

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL031620\
 Data File : VL034906.D
 Acq On : 17 Mar 2020 1:19
 Operator : SY/AP
 Sample : L1924-07
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV-03

Quant Time: Mar 17 04:29:05 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL030920AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 09 16:42:53 2020
 QLast Update : Mon Mar 09 16:42:53 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	843077	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	1865147	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.10	117	1820715	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	1516746	10.68	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.80%

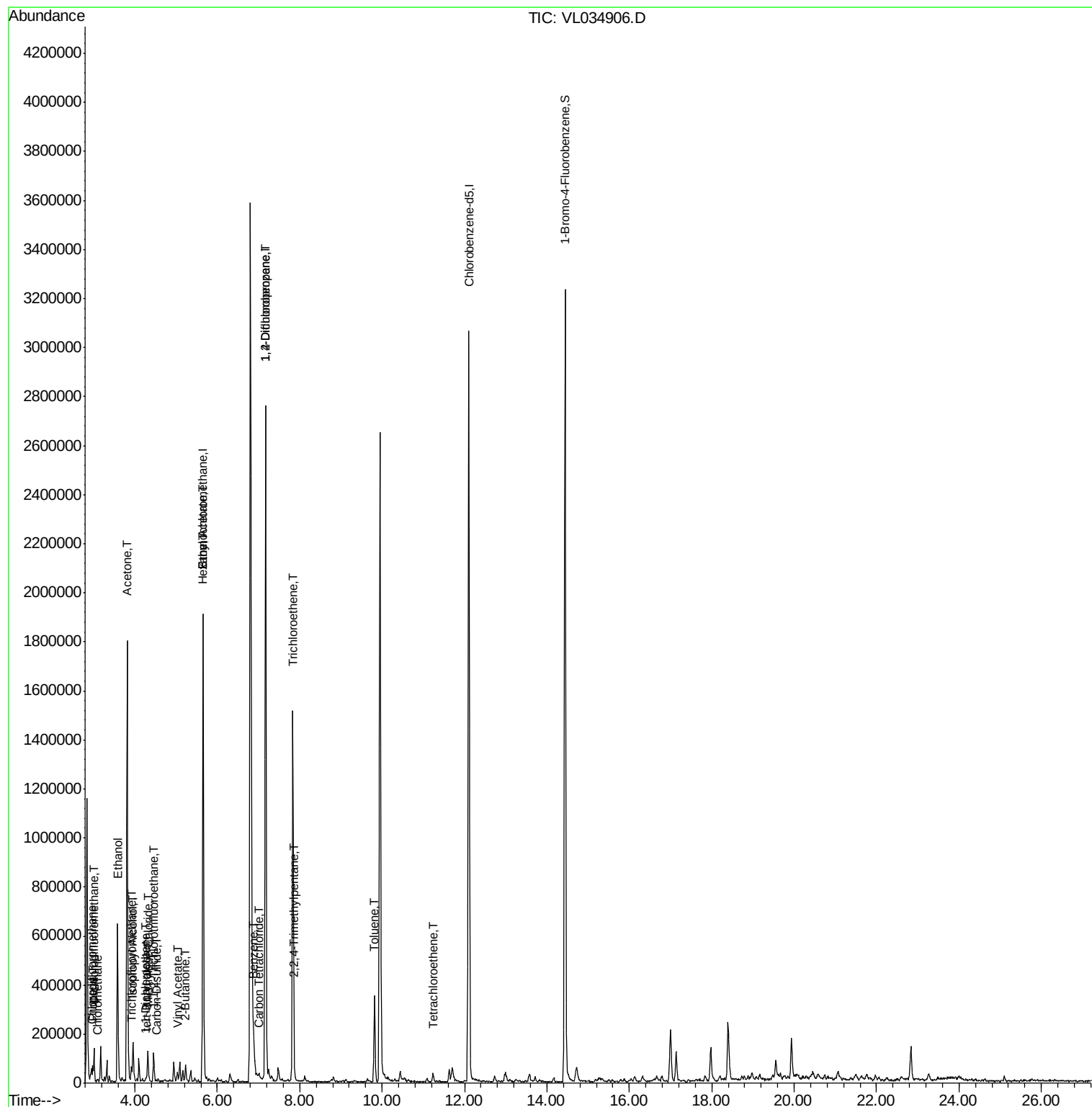
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.01	85	87956	0.762	ppbv	100
3) Chlorodifluoromethane	2.95	51	47466	0.504	ppbv	93
4) Chloromethane	3.10	50	2687	0.050	ppbv	89
9) Propene	2.97	41	10227	0.227	ppbv	91
11) Trichlorofluoromethane	3.92	101	34217	0.279	ppbv	100
12) 1,1,2-Trichlorotrifluoroet	4.46	101	38531	0.448	ppbv	90
13) Ethanol	3.58	45	605363	44.283	ppbv	94
15) Acetone	3.81	43	1801978	16.491	ppbv	100
17) tert-Butyl alcohol	4.28	59	9012	0.086	ppbv #	91
18) 1,1-Dichloroethene	4.26	96	1730	0.045	ppbv #	39
19) Isopropyl Alcohol	3.95	45	141521	2.051	ppbv #	1
20) Methylene Chloride	4.31	84	37093	1.074	ppbv	93
23) Vinyl Acetate	5.03	43	8658	0.054	ppbv #	1
25) Ethyl Acetate	5.66	43	16232	0.083	ppbv #	78
26) Hexane	5.66	57	17785	0.212	ppbv #	38
27) Carbon Disulfide	4.52	76	6376	0.067	ppbv #	19
34) 2-Butanone	5.23	43	62934	0.508	ppbv	95
35) Carbon Tetrachloride	7.02	117	6183	0.053	ppbv #	30
36) Benzene	6.88	78	21730	0.131	ppbv #	91
38) Trichloroethene	7.83	130	434912	6.888	ppbv	97
39) 1,2-Dichloropropane	7.17	63	509281	7.732	ppbv #	23
44) 2,2,4-Trimethylpentane	7.87	57	9182	0.033	ppbv #	1
52) Tetrachloroethene	11.24	164	3134	0.048	ppbv #	46
53) Toluene	9.82	91	260702	1.358	ppbv	96

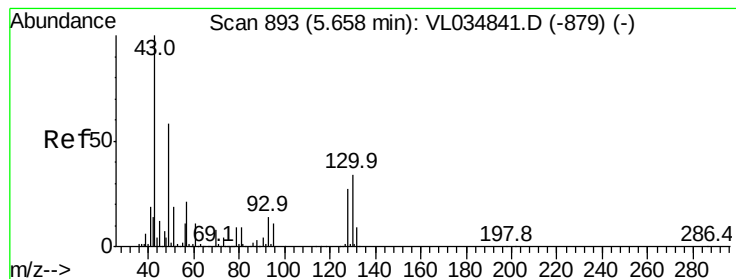
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Mon Mar 09 16:42:53 2020
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 891

Delta R.T. -0.01 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

SV-03

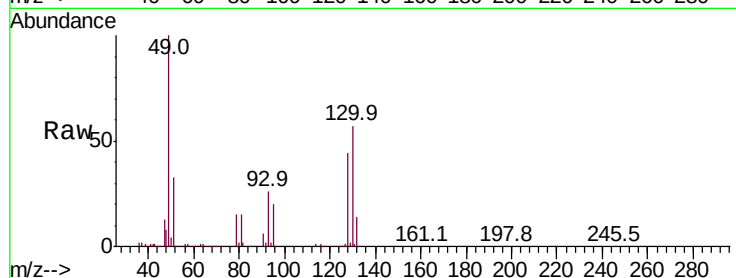
Tot Ion: 49 Resp: 843077

Ion Ratio Lower Upper

49 100

128 44.5 23.4 70.3

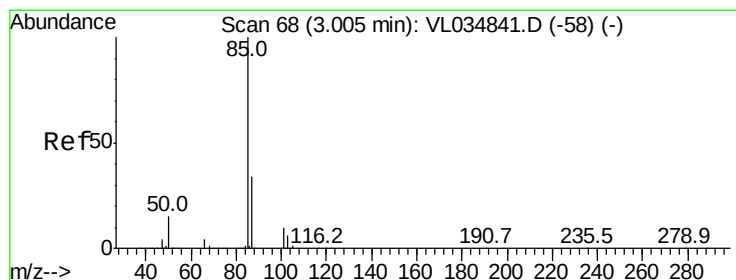
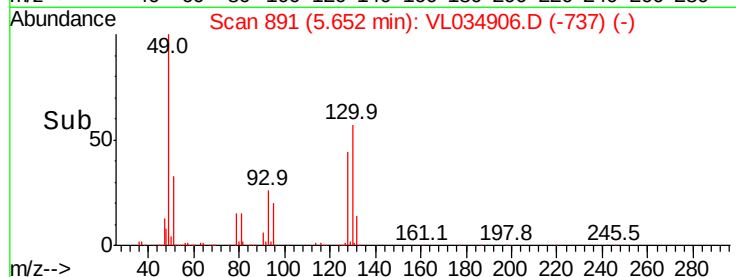
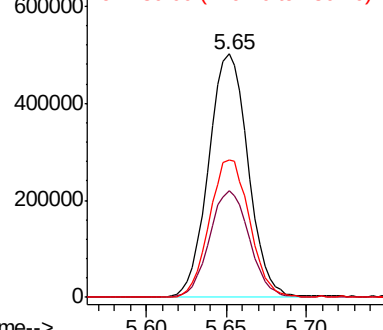
130 57.9 30.0 90.0



