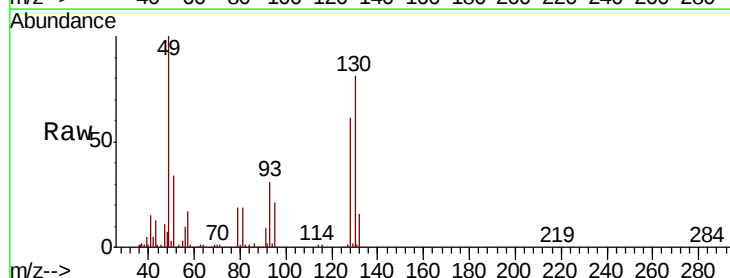
Ion Ratio Lower Upper

43 100

45 11.9 8.1 12.1

61 9.7 8.1 12.1

70 9.8 6.3 9.5#

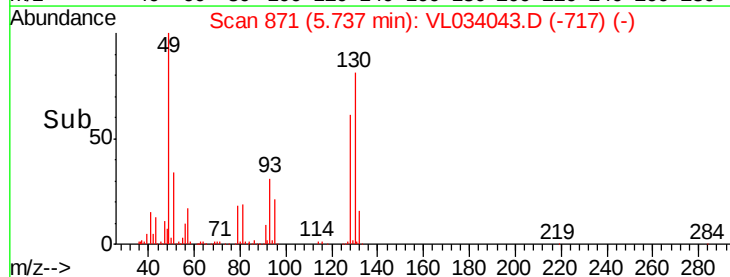
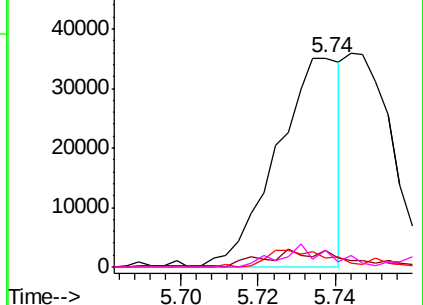


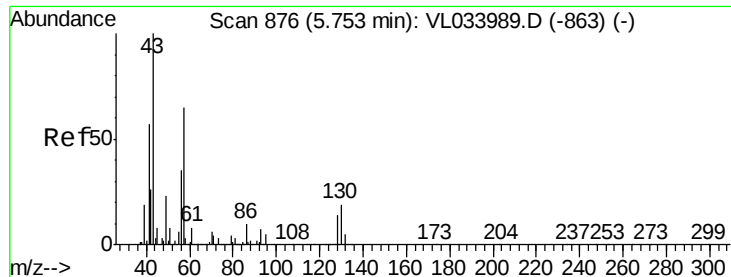
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.705 ppbv

