

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100819\
 Data File : VL034254.D
 Acq On : 8 Oct 2019 18:34
 Operator : SY/AP
 Sample : K5222-03DL 40X
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 V-3DL

Quant Time: Oct 09 05:20:30 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL091719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Sep 18 12:53:31 2019
 QLast Update : Wed Sep 18 12:53:31 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	1164628	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.21	114	1901705	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.15	117	1942926	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.49	95	1730899	10.25	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.50%

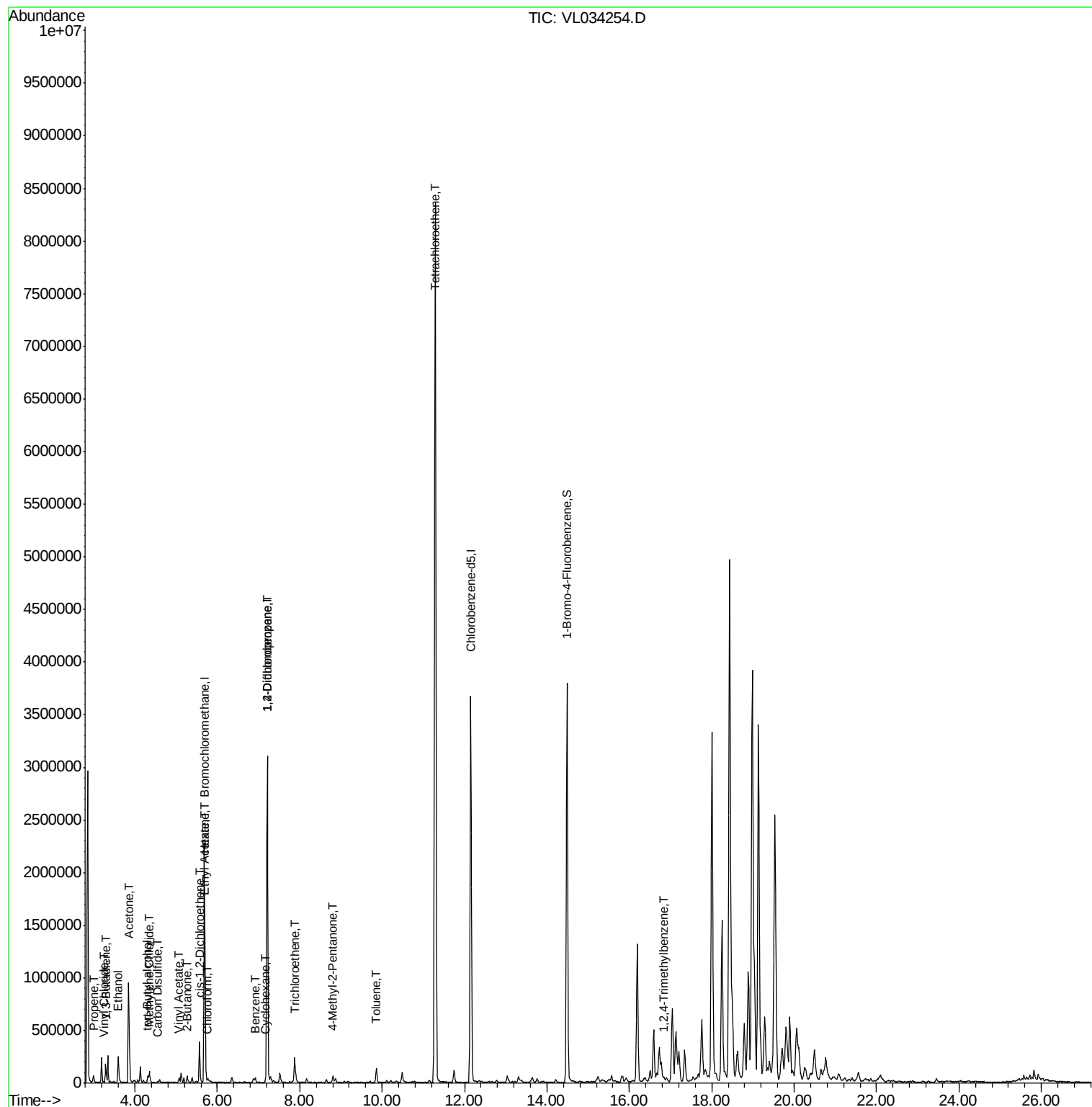
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) Vinyl Chloride	3.24	62	5842	0.080	ppbv #	67
9) Propene	2.99	41	27357	0.406	ppbv	88
13) Ethanol	3.59	45	249534	15.296	ppbv	99
15) Acetone	3.84	43	988580	6.333	ppbv	96
16) 1,3-Butadiene	3.29	39	47931	0.704	ppbv #	24
17) tert-Butyl alcohol	4.31	59	39632	0.401	ppbv	95
20) Methylene Chloride	4.35	84	17537	0.390	ppbv #	84
23) Vinyl Acetate	5.08	43	8714	0.038	ppbv #	1
25) Ethyl Acetate	5.71	43	28544	0.097	ppbv #	80
26) Hexane	5.71	57	25368	0.207	ppbv #	31
27) Carbon Disulfide	4.56	76	3974	0.035	ppbv #	1
29) Chloroform	5.76	83	7857	0.045	ppbv	85
30) Cyclohexane	7.16	84	2943	0.033	ppbv #	1
31) cis-1,2-Dichloroethene	5.57	61	209600	1.675	ppbv	96
34) 2-Butanone	5.27	43	66971	0.345	ppbv	98
36) Benzene	6.93	78	24867	0.118	ppbv	94
38) Trichloroethene	7.88	130	61620	0.821	ppbv	91
39) 1,2-Dichloropropane	7.21	63	648715	6.874	ppbv #	20
50) 4-Methyl-2-Pentanone	8.81	43	50017	0.177	ppbv #	85
52) Tetrachloroethene	11.29	164	1974404	28.453	ppbv	98
53) Toluene	9.86	91	86856	0.378	ppbv	98
74) 1,2,4-Trimethylbenzene	16.83	105	14505	0.048	ppbv #	72

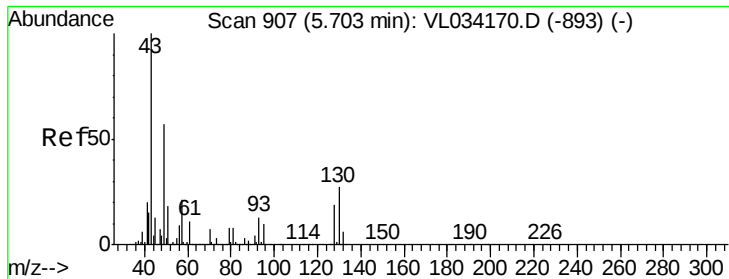
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Sep 18 12:53:31 2019
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. -0.02 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

V-3DL

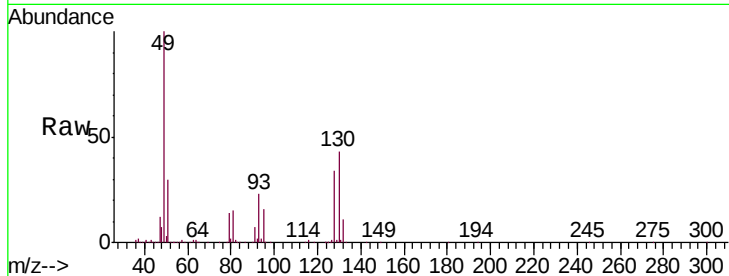
Tgt Ion: 49 Resp: 1164628

Ion Ratio Lower Upper

49 100

128 34.9 17.6 52.9

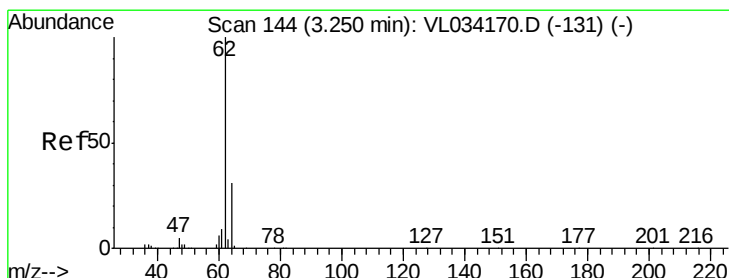
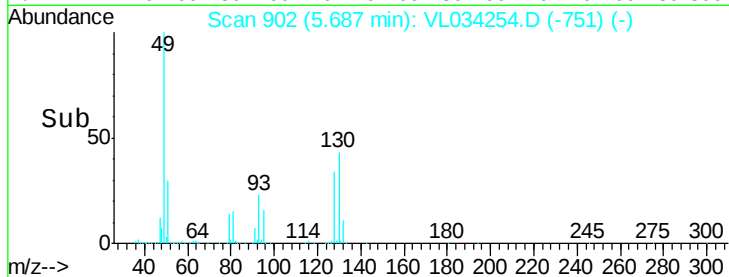
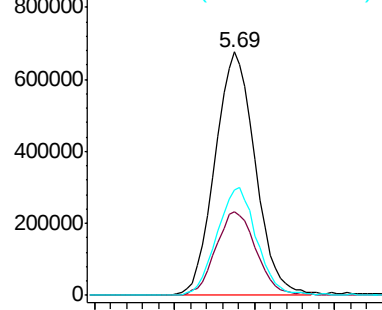
130 44.4 22.3 66.9