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.762 ppbv

RT: 3.01 min Scan# 68

Delta R.T. 0.00 min

Lab File: VL034906.D

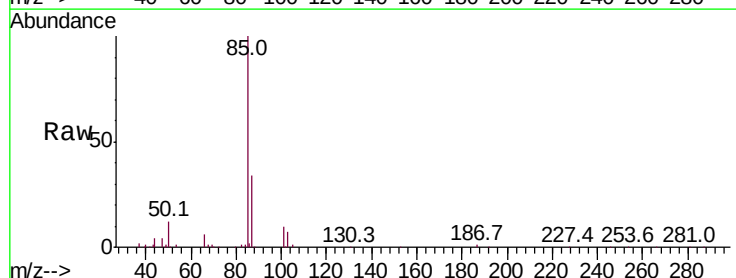
Acq: 17 Mar 2020 1:19

Tgt Ion: 85 Resp: 87956

Ion Ratio Lower Upper

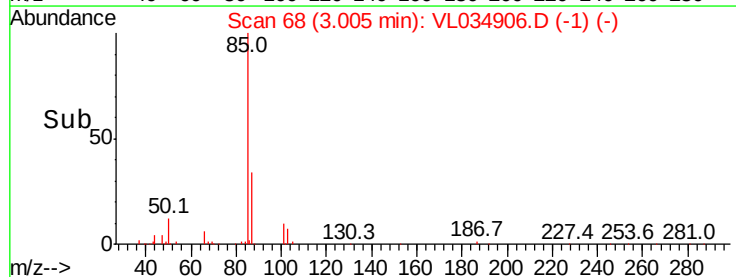
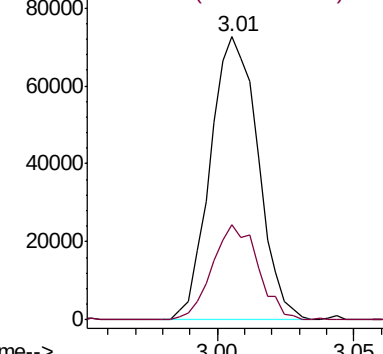
85 100

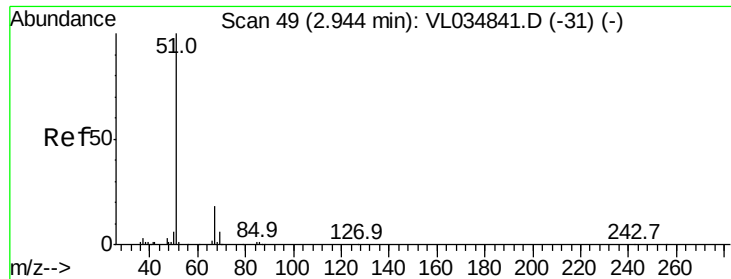
87 33.7 26.9 40.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.504 ppbv

RT: 2.95 min Scan# 50

Delta R.T. 0.00 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

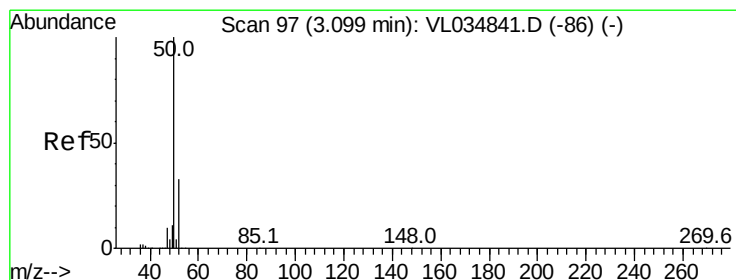
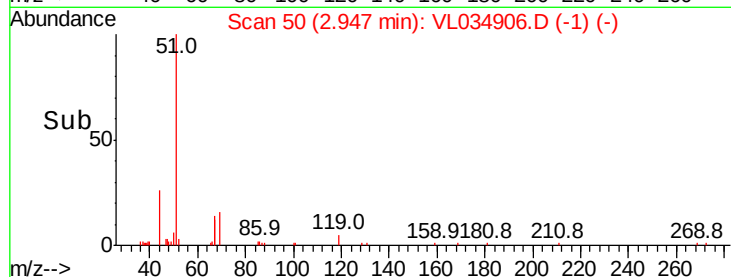
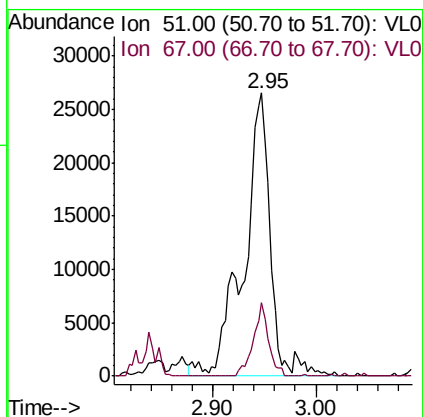
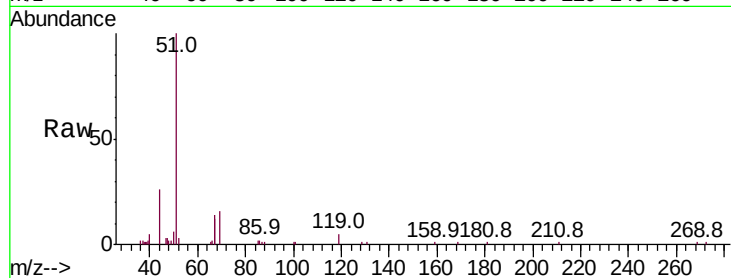
SV-03

Tot Ion: 51 Resp: 47466

Ion Ratio Lower Upper

51 100

67 14.7 14.3 21.5



#4

Chloromethane

Concen: 0.050 ppbv

RT: 3.10 min Scan# 97

Delta R.T. 0.00 min

Lab File: VL034906.D

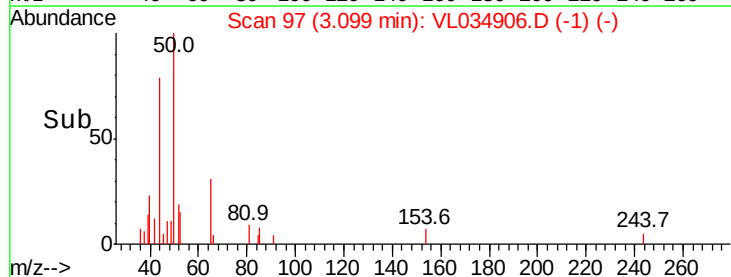
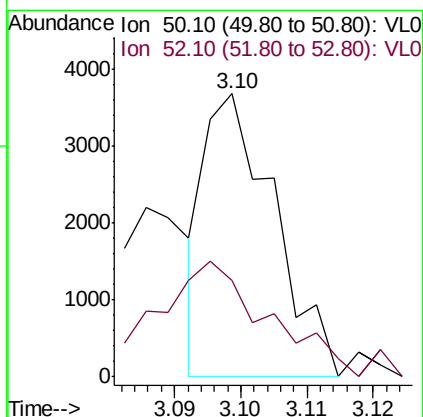
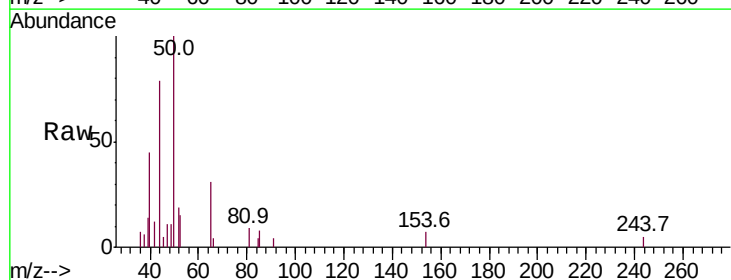
Acq: 17 Mar 2020 1:19

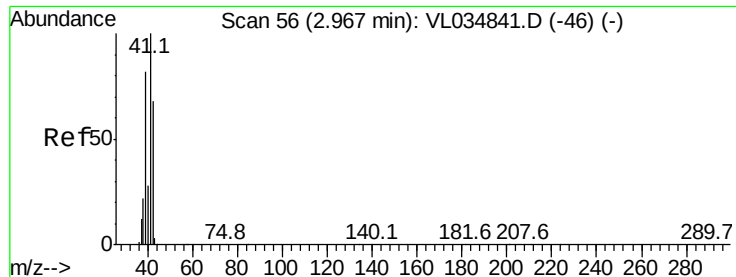
Tgt Ion: 50 Resp: 2687

Ion Ratio Lower Upper

50 100

52 27.2 26.8 40.2





#9

Propene

Concen: 0.227 ppbv

RT: 2.97 min Scan# 57

Delta R.T. 0.00 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

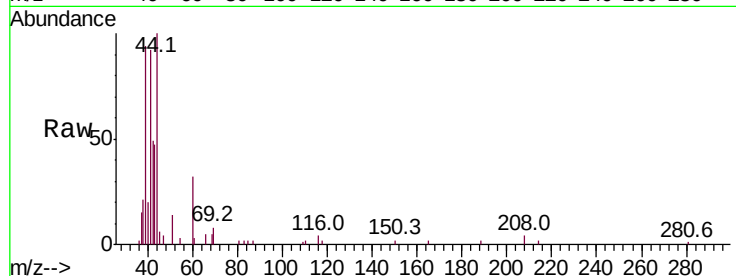
SV-03

Tot Ion: 41 Resp: 10227

Ion Ratio Lower Upper

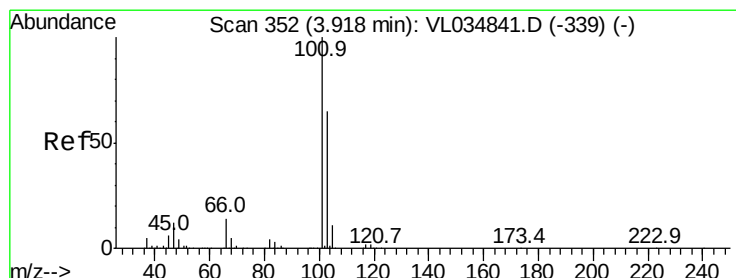
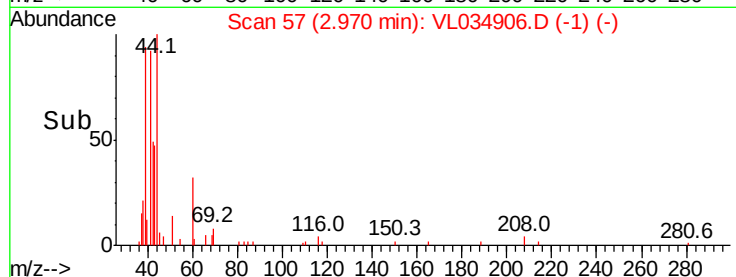
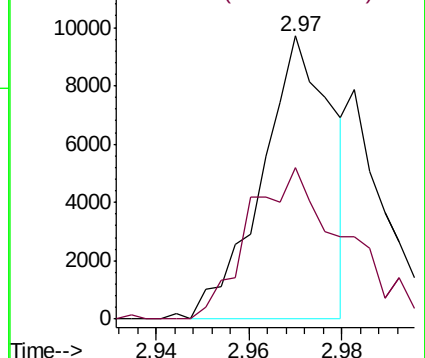
41 100