RT: 5.74 min Scan# 873

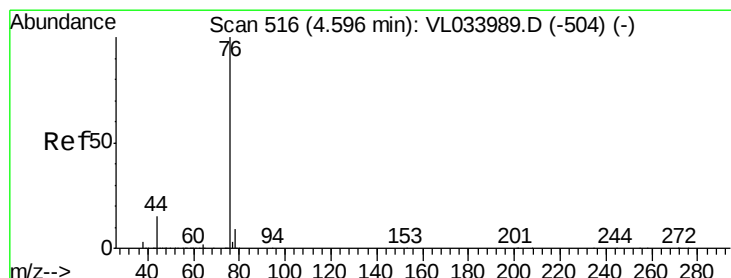
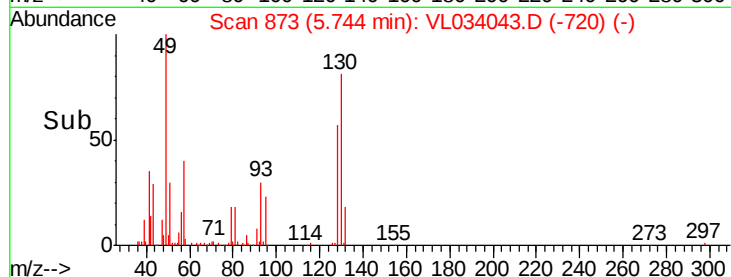
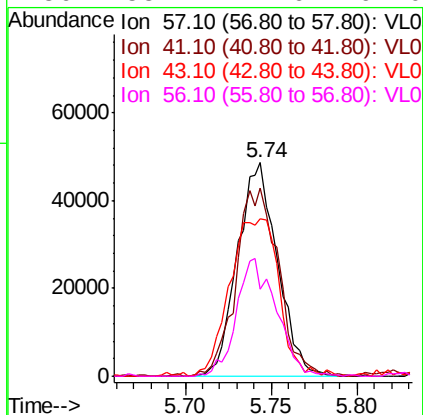
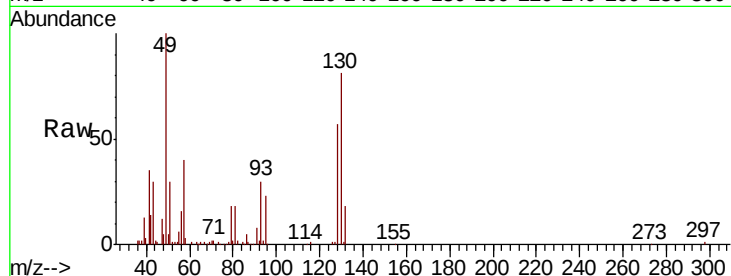
Delta R.T. -0.01 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	57	Resp:	78763
Ion	Ratio	Lower	Upper
57	100		
41	93.5	70.6	105.8
43	91.2	177.6	266.4#
56	55.2	42.6	64.0



#27

Carbon Disulfide

Concen: 0.039 ppbv

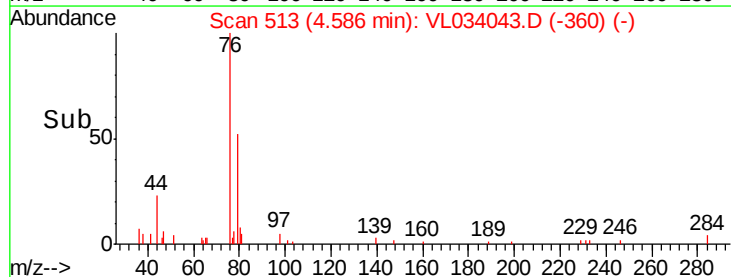
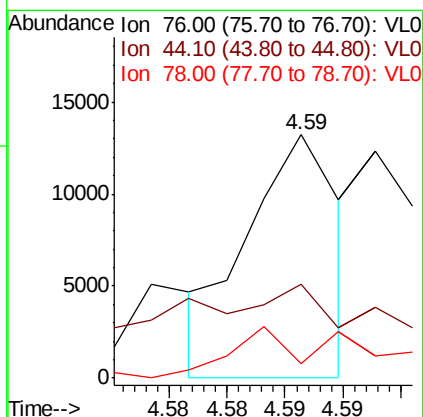
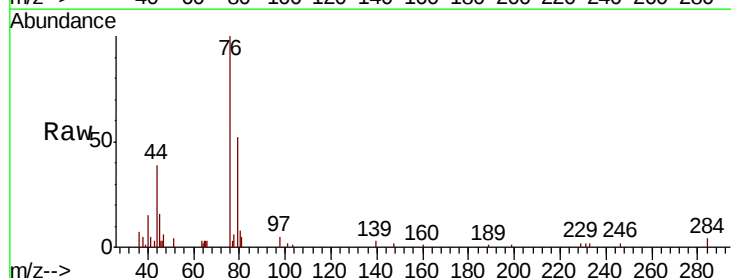
RT: 4.59 min Scan# 513

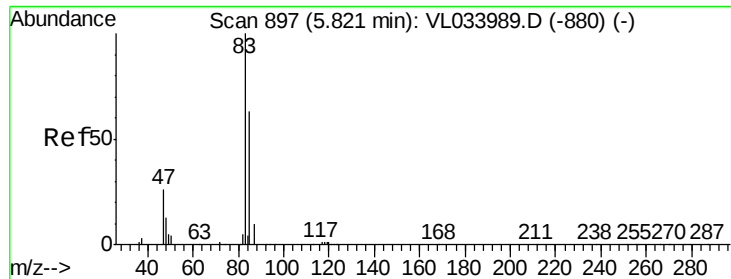
Delta R.T. -0.01 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Tgt Ion:	76	Resp:	7314
Ion	Ratio	Lower	Upper
76	100		
44	48.2	12.6	18.8#
78	51.3	7.2	10.8#