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



#5

Vinyl Chloride

Concen: 0.080 ppbv

RT: 3.24 min Scan# 141

Delta R.T. -0.01 min

Lab File: VL034254.D

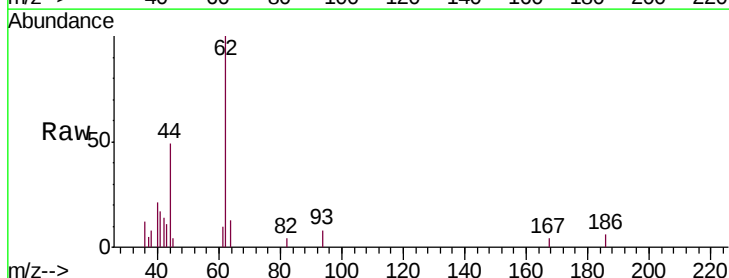
Acq: 8 Oct 2019 18:34

Tgt Ion: 62 Resp: 5842

Ion Ratio Lower Upper

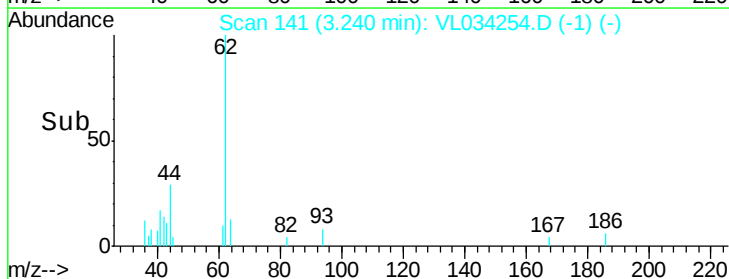
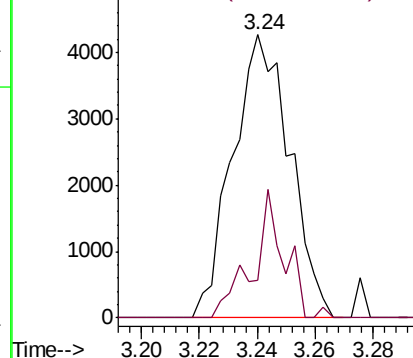
62 100

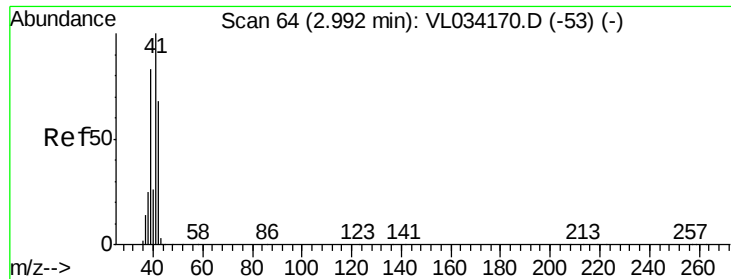
64 13.2 25.2 37.8#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0





#9

Propene

Concen: 0.406 ppbv

RT: 2.99 min Scan# 64

Delta R.T. 0.00 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

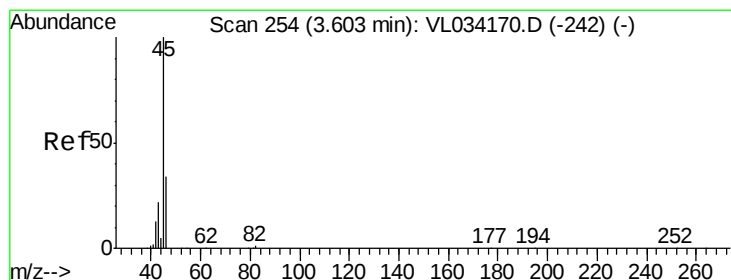
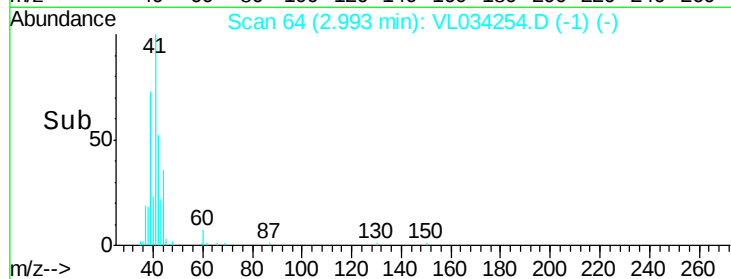
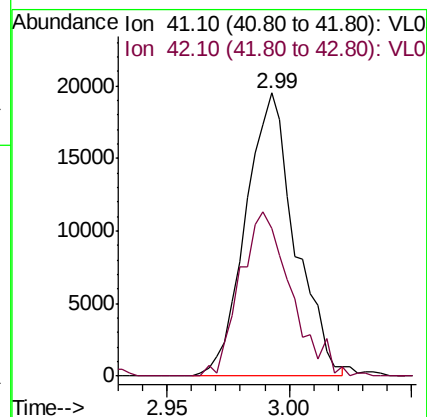
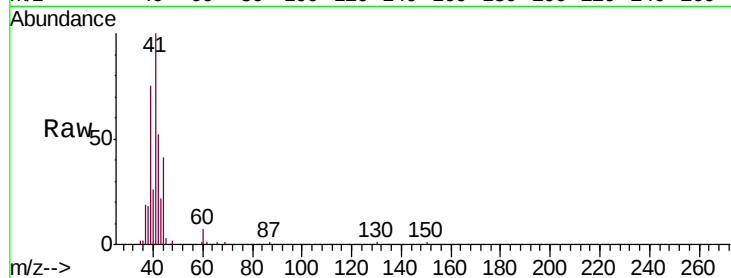
V-3DL

Tgt Ion: 41 Resp: 27357

Ion Ratio Lower Upper

41 100

42 60.2 55.8 83.6



#13

Ethanol

Concen: 15.296 ppbv

RT: 3.59 min Scan# 250

Delta R.T. -0.01 min

Lab File: VL034254.D

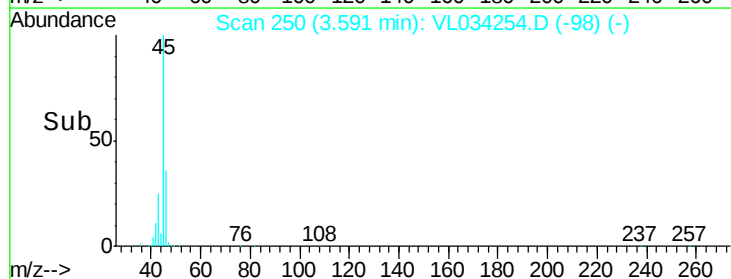
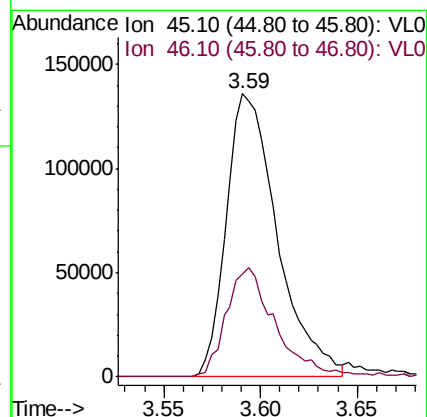
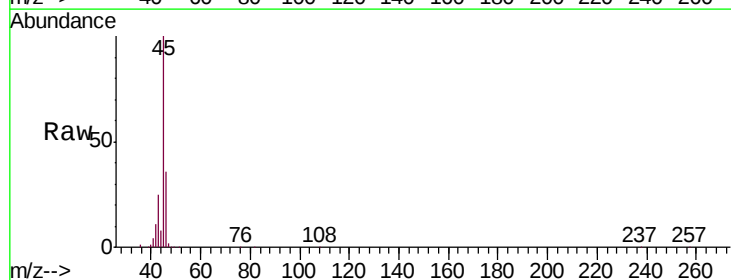
Acq: 8 Oct 2019 18:34

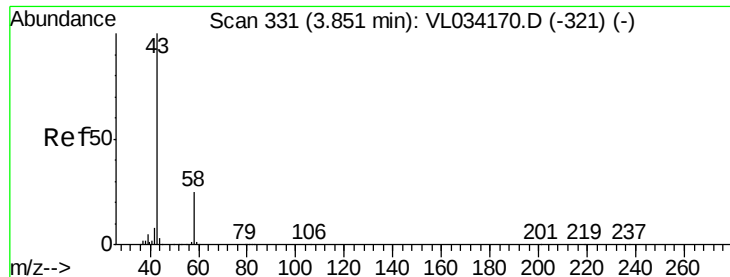
Tgt Ion: 45 Resp: 249534

Ion Ratio Lower Upper

45 100

46 38.1 15.5 61.9





#15

Acetone

Concen: 6.333 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.01 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

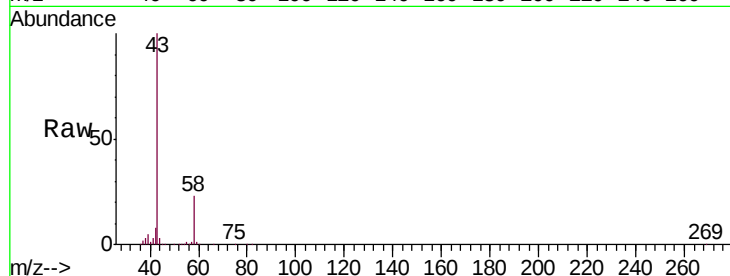
V-3DL

Tgt Ion: 43 Resp: 988580

Ion Ratio Lower Upper

43 100

58 23.7 20.5 30.7



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.84

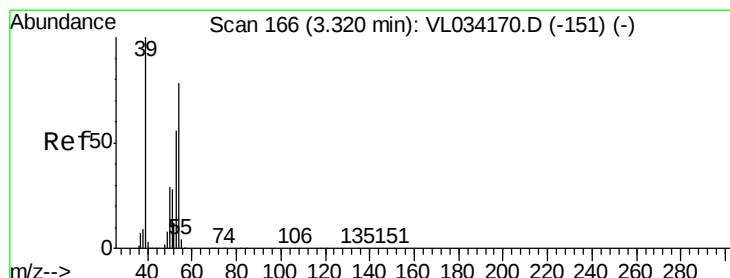
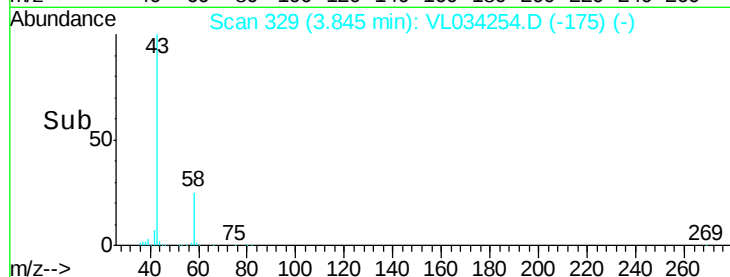
600000