42 76.3 55.2 82.8



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#11

Trichlorofluoromethane

Concen: 0.279 ppbv

RT: 3.92 min Scan# 352

Delta R.T. 0.00 min

Lab File: VL034906.D

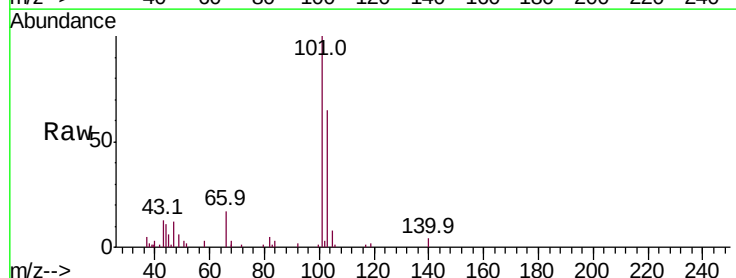
Acq: 17 Mar 2020 1:19

Tgt Ion: 101 Resp: 34217

Ion Ratio Lower Upper

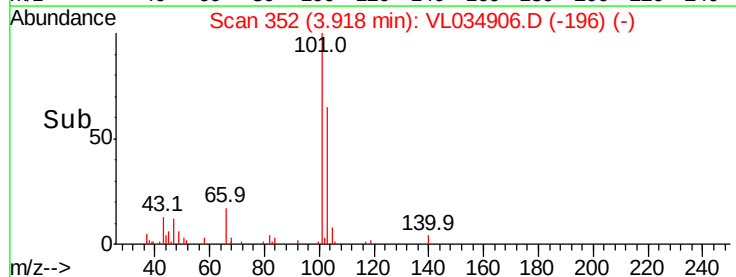
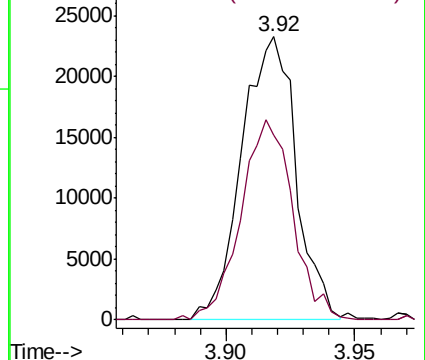
101 100

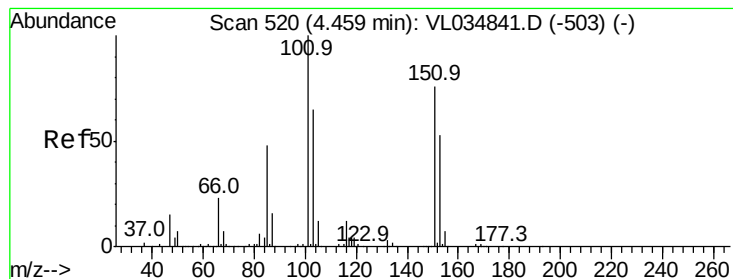
103 65.2 51.8 77.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.448 ppbv

RT: 4.46 min Scan# 520

Delta R.T. 0.00 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

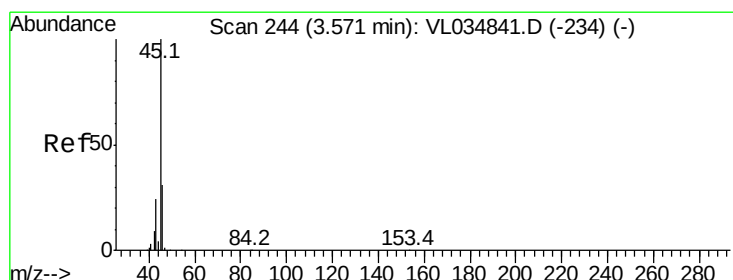
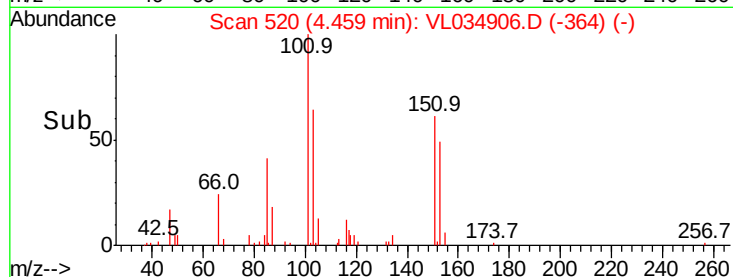
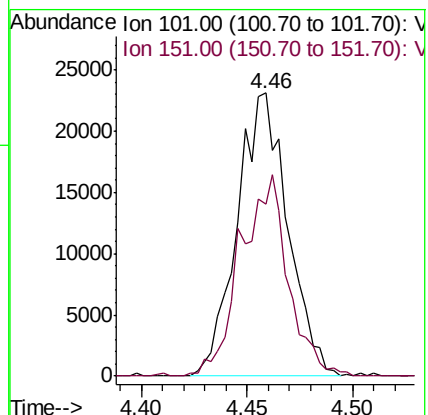
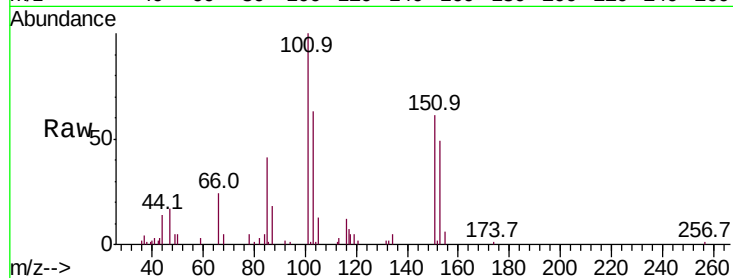
SV-03

Tot Ion:101 Resp: 38531

Ion Ratio Lower Upper

101 100

151 67.0 60.8 91.2



#13

Ethanol

Concen: 44.283 ppbv

RT: 3.58 min Scan# 246

Delta R.T. 0.01 min

Lab File: VL034906.D

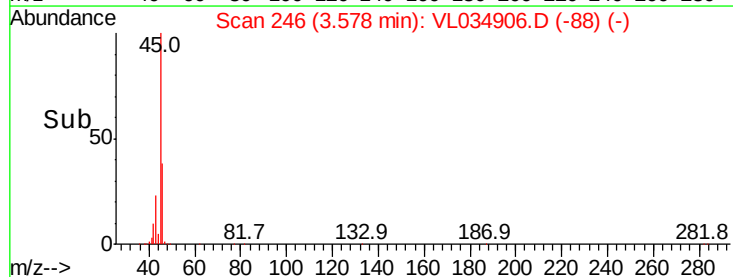
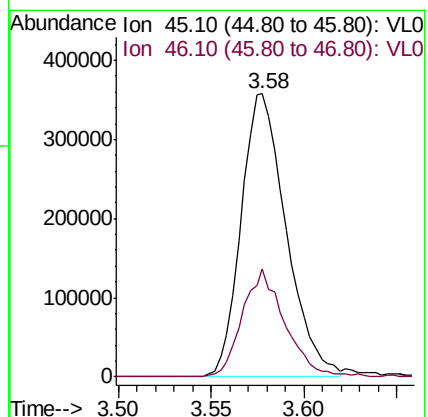
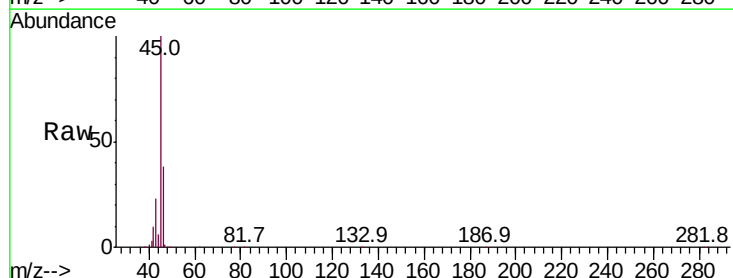
Acq: 17 Mar 2020 1:19

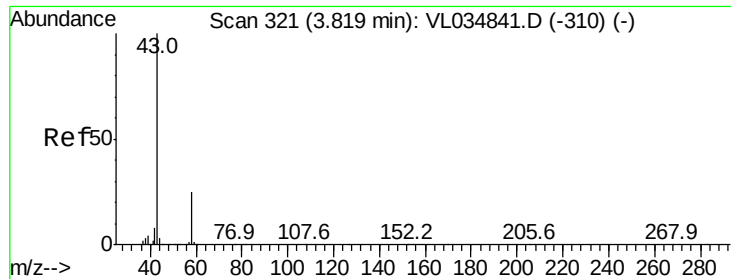
Tgt Ion: 45 Resp: 605363

Ion Ratio Lower Upper

45 100

46 36.4 16.0 64.0





#15

Acetone

Concen: 16.491 ppbv

RT: 3.81 min Scan# 318

Delta R.T. -0.01 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

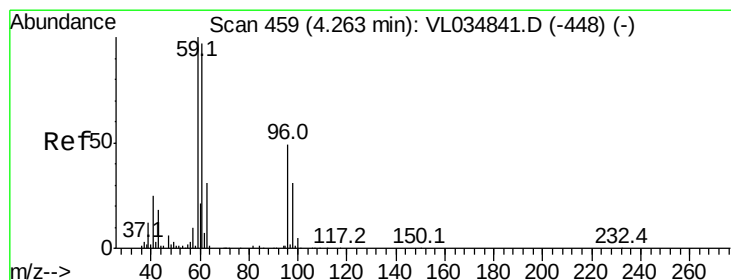
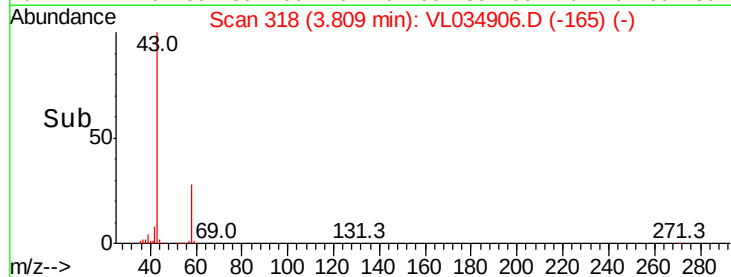
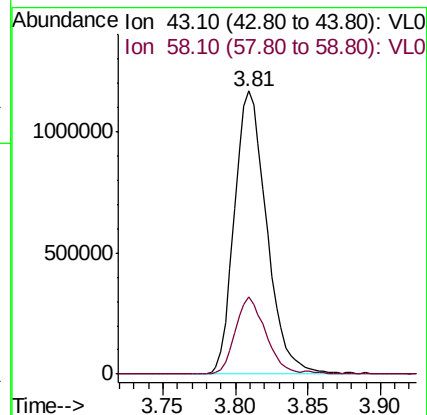
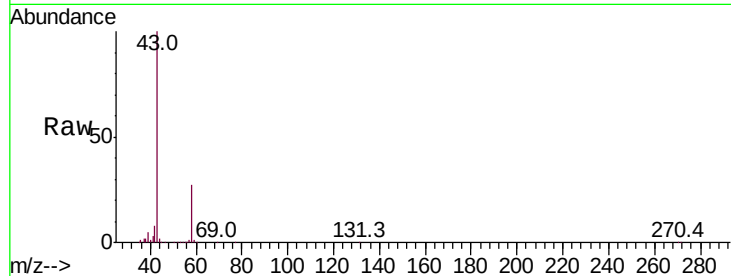
SV-03