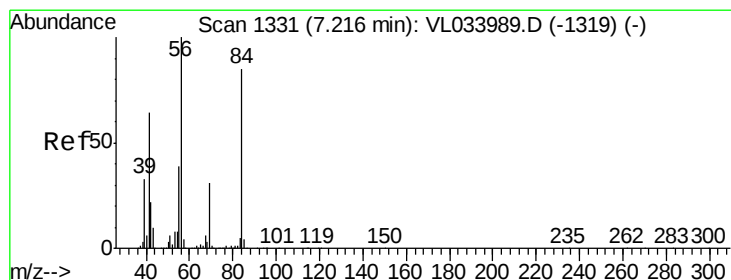
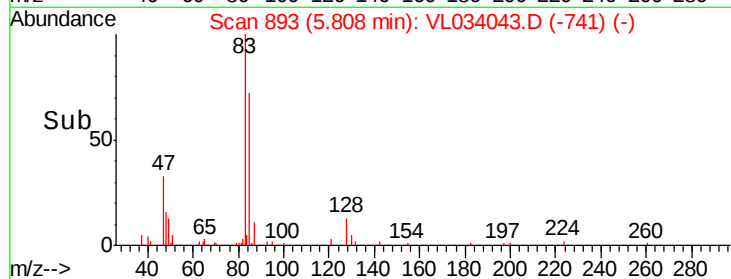
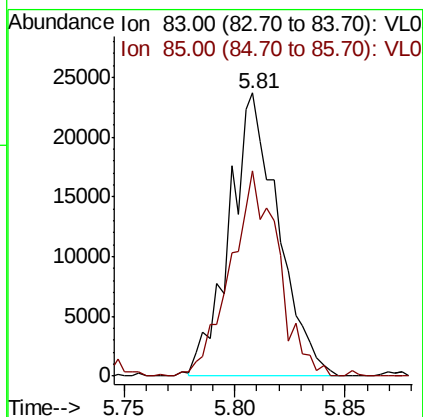
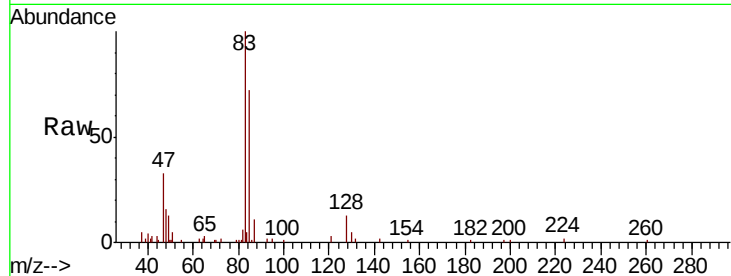




#29
Chloroform
Concen: 0.173 ppbv
RT: 5.81 min Scan# 893
Delta R.T. -0.01 min
Lab File: VL034043.D
Acq: 17 Jul 2019 22:32