400000

200000

0

Time-->



#16

1,3-Butadiene

Concen: 0.704 ppbv

RT: 3.29 min Scan# 157

Delta R.T. -0.03 min

Lab File: VL034254.D

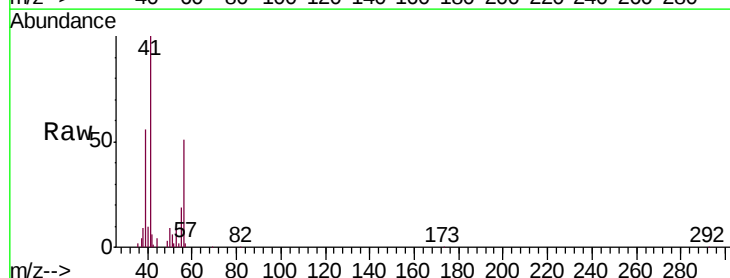
Acq: 8 Oct 2019 18:34

Tgt Ion: 39 Resp: 47931

Ion Ratio Lower Upper

39 100

54 12.8 63.4 95.0#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

3.29

40000

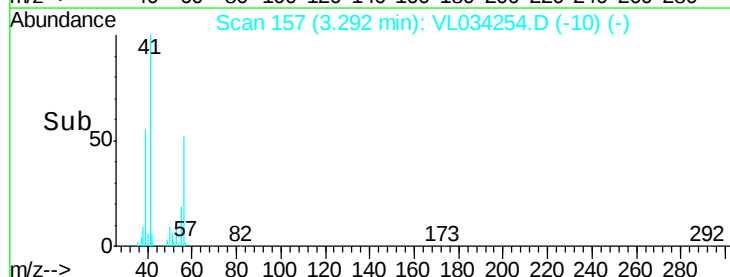
30000

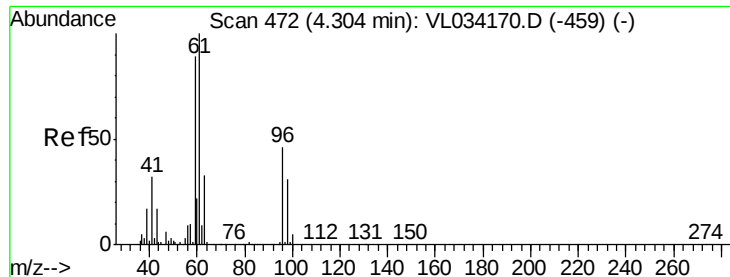
20000

10000

0

Time-->



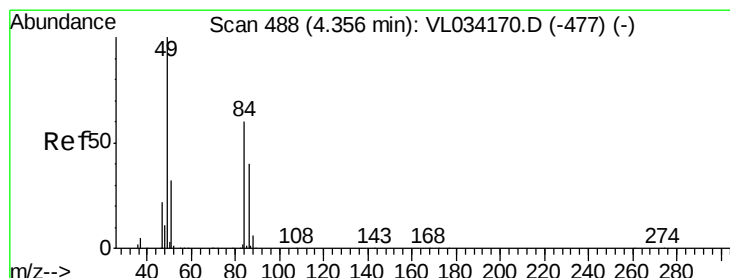
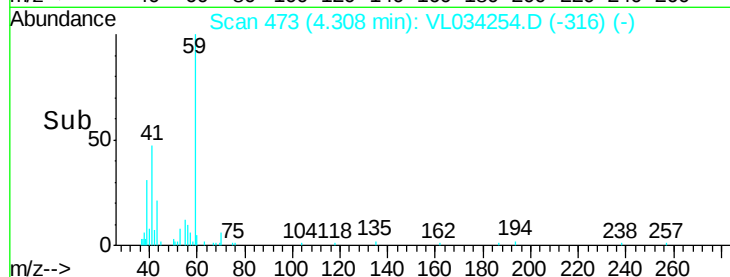
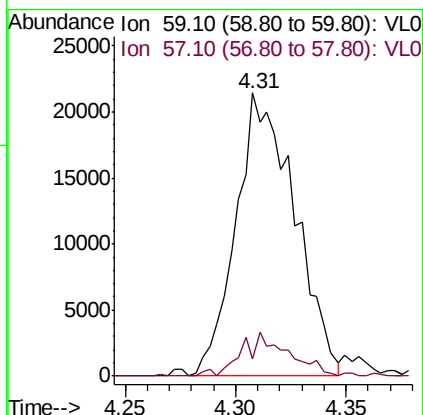
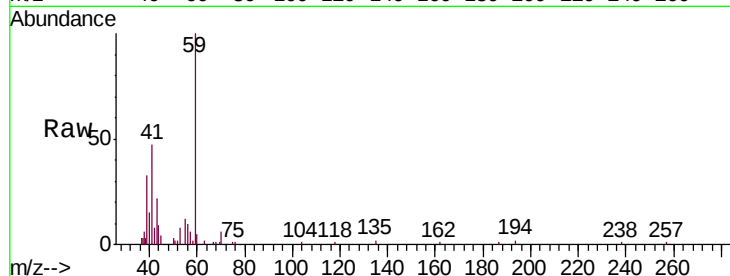


#17

tert-Butyl alcohol
Concen: 0.401 ppbv
RT: 4.31 min Scan# 473
Delta R.T. 0.00 min
Lab File: VL034254.D
Acq: 8 Oct 2019 18:34

Instrument :
MSVOA_L
ClientSampleId :
V-3DL

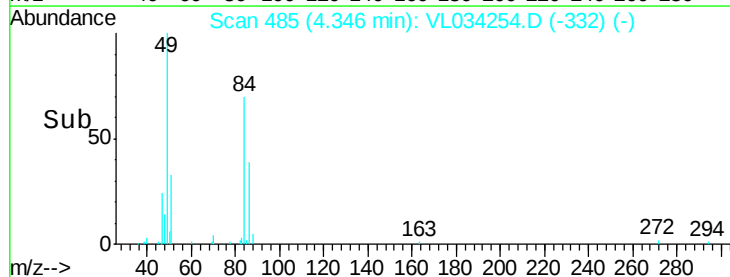
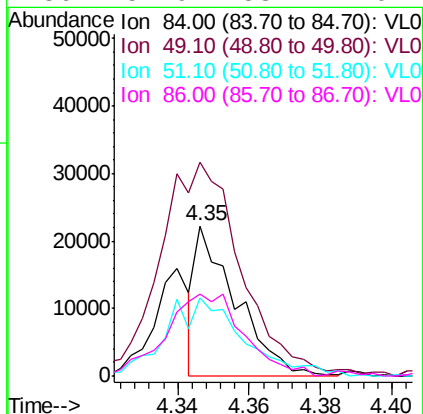
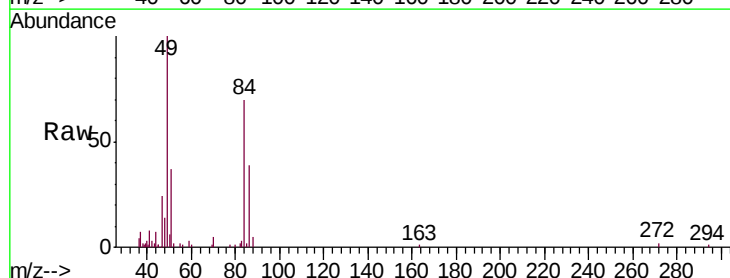
Tgt Ion: 59 Resp: 39632
Ion Ratio Lower Upper
59 100
57 12.8 8.7 13.1

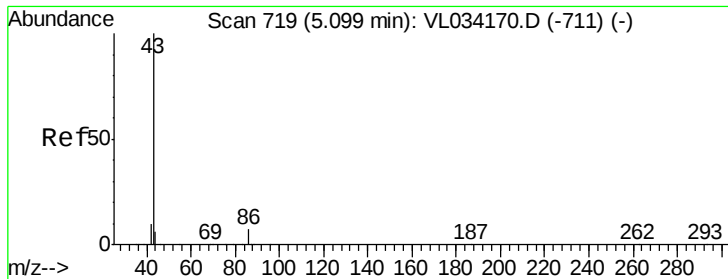


#20

Methylene Chloride
Concen: 0.390 ppbv
RT: 4.35 min Scan# 485
Delta R.T. -0.01 min
Lab File: VL034254.D
Acq: 8 Oct 2019 18:34

Tgt Ion: 84 Resp: 17537
Ion Ratio Lower Upper
84 100
49 140.5 133.8 200.8
51 52.4 43.6 65.4
86 52.9 53.1 79.7#