Tot Ion: 43 Resp: 1801978

Ion Ratio Lower Upper

43 100

58 26.1 21.0 31.6



#17

tert-Butyl alcohol

Concen: 0.086 ppbv

RT: 4.28 min Scan# 465

Delta R.T. 0.02 min

Lab File: VL034906.D

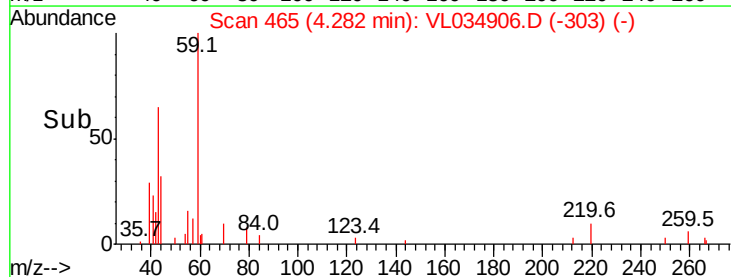
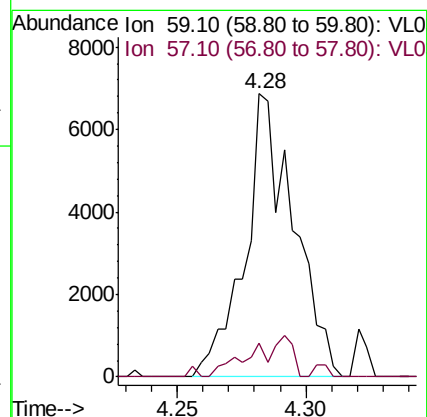
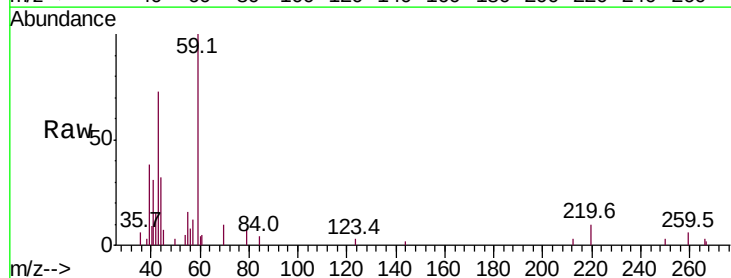
Acq: 17 Mar 2020 1:19

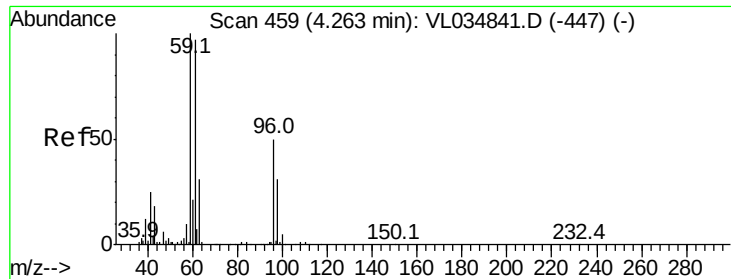
Tgt Ion: 59 Resp: 9012

Ion Ratio Lower Upper

59 100

57 13.8 8.3 12.5#

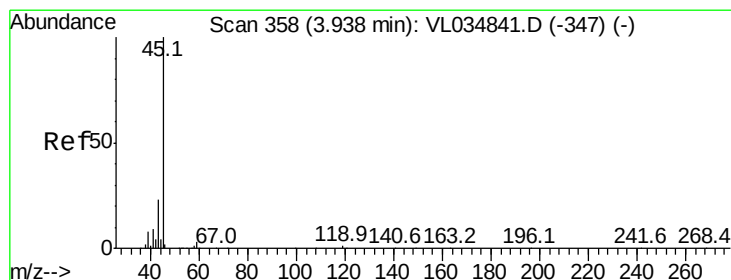
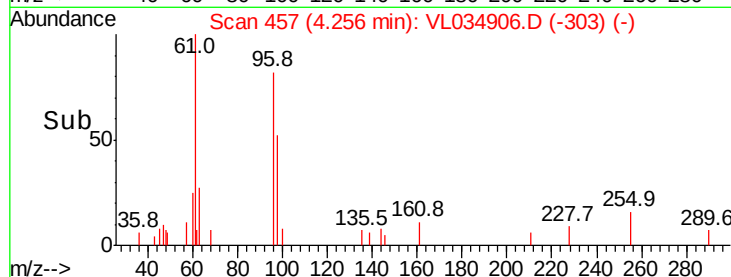
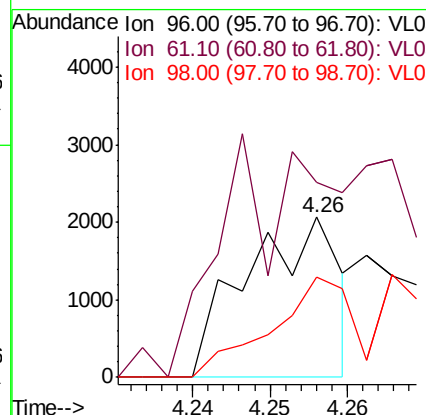
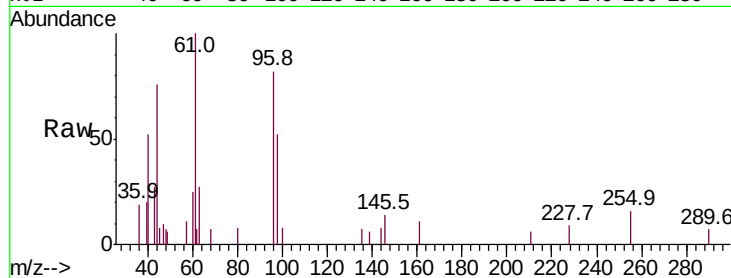




#18
 1,1-Dichloroethene
 Concen: 0.045 ppbv
 RT: 4.26 min Scan# 457
 Delta R.T. -0.01 min
 Lab File: VL034906.D
 Acq: 17 Mar 2020 1:19

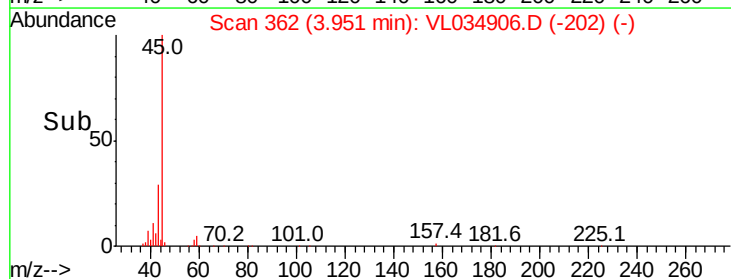
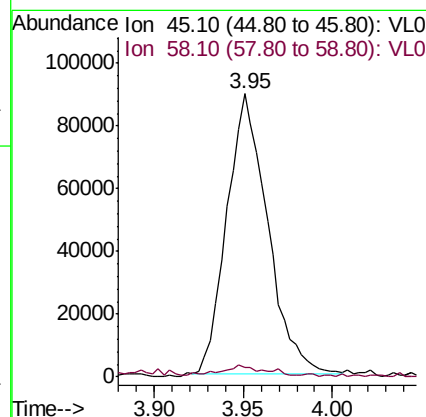
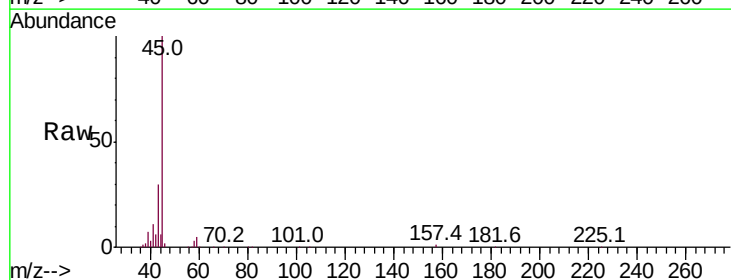
Instrument :
 MSVOA_L
 ClientSampleID :
 SV-03

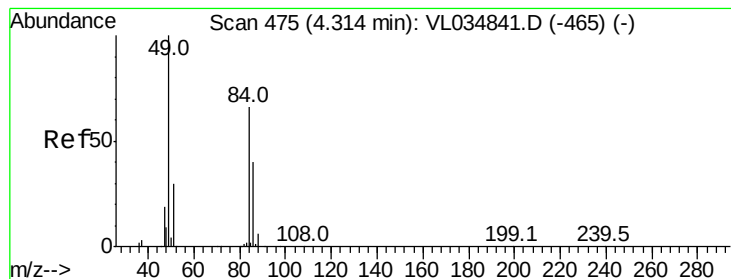
Tot Ion: 96 Resp: 1730
 Ion Ratio Lower Upper
 96 100
 61 76.6 157.3 235.9#
 98 63.0 50.2 75.4