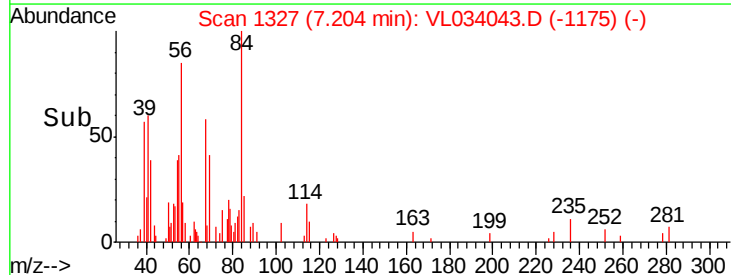
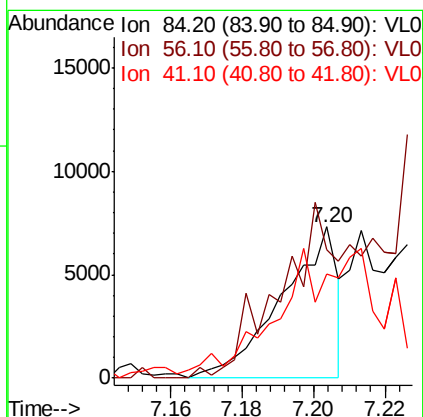
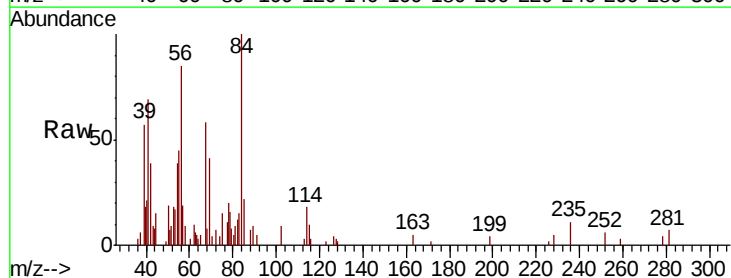
Instrument :
MSVOA_L
ClientSampled :

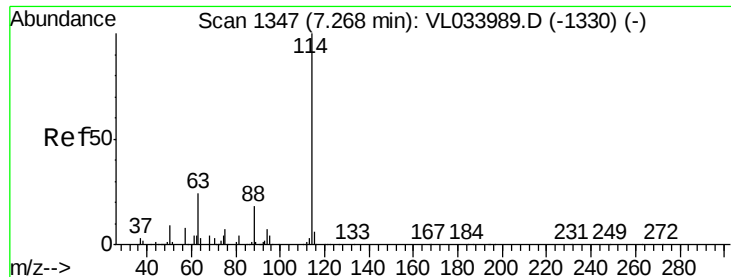
Tot Ion: 83 Resp: 36304
Ion Ratio Lower Upper
83 100
85 70.8 50.6 75.8



#30
Cyclohexane
Concen: 0.091 ppbv
RT: 7.20 min Scan# 1327
Delta R.T. -0.01 min
Lab File: VL034043.D
Acq: 17 Jul 2019 22:32

Tgt Ion: 84 Resp: 7853
Ion Ratio Lower Upper
84 100
56 0.0 103.7 155.5#
41 0.0 62.6 94.0#