#23

Vinyl Acetate

Concen: 0.038 ppbv

RT: 5.08 min Scan# 712

Delta R.T. -0.02 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

V-3DL

Tgt Ion: 43 Resp: 8714

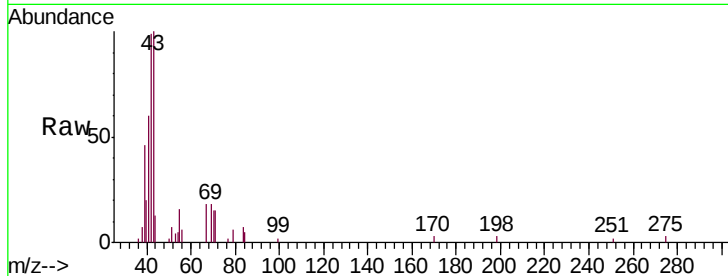
Ion Ratio Lower Upper

43 100

86 0.0 5.1 7.7#

42 98.5 8.6 12.8#

44 0.0 4.7 7.1#

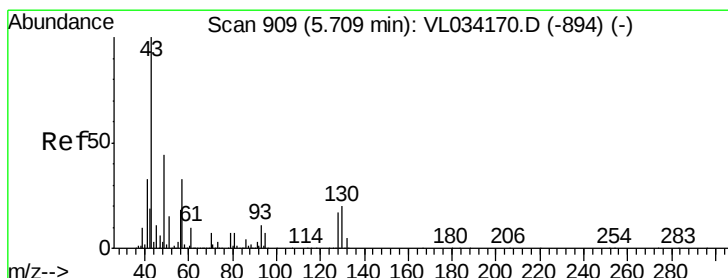
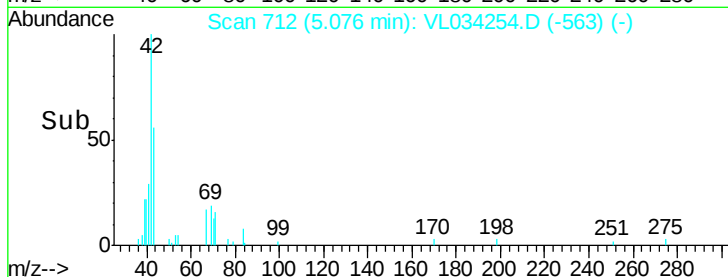
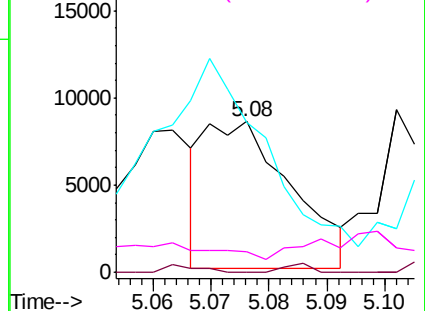


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.097 ppbv

RT: 5.71 min Scan# 909

Delta R.T. 0.00 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Tgt Ion: 43 Resp: 28544

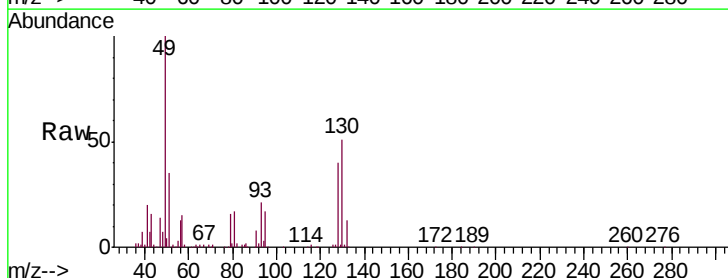
Ion Ratio Lower Upper

43 100

45 2.7 8.4 12.6#

61 0.0 7.2 10.8#

70 2.4 5.3 7.9#

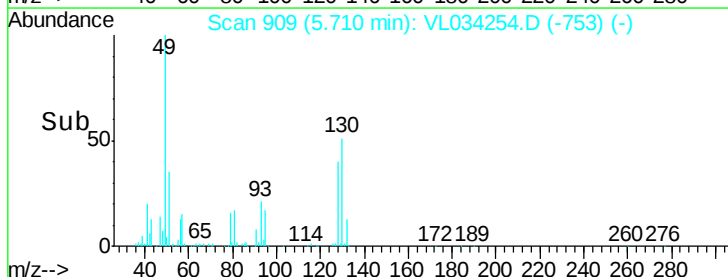
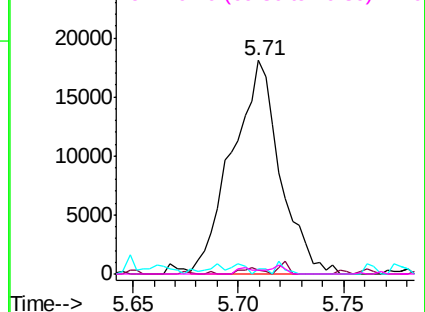


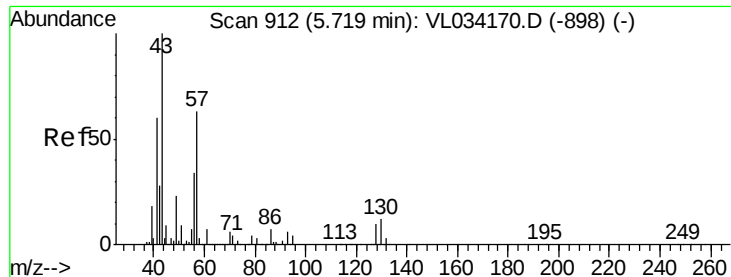
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.207 ppbv

RT: 5.71 min Scan# 908

Delta R.T. -0.01 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

V-3DL

Tgt Ion: 57 Resp: 25368

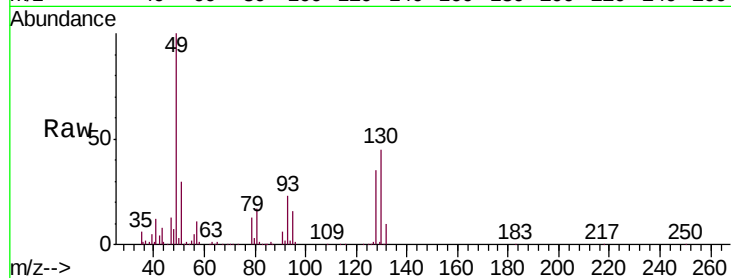
Ion Ratio Lower Upper

57 100

41 167.8 78.5 117.7#

43 114.1 189.5 284.3#

56 87.0 43.2 64.8#

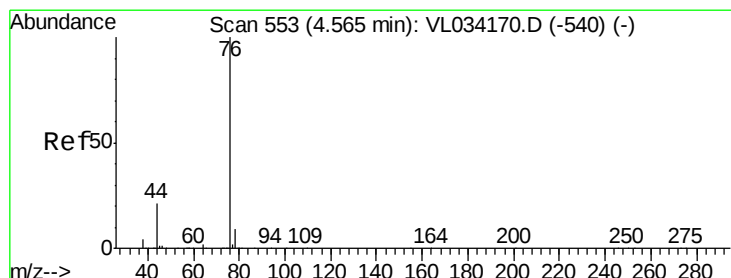
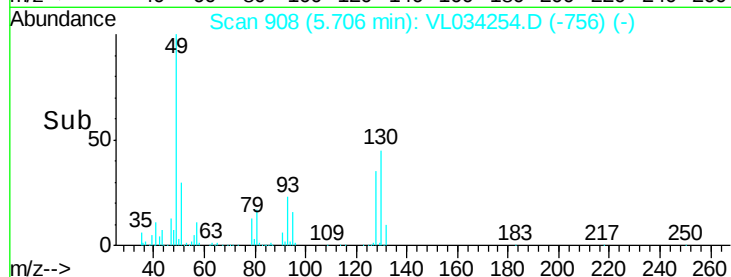
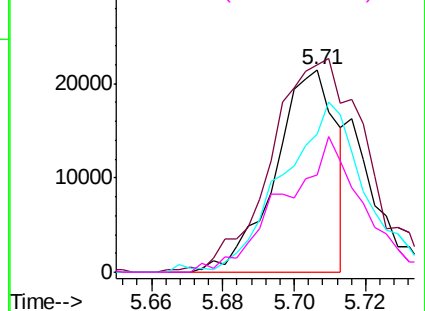


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#27

Carbon Disulfide

Concen: 0.035 ppbv

RT: 4.56 min Scan# 550

Delta R.T. -0.01 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

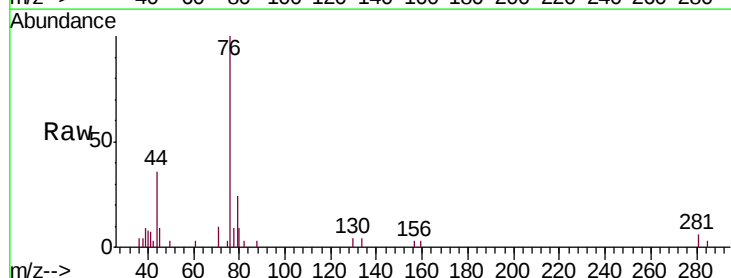
Tgt Ion: 76 Resp: 3974

Ion Ratio Lower Upper

76 100

44 107.1 17.6 26.4#

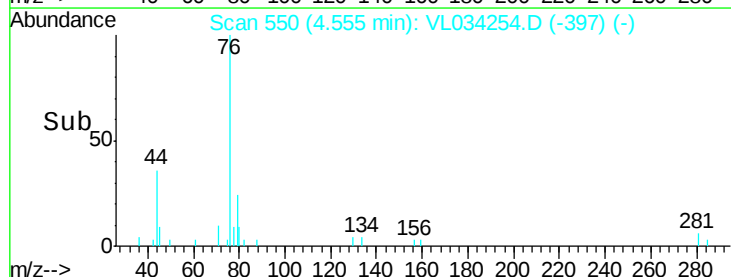
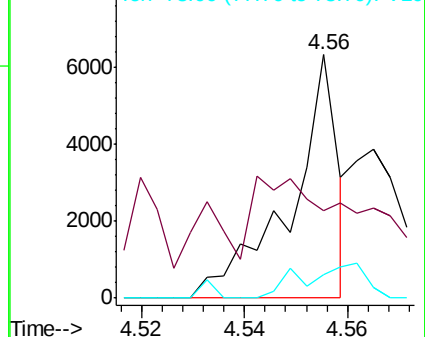
78 0.0 7.6 11.4#