#19
 Isopropyl Alcohol
 Concen: 2.051 ppbv
 RT: 3.95 min Scan# 362
 Delta R.T. 0.01 min
 Lab File: VL034906.D
 Acq: 17 Mar 2020 1:19

Tgt Ion: 45 Resp: 141521
 Ion Ratio Lower Upper
 45 100
 58 333.5 30.5 45.7#





#20

Methvlene Chloride

Concen: 1.074 ppbv

RT: 4.31 min Scan# 475

Delta R.T. 0.00 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

SV-03

Tot Ion: 84 Resp: 37093

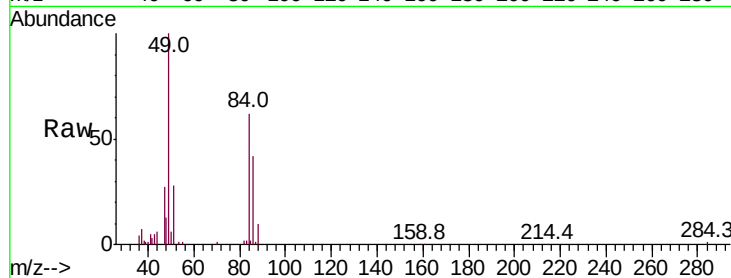
Ion Ratio Lower Upper

84 100

49 161.2 121.5 182.3

51 45.0 36.6 55.0

86 68.0 48.2 72.2

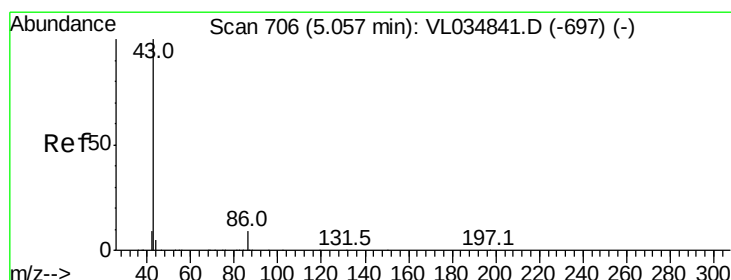
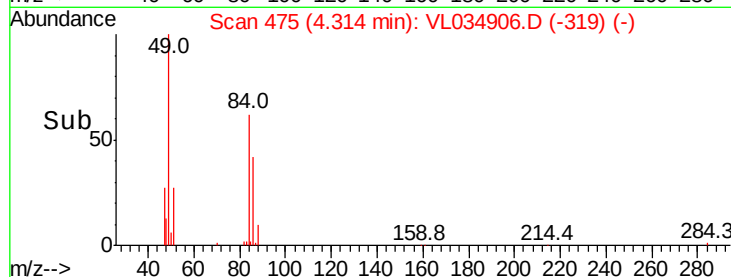
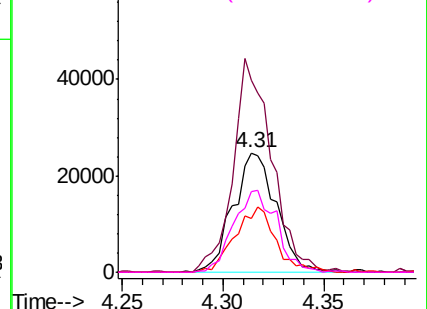


Abundance Ion 84.00 (83.70 to 84.70): VL0

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: 0.054 ppbv

RT: 5.03 min Scan# 699

Delta R.T. -0.02 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Tgt Ion: 43 Resp: 8658

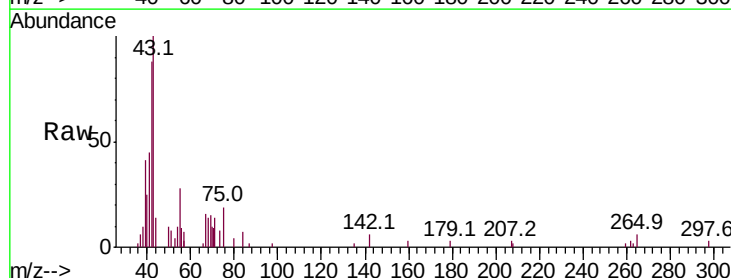
Ion Ratio Lower Upper

43 100

86 3.9 6.3 9.5#

42 109.7 7.8 11.8#

44 0.0 4.0 6.0#

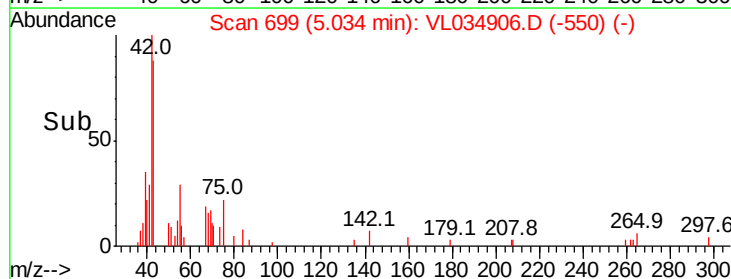
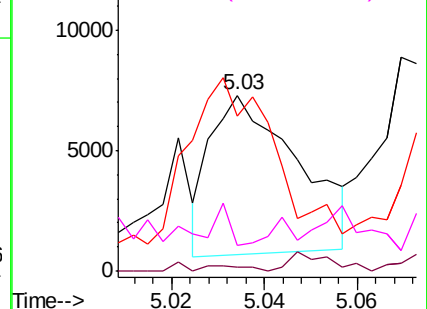


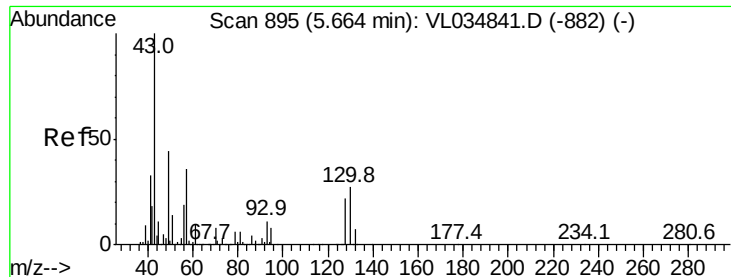
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.083 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.00 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

SV-03

Tot Ion: 43 Resp: 16232

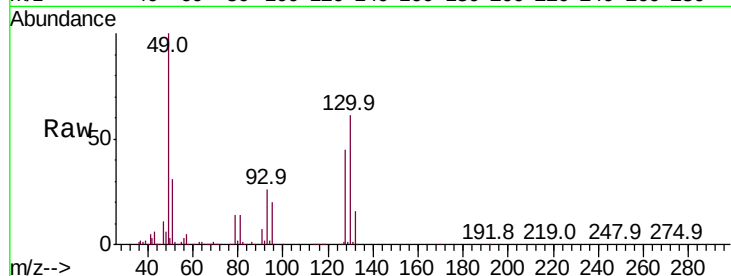
Ion Ratio Lower Upper

43 100

45 24.7 8.2 12.2#

61 8.3 7.8 11.6

70 0.0 5.8 8.8#

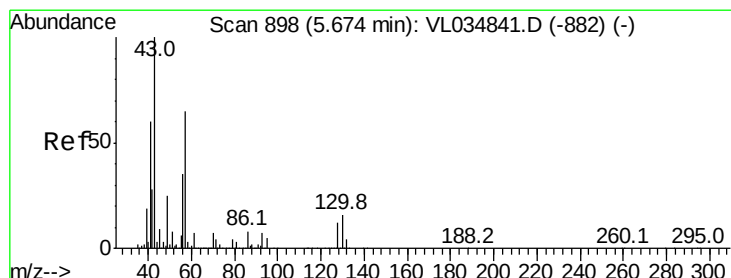
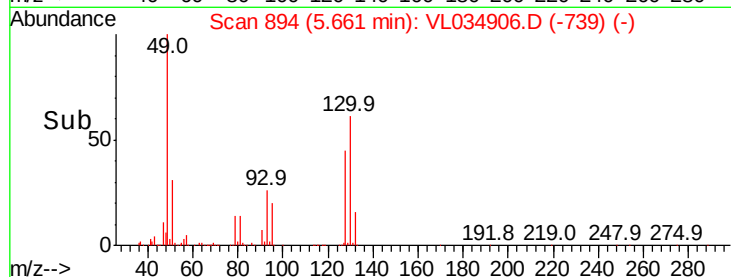
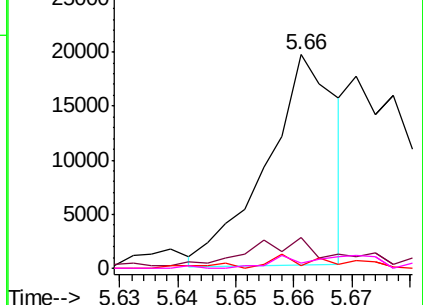


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.212 ppbv

RT: 5.66 min Scan# 895

Delta R.T. -0.01 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Tgt Ion: 57 Resp: 17785

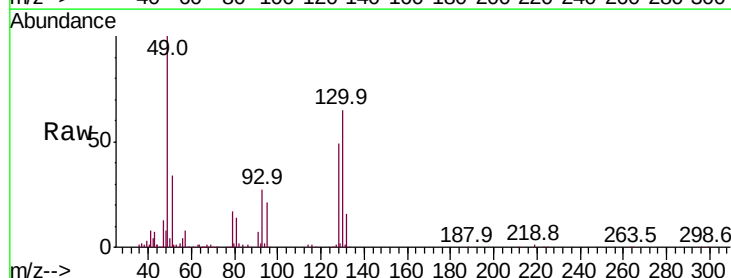
Ion Ratio Lower Upper

57 100

41 240.1 72.6 109.0#

43 194.2 183.8 275.6

56 0.0 41.9 62.9#

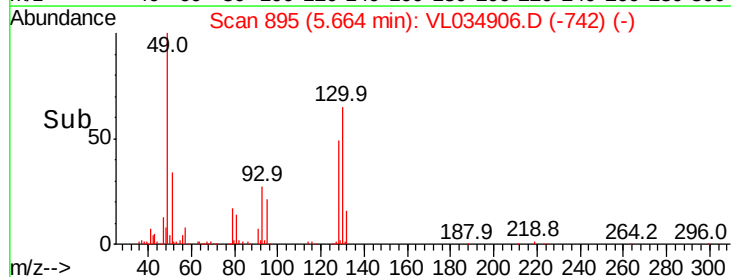
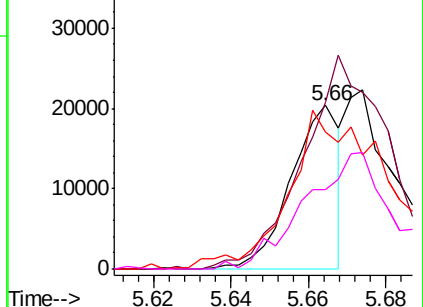