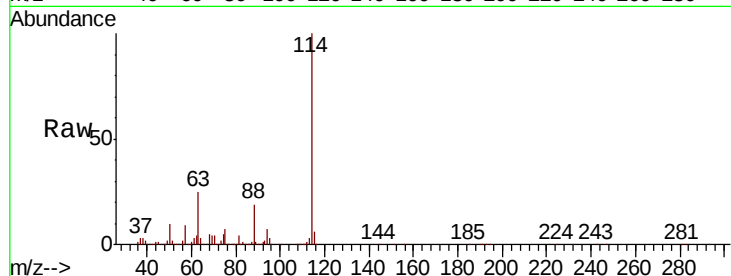




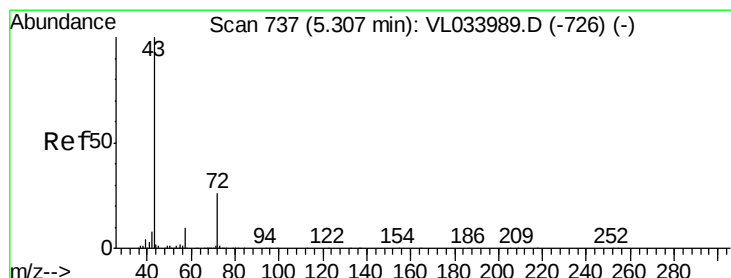
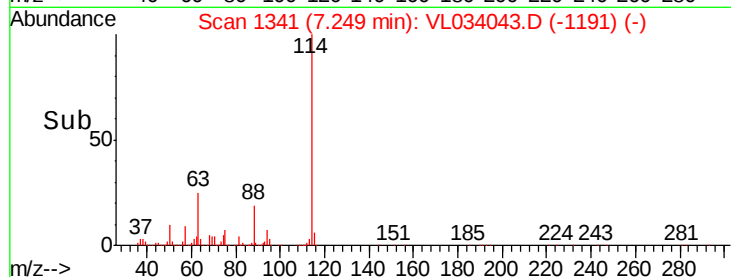
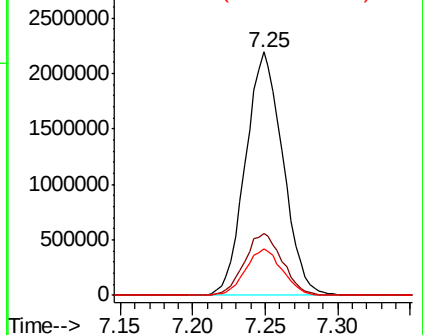
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.25 min Scan# 1341
 Delta R.T. -0.02 min
 Lab File: VL034043.D
 Acq: 17 Jul 2019 22:32

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:114 Resp: 3939529
 Ion Ratio Lower Upper
 114 100
 63 25.9 20.2 30.2
 88 18.9 14.1 21.1

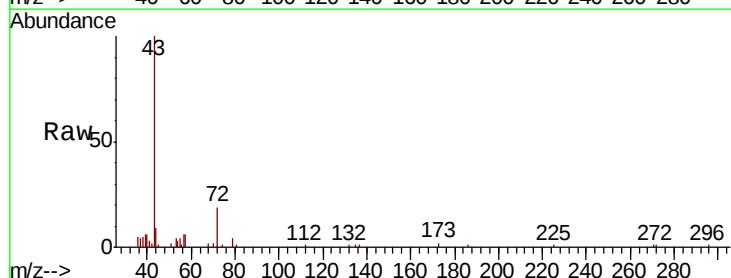


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

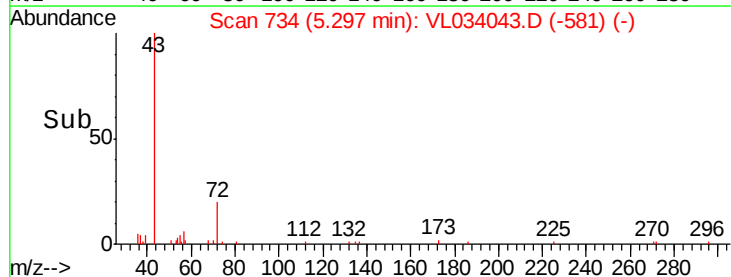
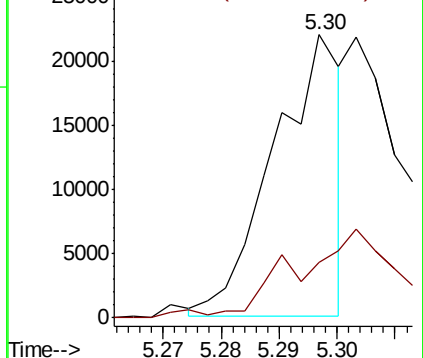


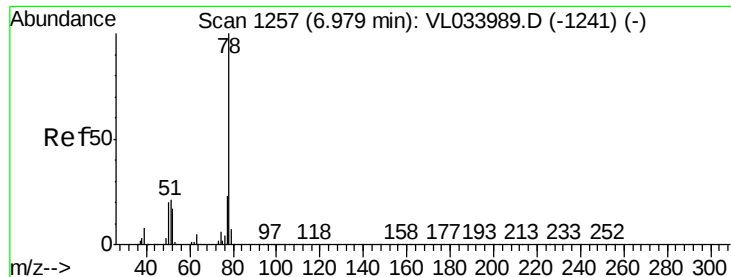
#34
 2-Butanone
 Concen: 0.085 ppbv
 RT: 5.30 min Scan# 734
 Delta R.T. -0.01 min
 Lab File: VL034043.D
 Acq: 17 Jul 2019 22:32

Tgt Ion: 43 Resp: 17723
 Ion Ratio Lower Upper
 43 100
 72 0.0 19.9 29.9#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.169 ppbv