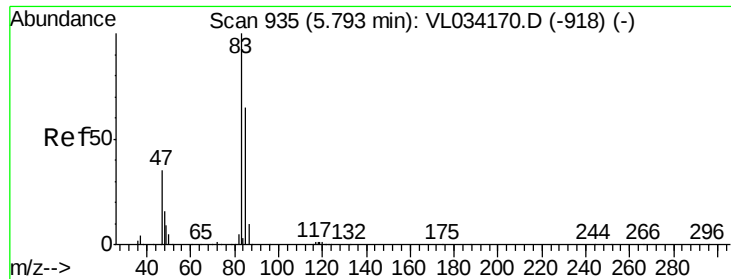


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0





#29

Chloroform

Concen: 0.045 ppbv

RT: 5.76 min Scan# 926

Delta R.T. -0.03 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

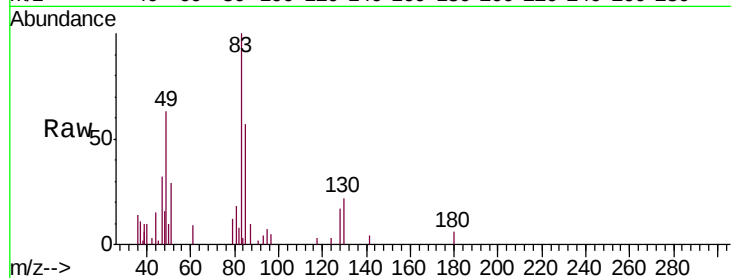
V-3DL

Tgt Ion: 83 Resp: 7857

Ion Ratio Lower Upper

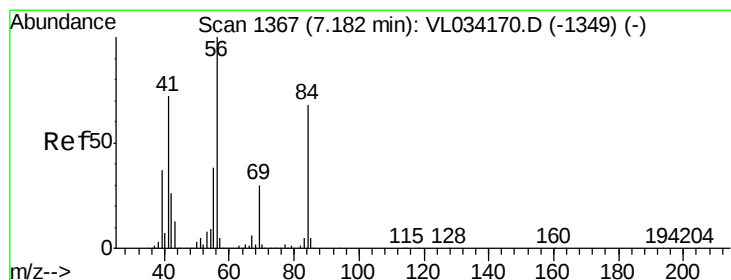
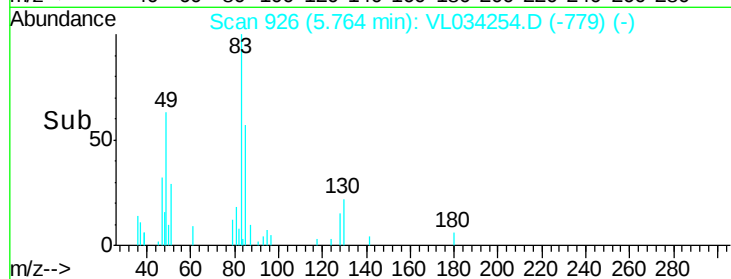
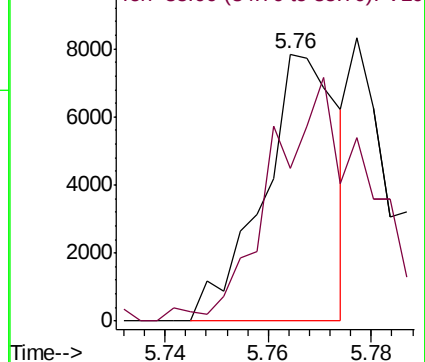
83 100

85 53.4 52.3 78.5



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#30

Cyclohexane

Concen: 0.033 ppbv

RT: 7.16 min Scan# 1361

Delta R.T. -0.02 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

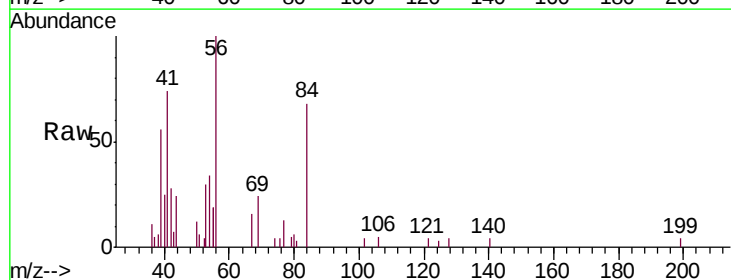
Tgt Ion: 84 Resp: 2943

Ion Ratio Lower Upper

84 100

56 0.0 126.2 189.2#

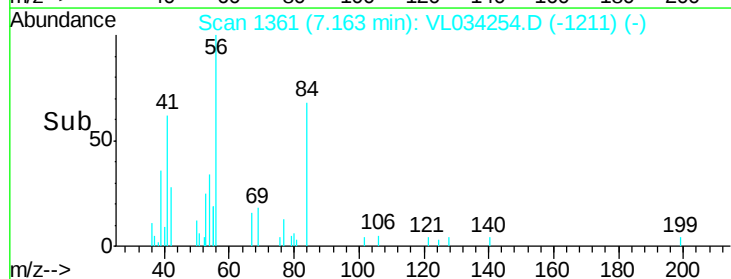
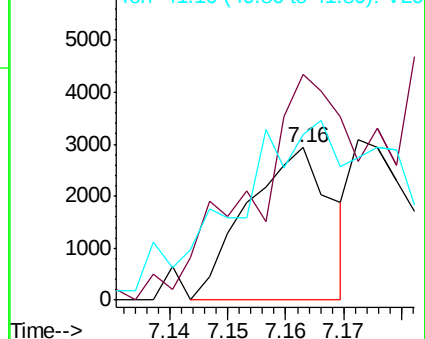
41 278.9 85.8 128.8#

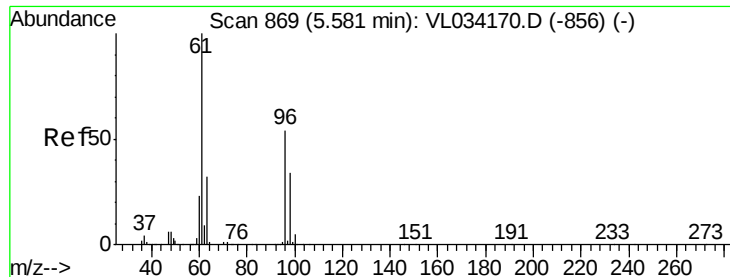


Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0





#31

cis-1,2-Dichloroethene

Concen: 1.675 ppbv

RT: 5.57 min Scan# 865

Delta R.T. -0.01 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

V-3DL

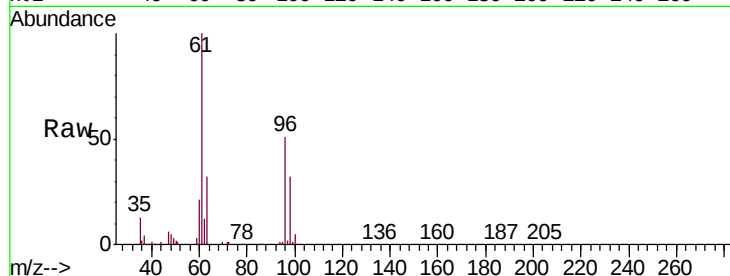
Tgt Ion: 61 Resp: 209600

Ion Ratio Lower Upper

61 100

96 50.5 43.0 64.4

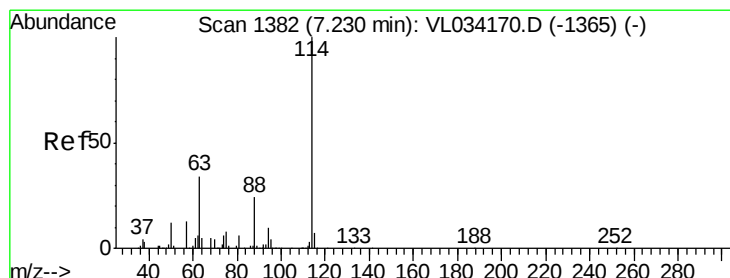
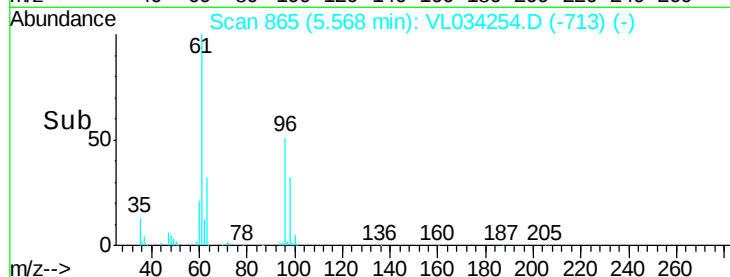
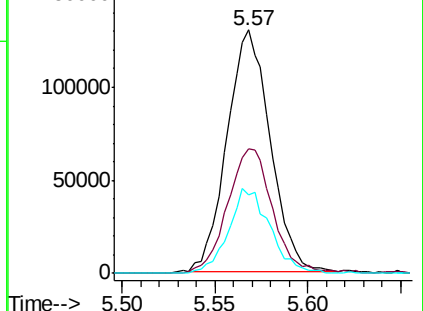
98 32.2 27.2 40.8



Abundance Ion 61.10 (60.80 to 61.80): VL0

Ion 96.00 (95.70 to 96.70): VL0

Ion 98.00 (97.70 to 98.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.21 min Scan# 1376