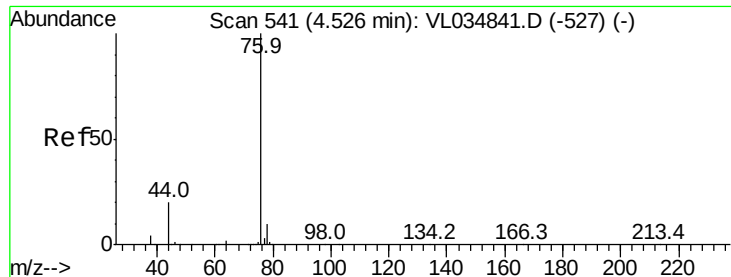
Abundance Ion 57.10 (56.80 to 57.80): VL0

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: 0.067 ppbv

RT: 4.52 min Scan# 540

Delta R.T. -0.00 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

SV-03

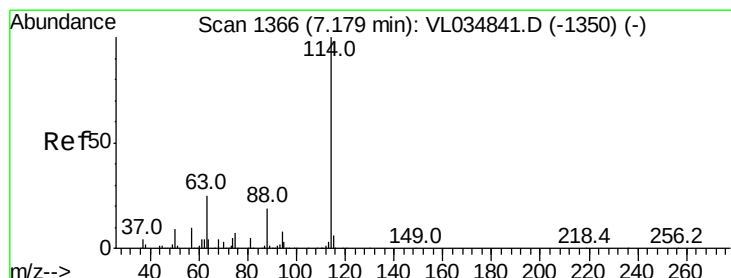
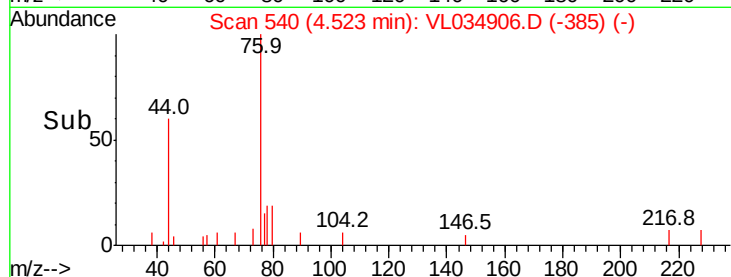
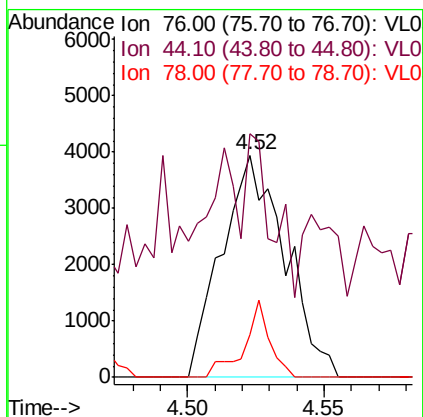
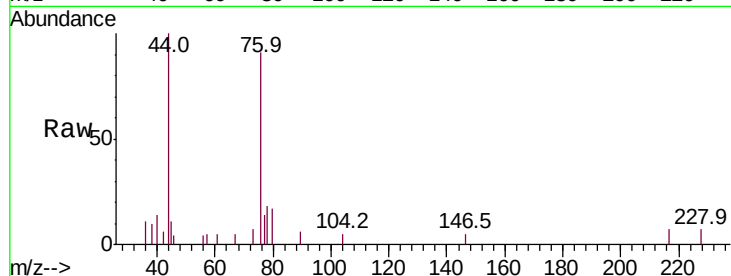
Tot Ion: 76 Resp: 6376

Ion Ratio Lower Upper

76 100

44 72.8 16.2 24.2#

78 13.8 7.8 11.6#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1364

Delta R.T. -0.01 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

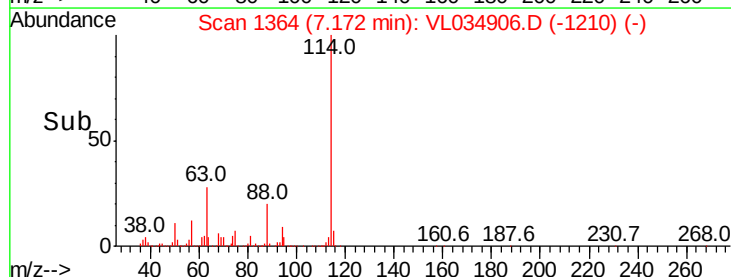
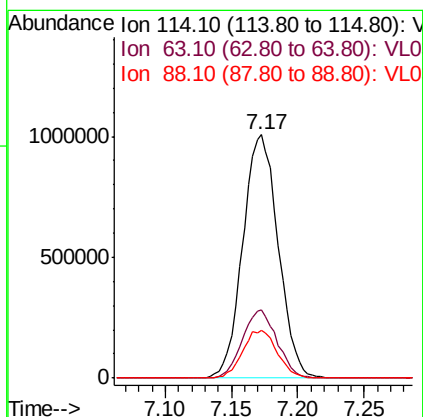
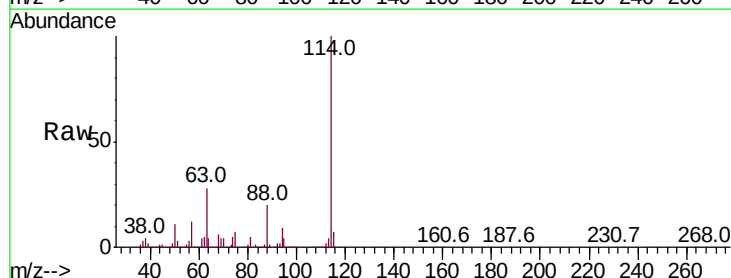
Tgt Ion: 114 Resp: 1865147

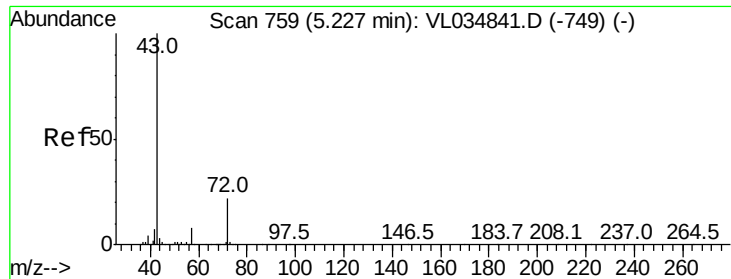
Ion Ratio Lower Upper

114 100

63 27.5 20.6 31.0

88 19.4 15.0 22.6

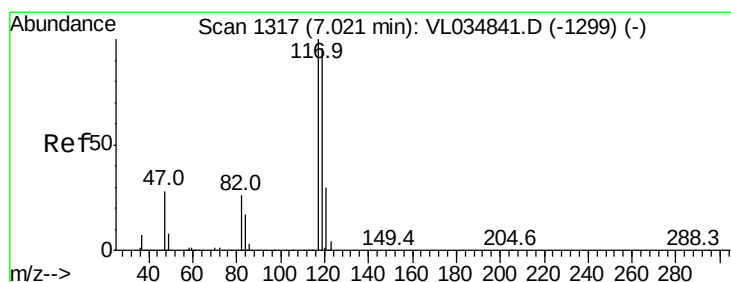
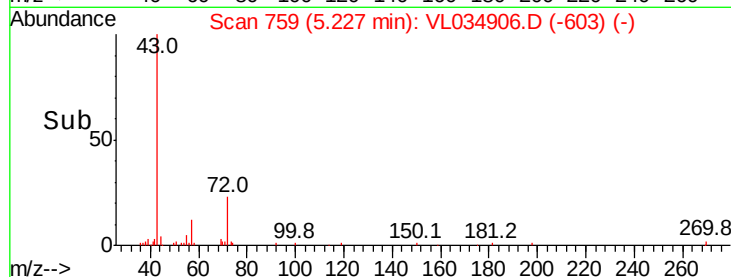
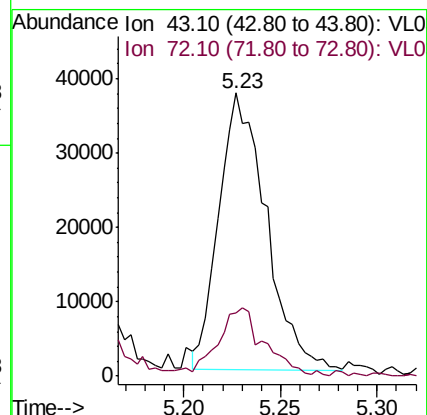
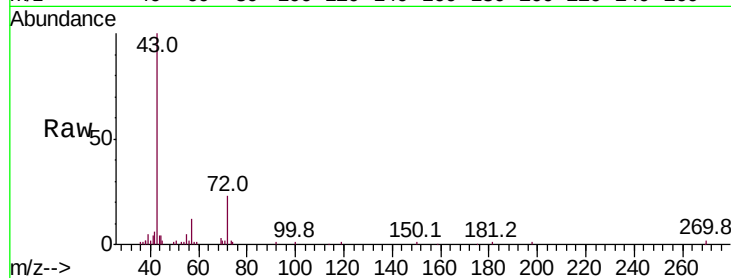




#34
2-Butanone
Concen: 0.508 ppbv
RT: 5.23 min Scan# 759
Delta R.T. 0.00 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