RT: 6.96 min Scan# 1251

Delta R.T. -0.02 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

ClientSampleId :

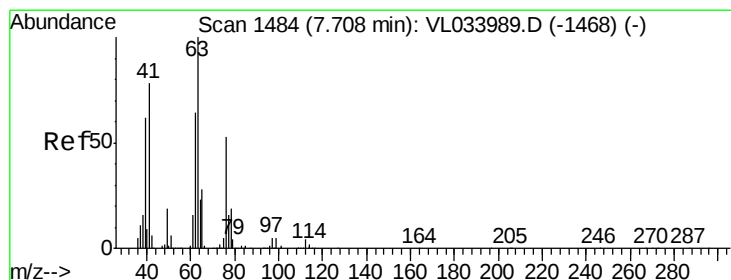
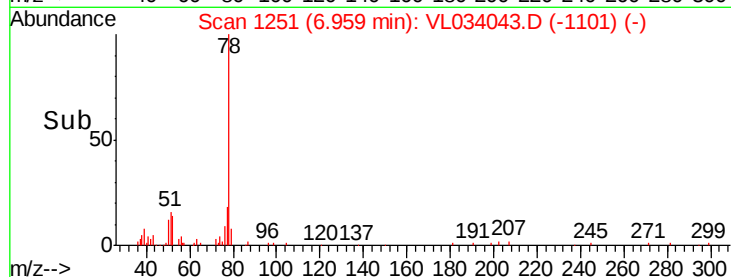
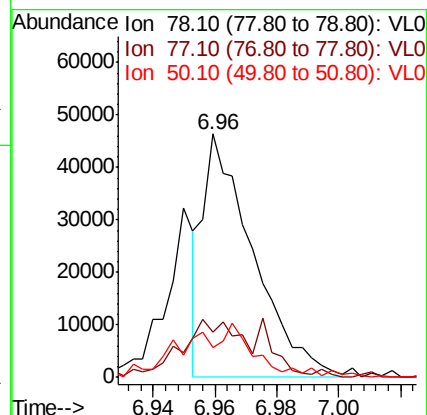
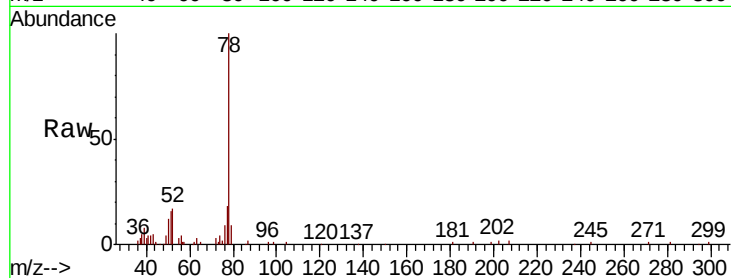
Tot Ion: 78 Resp: 51959