Delta R.T. -0.02 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

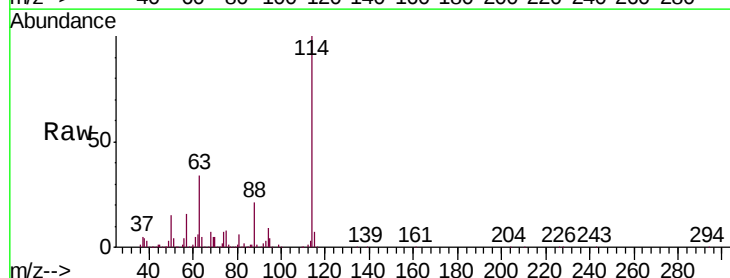
Tgt Ion: 114 Resp: 1901705

Ion Ratio Lower Upper

114 100

63 34.2 27.8 41.6

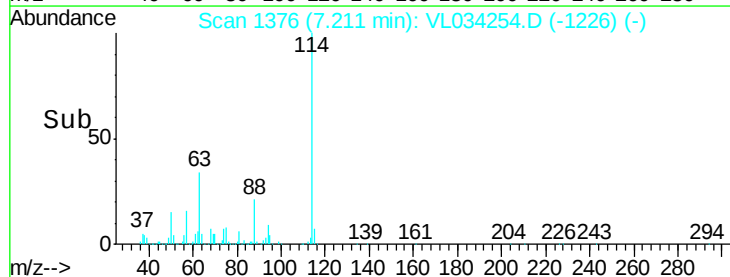
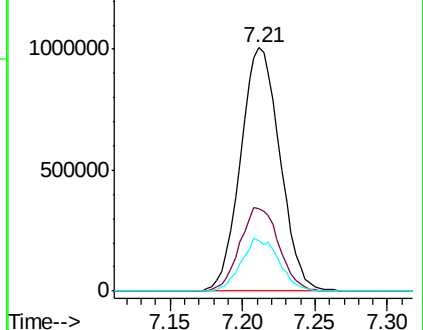
88 21.0 17.1 25.7

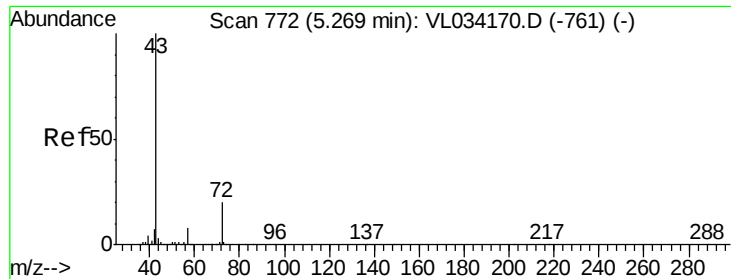


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

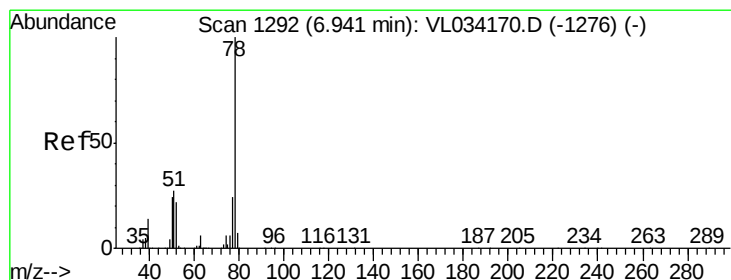
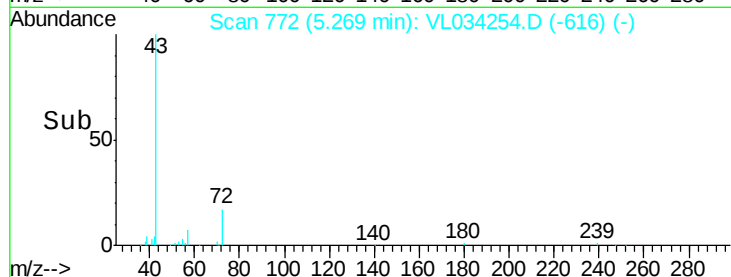
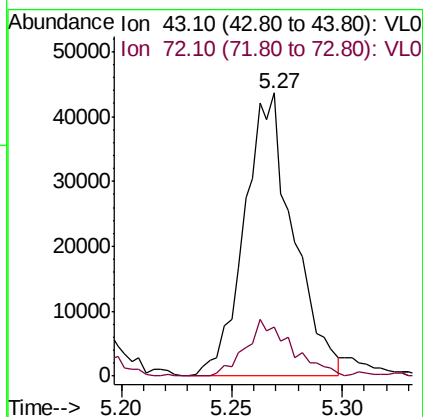
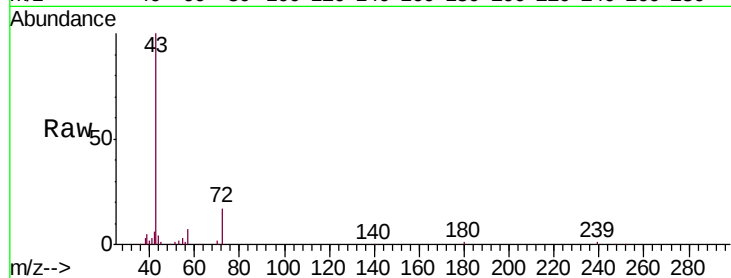




#34
2-Butanone
Concen: 0.345 ppbv
RT: 5.27 min Scan# 772
Delta R.T. 0.00 min
Lab File: VL034254.D
Acq: 8 Oct 2019 18:34

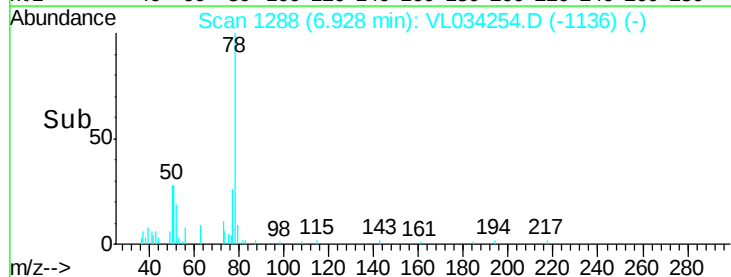
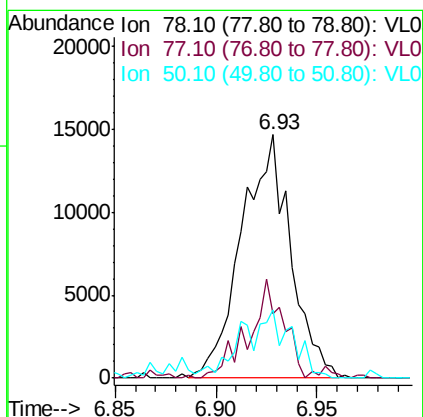
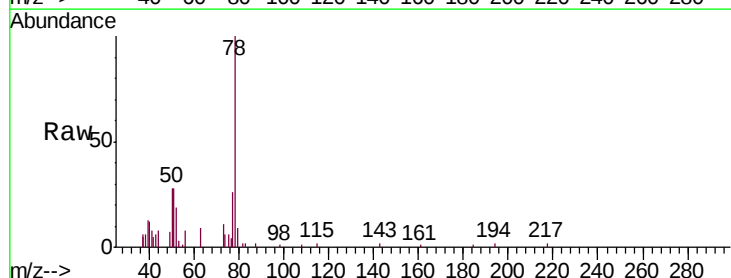
Instrument :
MSVOA_L
ClientSampleId :
V-3DL

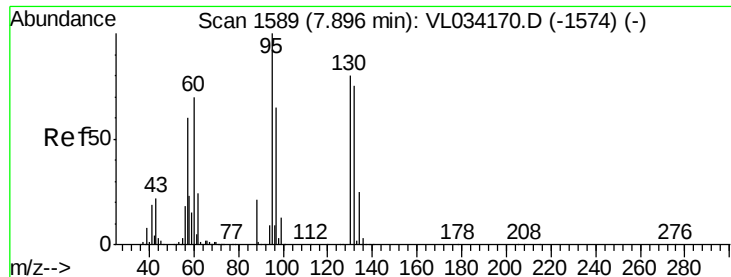
Tgt Ion: 43 Resp: 66971
Ion Ratio Lower Upper
43 100
72 19.6 15.0 22.6



#36
Benzene
Concen: 0.118 ppbv
RT: 6.93 min Scan# 1288
Delta R.T. -0.01 min
Lab File: VL034254.D
Acq: 8 Oct 2019 18:34

Tgt Ion: 78 Resp: 24867
Ion Ratio Lower Upper
78 100
77 25.1 19.0 28.4
50 28.2 18.9 28.3

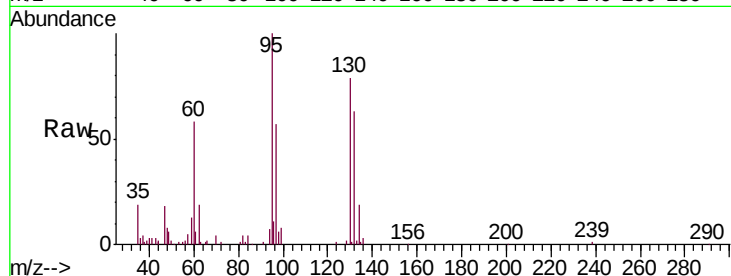




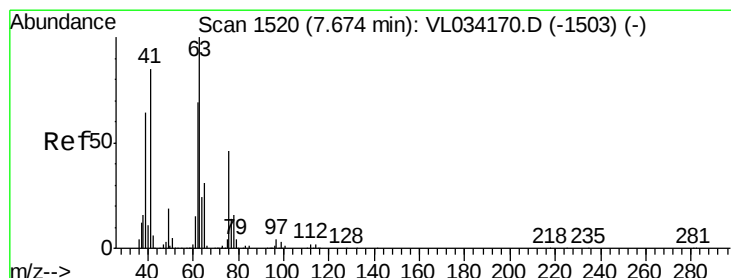
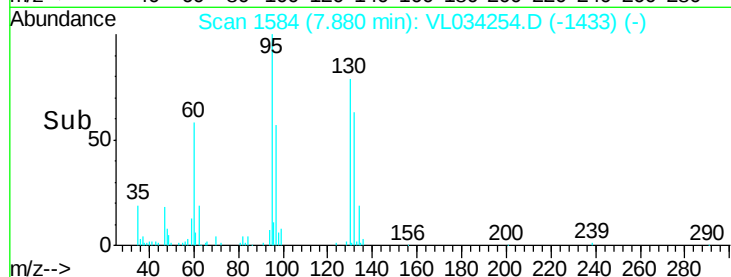
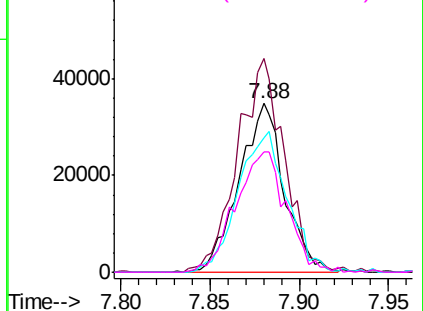
#38
 Trichloroethene
 Concen: 0.821 ppbv
 RT: 7.88 min Scan# 1584
 Delta R.T. -0.02 min
 Lab File: VL034254.D
 Acq: 8 Oct 2019 18:34