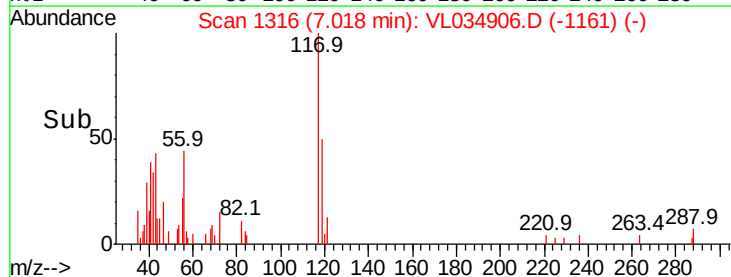
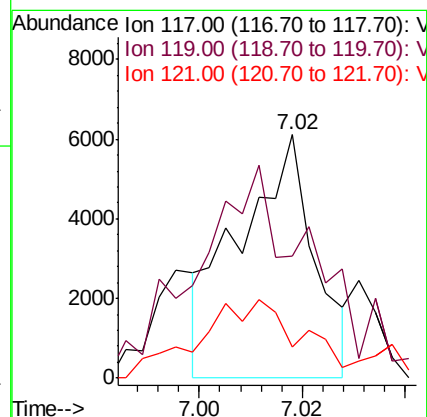
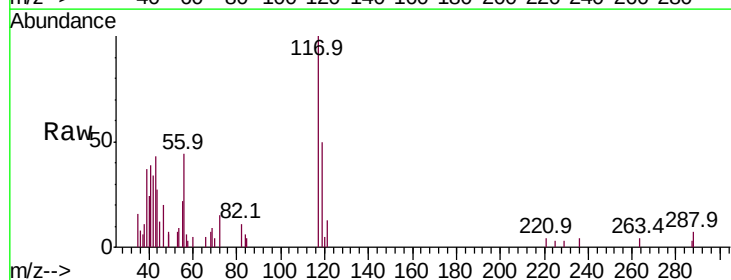
Instrument :
MSVOA_L
ClientSampled :
SV-03

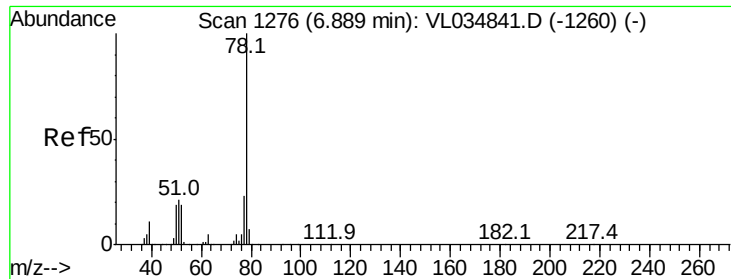
Tot Ion: 43 Resp: 62934
Ion Ratio Lower Upper
43 100
72 24.2 17.6 26.4



#35
Carbon Tetrachloride
Concen: 0.053 ppbv
RT: 7.02 min Scan# 1316
Delta R.T. -0.00 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

Tgt Ion: 117 Resp: 6183
Ion Ratio Lower Upper
117 100
119 16.7 77.0 115.4#
121 11.7 24.0 36.0#





#36

Benzene

Concen: 0.131 ppbv

RT: 6.88 min Scan# 1273

Delta R.T. -0.01 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

SV-03

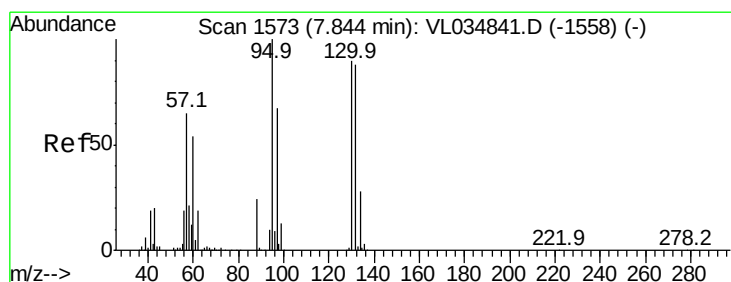
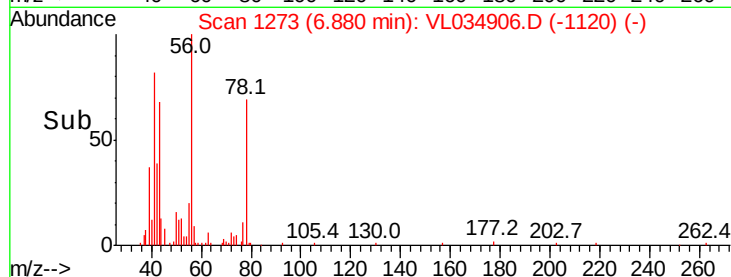
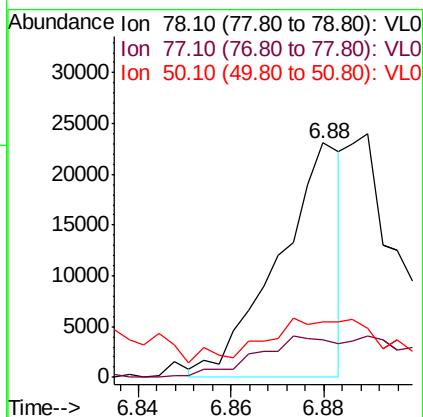
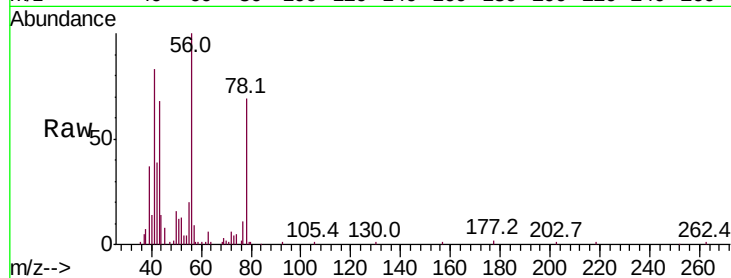
Tot Ion: 78 Resp: 21730

Ion Ratio Lower Upper

78 100

77 15.5 18.2 27.2#

50 18.0 15.2 22.8



#38

Trichloroethene

Concen: 6.888 ppbv

RT: 7.83 min Scan# 1570

Delta R.T. -0.01 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Tgt Ion:130 Resp: 434912

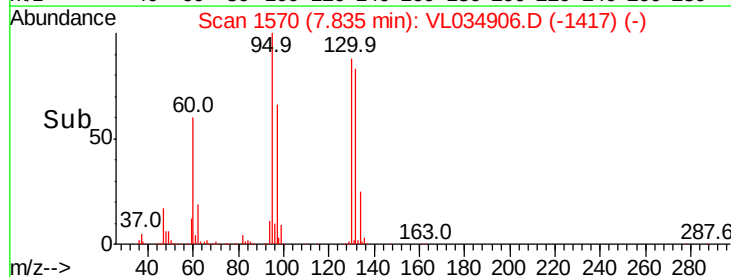
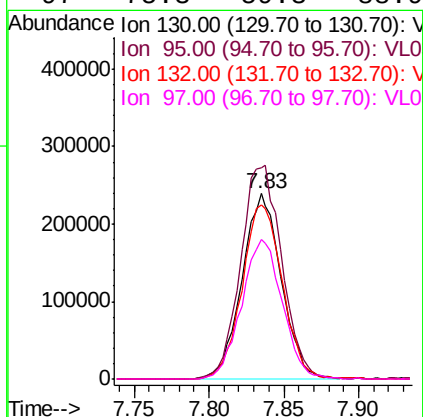
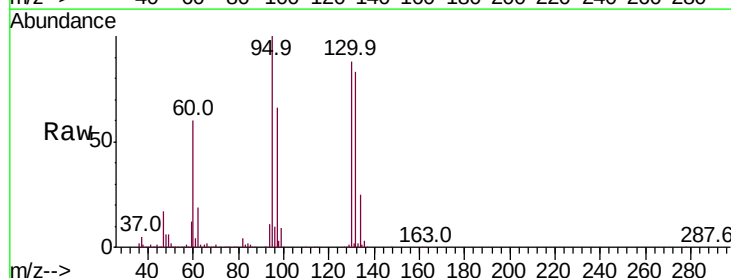
Ion Ratio Lower Upper

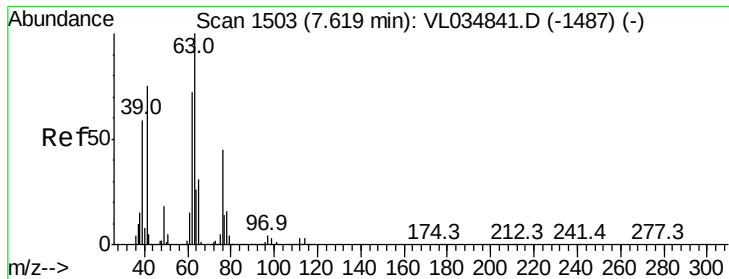
130 100

95 113.9 88.5 132.7

132 94.1 78.0 117.0

97 75.3 59.3 88.9





#39

1,2-Dichloropropane

Concen: 7.732 ppbv

RT: 7.17 min Scan# 1364

Delta R.T. -0.45 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

SV-03

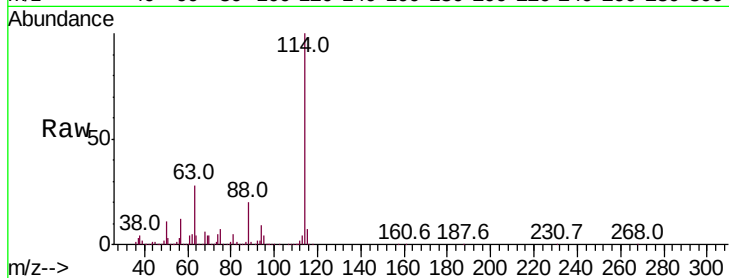
Tot Ion: 63 Resp: 509281

Ion Ratio Lower Upper

63 100

41 0.0 59.8 89.8#

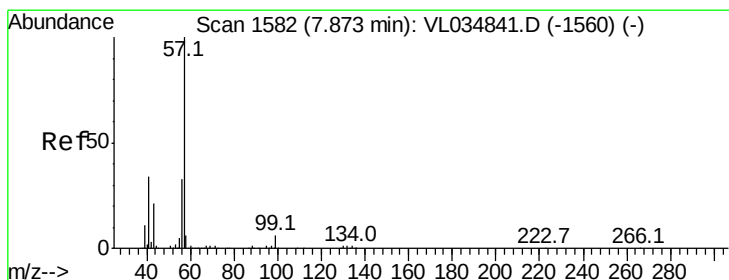
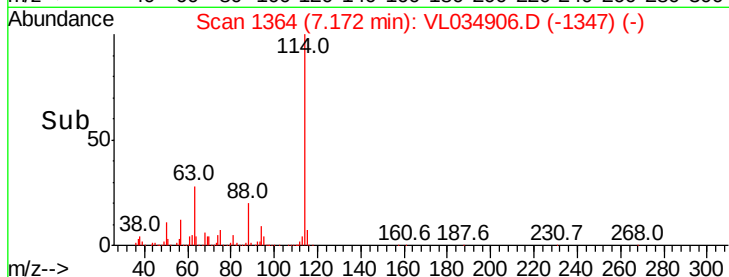
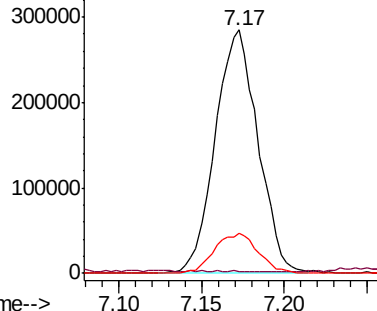
62 16.7 57.6 86.4#