Ion Ratio Lower Upper

78 100

77 18.6 18.7 28.1#

50 11.0 16.2 24.2#



#39

1,2-Dichloropropane

Concen: 8.869 ppbv

RT: 7.25 min Scan# 1341

Delta R.T. -0.46 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

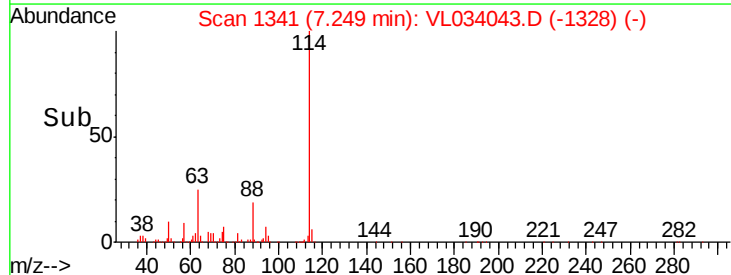
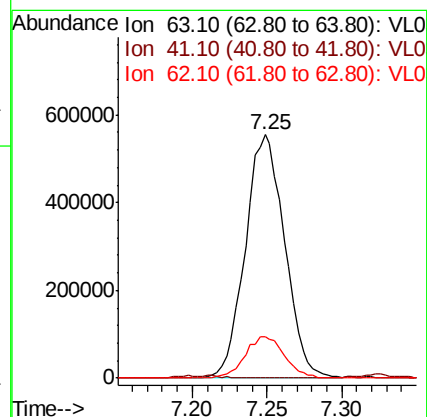
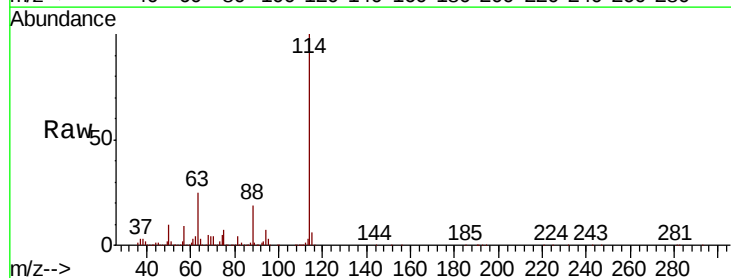
Tgt Ion: 63 Resp: 1016594

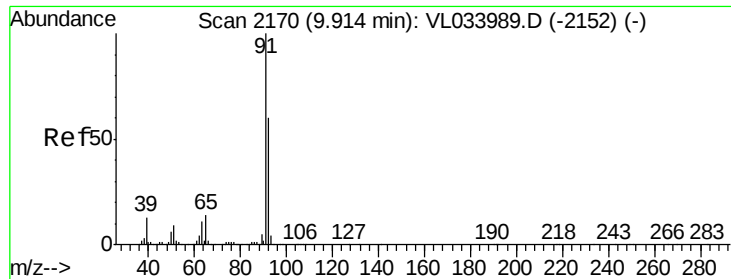
Ion Ratio Lower Upper

63 100

41 0.0 62.3 93.5#

62 16.7 51.4 77.2#





#53

Toluene

Concen: 0.168 ppbv

RT: 9.90 min Scan# 2165

Delta R.T. -0.02 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

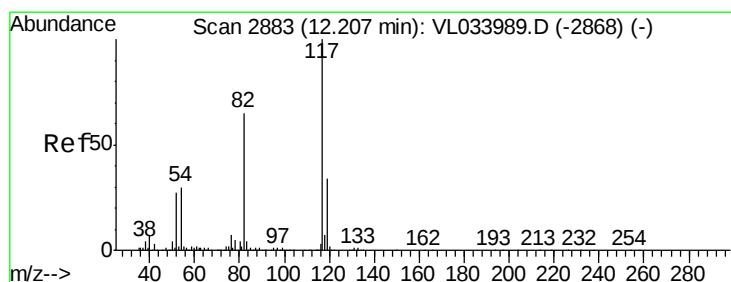
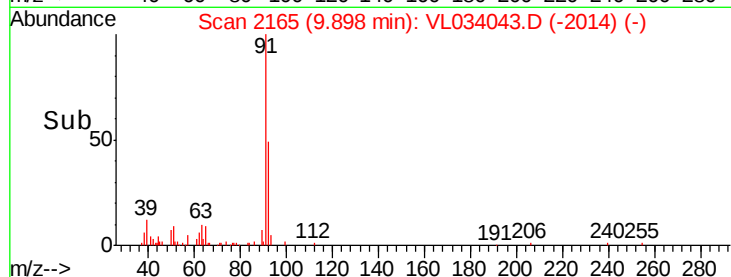
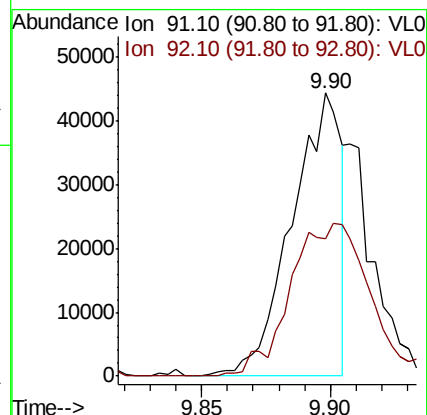
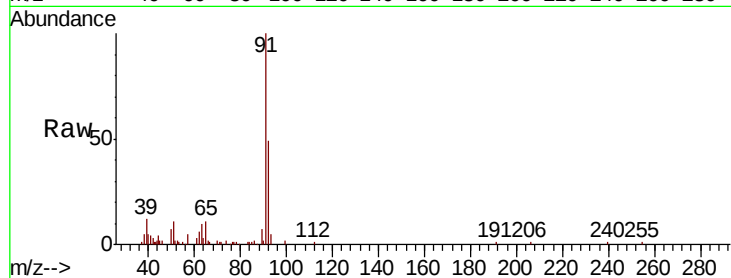
ClientSampleId :