Instrument :
 MSVOA_L
 ClientSampleId :
 V-3DL

Tgt Ion:130 Resp: 61620
 Ion Ratio Lower Upper
 130 100
 95 122.5 99.8 149.6
 132 78.7 75.2 112.8
 97 69.5 65.0 97.4

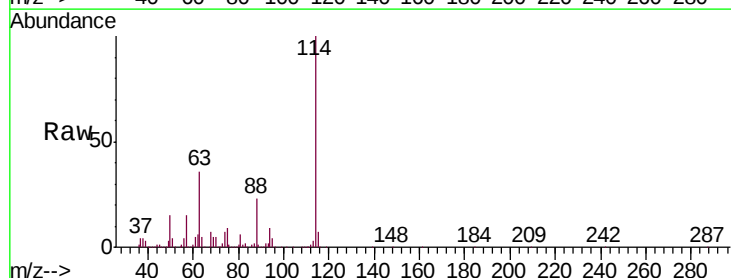


Abundance Ion 130.00 (129.70 to 130.70): V
 Ion 95.00 (94.70 to 95.70): VL0
 Ion 132.00 (131.70 to 132.70): V
 Ion 97.00 (96.70 to 97.70): VL0

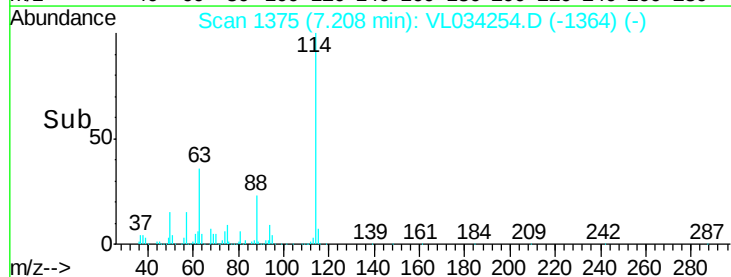
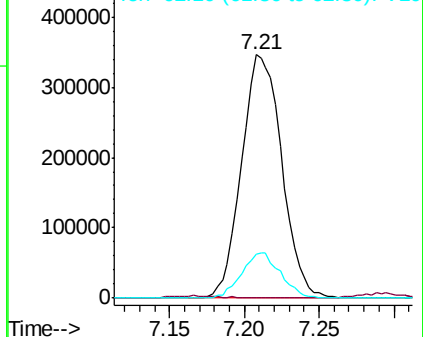


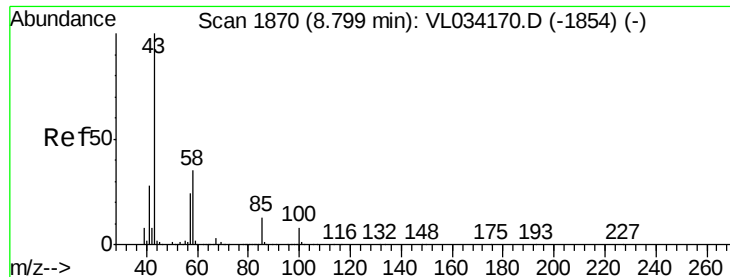
#39
 1,2-Dichloropropane
 Concen: 6.874 ppbv
 RT: 7.21 min Scan# 1375
 Delta R.T. -0.47 min
 Lab File: VL034254.D
 Acq: 8 Oct 2019 18:34

Tgt Ion: 63 Resp: 648715
 Ion Ratio Lower Upper
 63 100
 41 0.0 68.4 102.6#
 62 18.1 55.4 83.2#



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

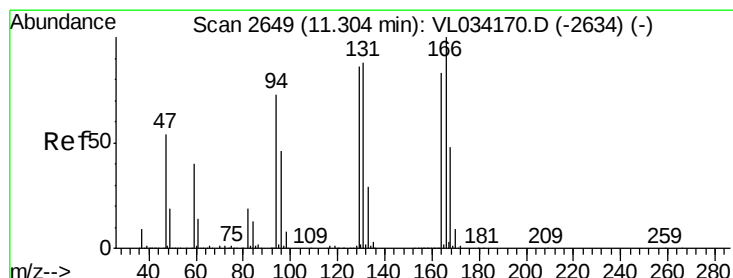
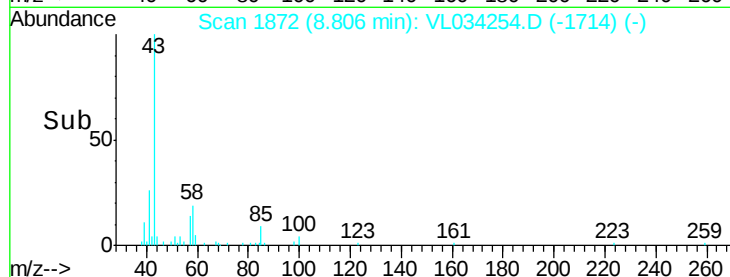
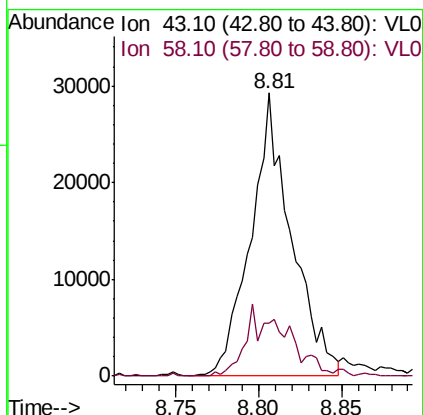
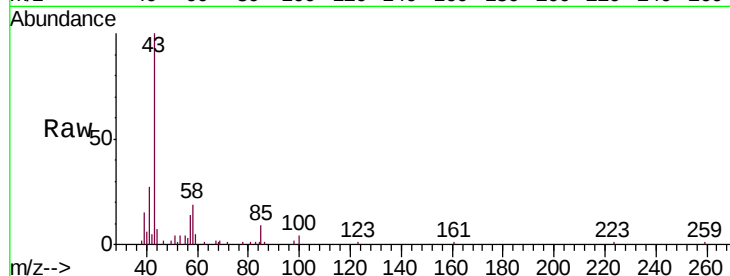




#50
4-Methyl-2-Pentanone
Concen: 0.177 ppbv
RT: 8.81 min Scan# 1872
Delta R.T. 0.01 min
Lab File: VL034254.D
Acq: 8 Oct 2019 18:34

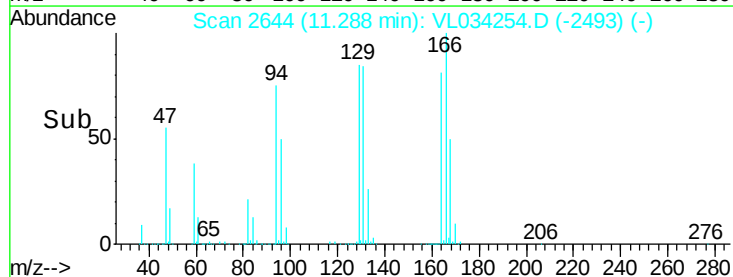
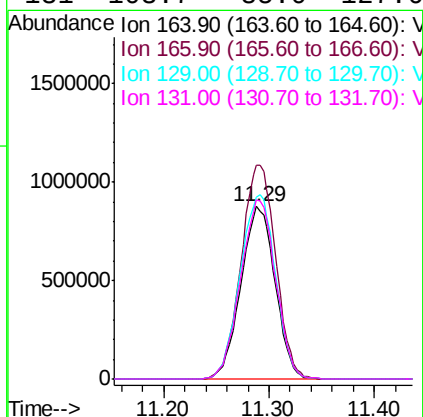
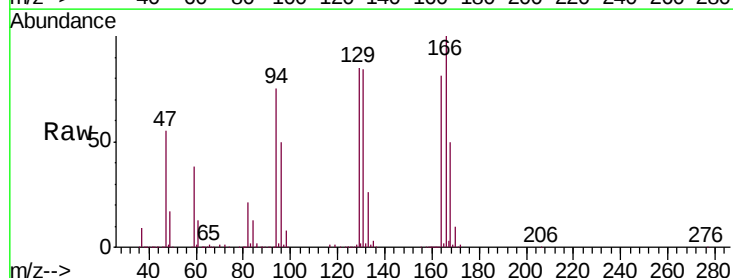
Instrument :
MSVOA_L
ClientSampleId :
V-3DL

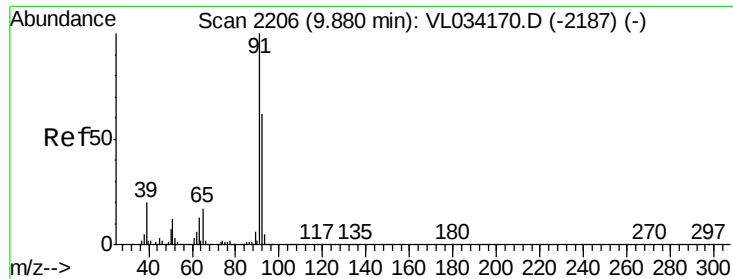
Tgt Ion: 43 Resp: 50017
Ion Ratio Lower Upper
43 100
58 25.9 27.6 41.4#



#52
Tetrachloroethene
Concen: 28.453 ppbv
RT: 11.29 min Scan# 2644
Delta R.T. -0.02 min
Lab File: VL034254.D
Acq: 8 Oct 2019 18:34

Tgt Ion: 164 Resp: 1974404
Ion Ratio Lower Upper
164 100
166 123.6 96.7 145.1
129 105.6 82.8 124.2
131 103.7 85.0 127.6





#53

Toluene

Concen: 0.378 ppbv

RT: 9.86 min Scan# 2201

Delta R.T. -0.02 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

Instrument :

MSVOA_L

ClientSampleId :

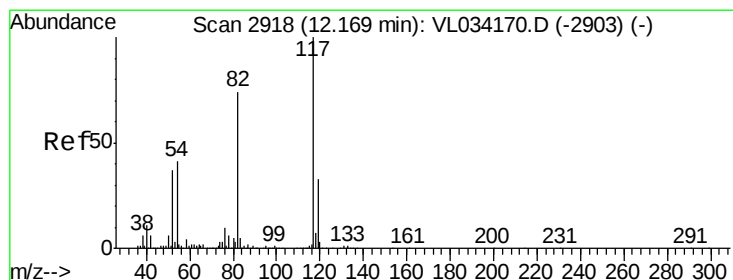
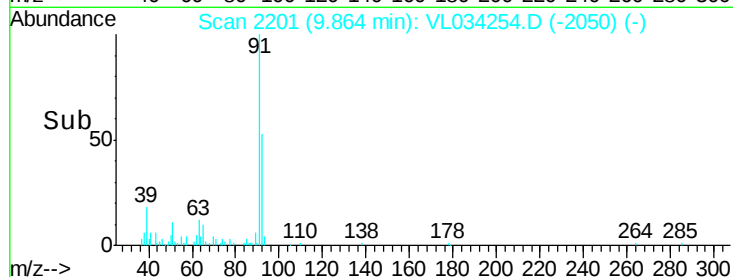
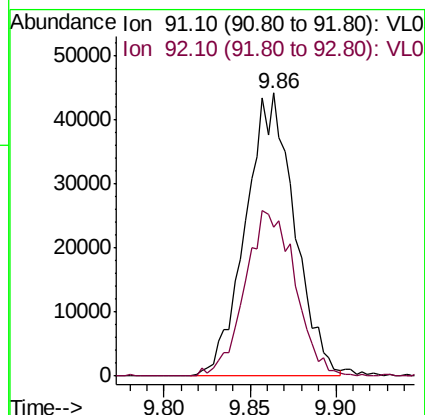
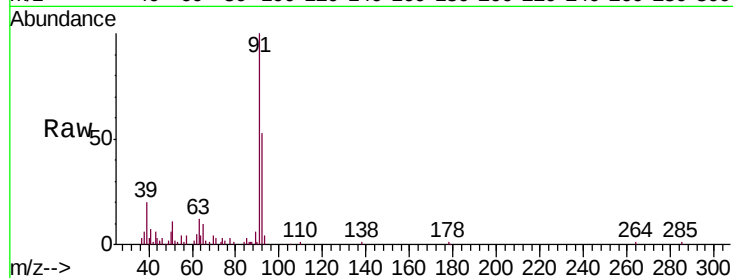
V-3DL

Tgt Ion: 91 Resp: 86856

Ion Ratio Lower Upper

91 100

92 60.0 49.0 73.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.15 min Scan# 2913

Delta R.T. -0.02 min

Lab File: VL034254.D

Acq: 8 Oct 2019 18:34

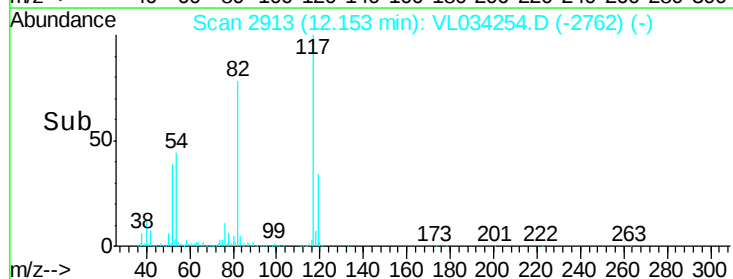
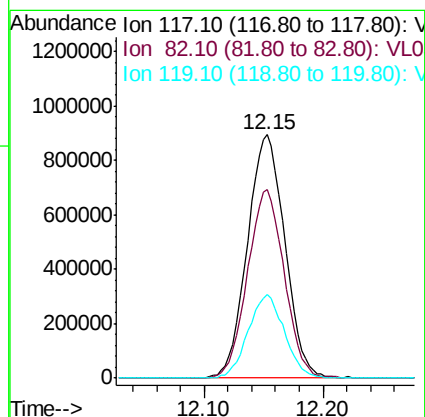
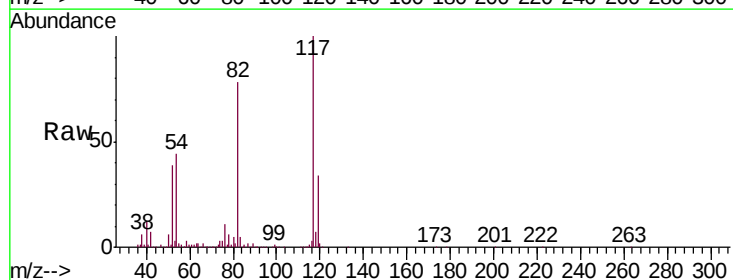
Tgt Ion: 117 Resp: 1942926

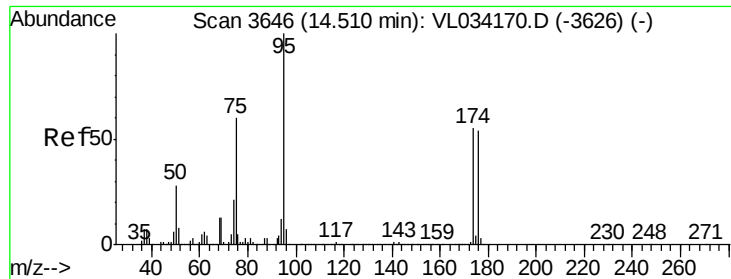
Ion Ratio Lower Upper

117 100

82 76.5 58.2 87.4

119 33.4 23.7 35.5

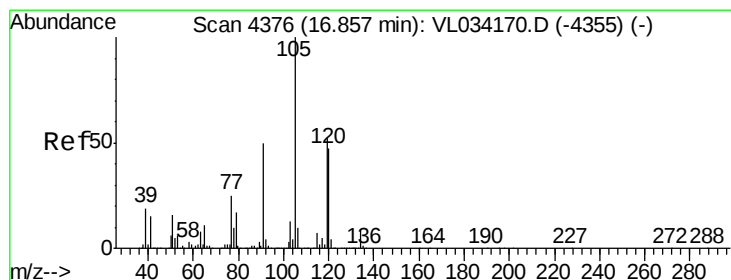
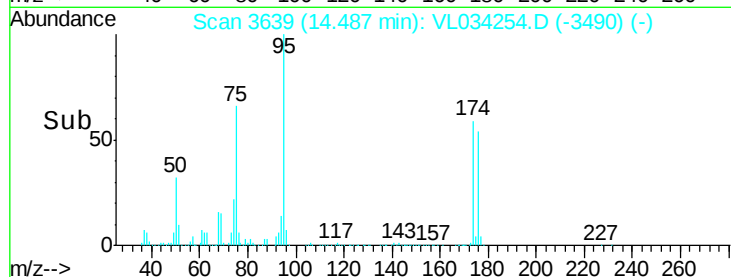
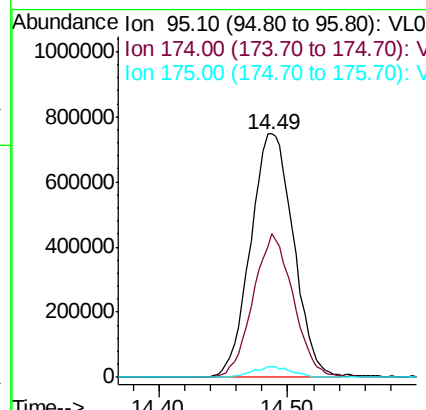
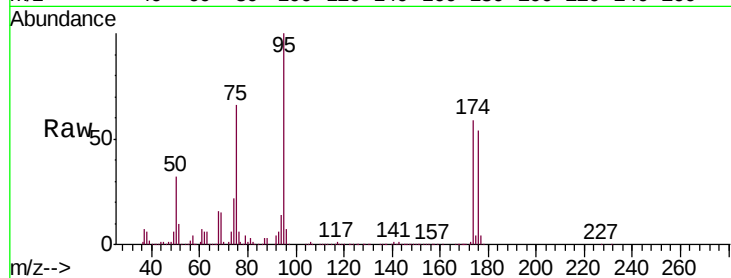




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.253 ppbv
 RT: 14.49 min Scan# 3639
 Delta R.T. -0.02 min
 Lab File: VL034254.D
 Acq: 8 Oct 2019 18:34

Instrument :
 MSVOA_L
 ClientSampleId :
 V-3DL

Tgt Ion: 95 Resp: 1730899
 Ion Ratio Lower Upper
 95 100
 174 55.5 45.1 67.7
 175 4.1 3.3 4.9



#74
 1,2,4-Trimethylbenzene
 Concen: 0.048 ppbv
 RT: 16.83 min Scan# 4369
 Delta R.T. -0.02 min
 Lab File: VL034254.D
 Acq: 8 Oct 2019 18:34

Tgt Ion: 105 Resp: 14505
 Ion Ratio Lower Upper
 105 100
 120 49.2 37.5 56.3
 91 12.3 41.1 61.7#
 77 17.3 19.9 29.9#