Tot Ion: 91 Resp: 59167

Ion Ratio Lower Upper

91 100

92 87.2 47.7 71.5#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.19 min Scan# 2878

Delta R.T. -0.02 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

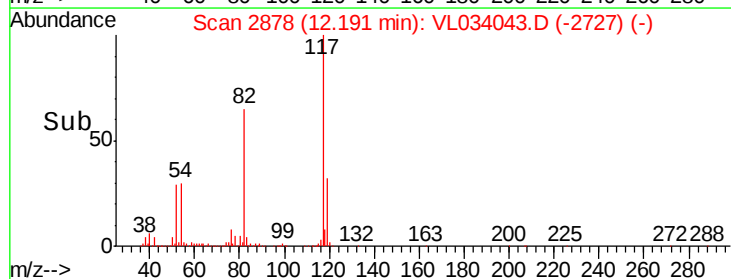
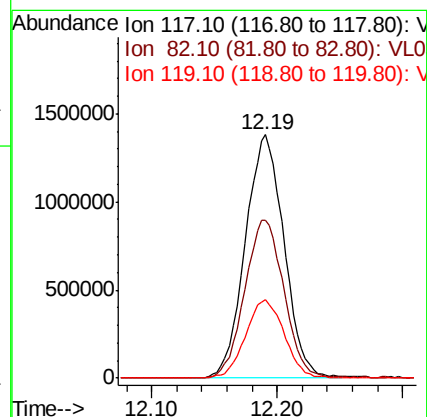
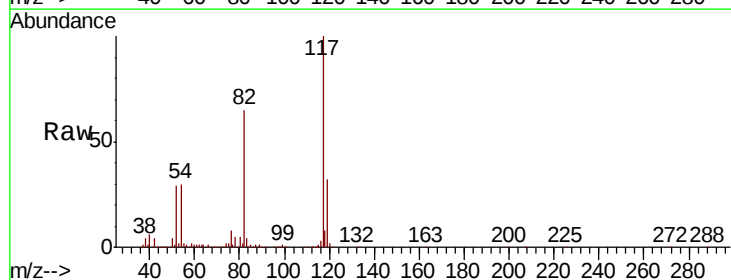
Tgt Ion: 117 Resp: 2962259

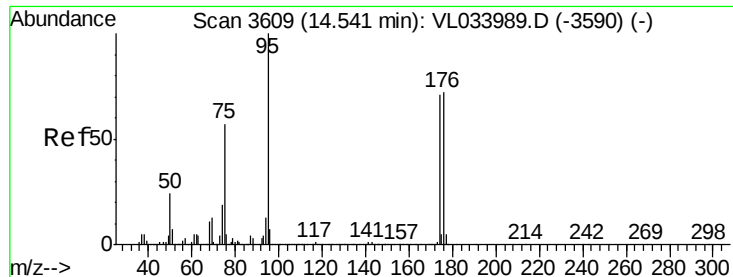
Ion Ratio Lower Upper

117 100

82 66.1 50.8 76.2

119 32.3 24.0 36.0





#68

1-Bromo-4-Fluorobenzene

Concen: 9.289 ppbv

RT: 14.52 min Scan# 3604

Delta R.T. -0.02 min

Lab File: VL034043.D

Acq: 17 Jul 2019 22:32

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 95 Resp: 2346875

Ion Ratio Lower Upper

95 100

174 71.5 60.5 90.7

175 5.3 4.0 6.0