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



#44

2,2,4-Trimethylpentane

Concen: 0.033 ppbv

RT: 7.87 min Scan# 1581

Delta R.T. -0.00 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

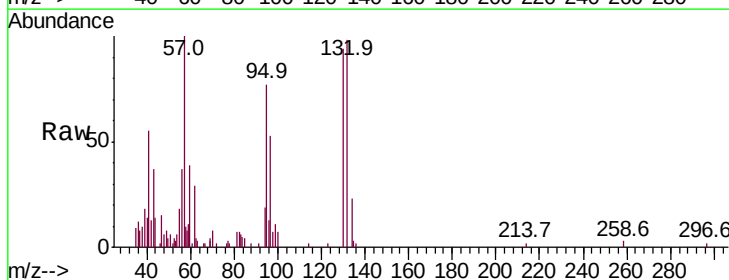
Tgt Ion: 57 Resp: 9182

Ion Ratio Lower Upper

57 100

41 0.0 26.2 39.4#

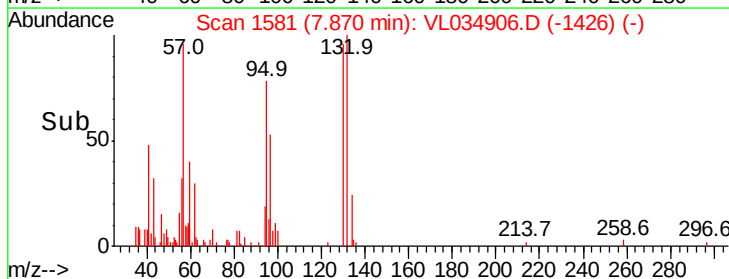
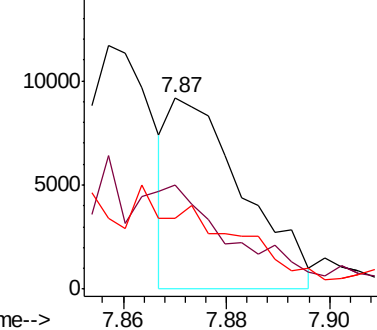
56 113.7 25.0 37.4#

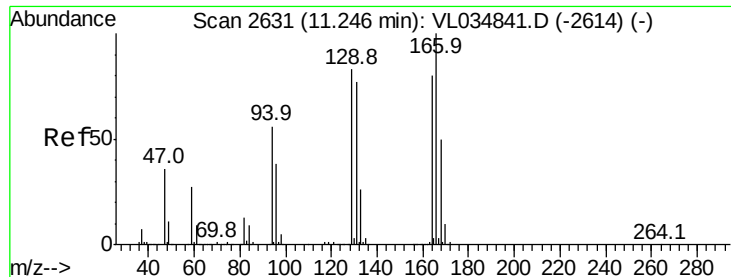


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 0.048 ppbv

RT: 11.24 min Scan# 2628

Delta R.T. -0.01 min

Lab File: VL034906.D

Acq: 17 Mar 2020 1:19

Instrument :

MSVOA_L

ClientSampleId :

SV-03

Tot Ion:164 Resp: 3134

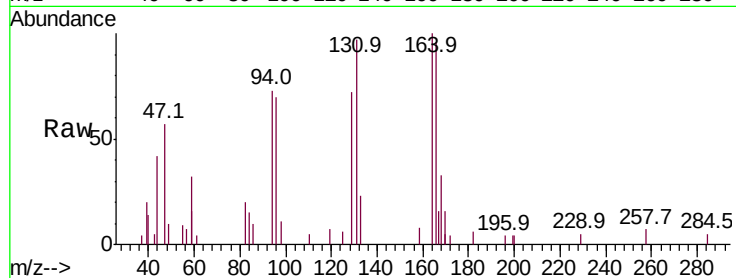
Ion Ratio Lower Upper

164 100

166 33.5 100.0 150.0#

129 37.8 83.1 124.7#

131 86.8 77.2 115.8

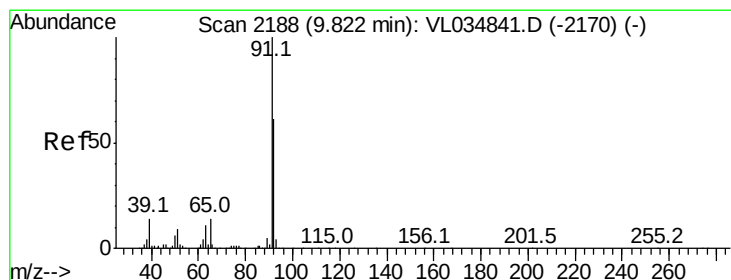
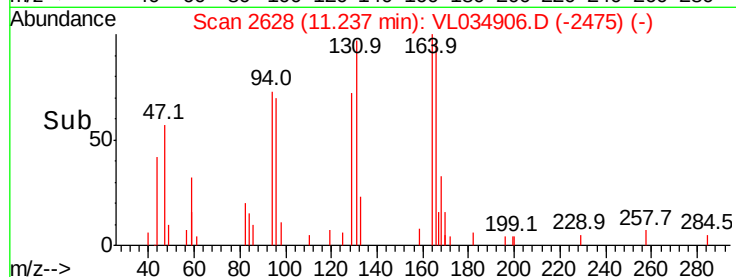
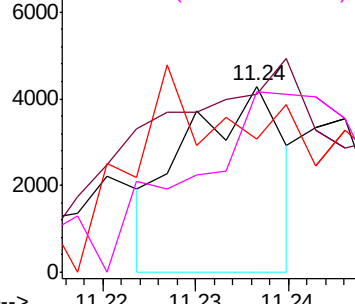


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 1.358 ppbv

RT: 9.82 min Scan# 2186

Delta R.T. -0.01 min

Lab File: VL034906.D

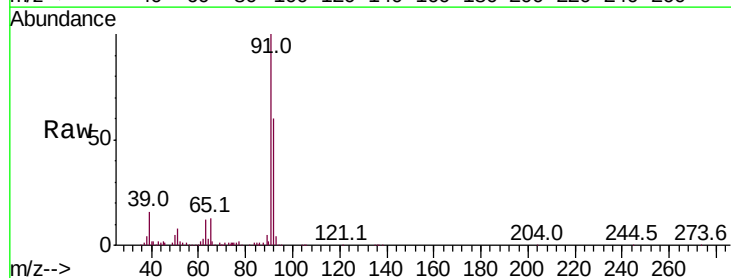
Acq: 17 Mar 2020 1:19

Tgt Ion: 91 Resp: 260702

Ion Ratio Lower Upper

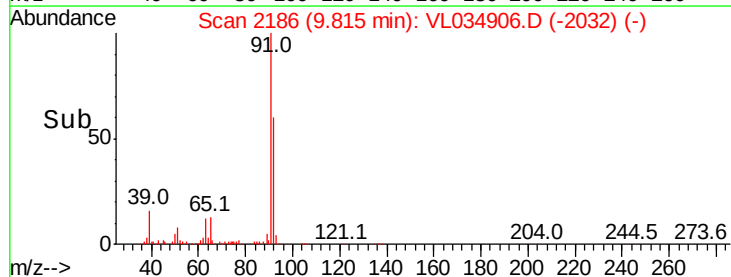
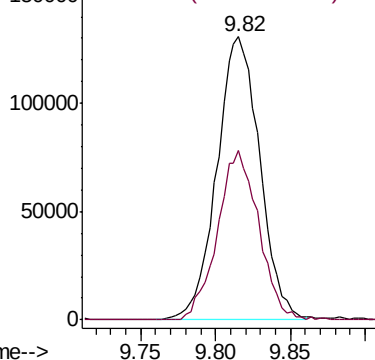
91 100

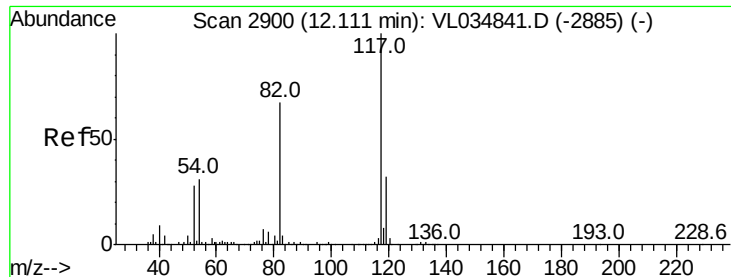
92 57.4 48.6 72.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

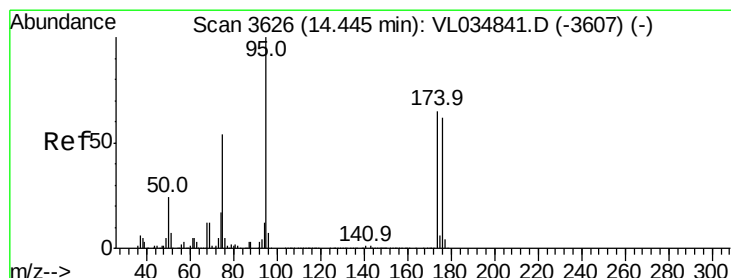
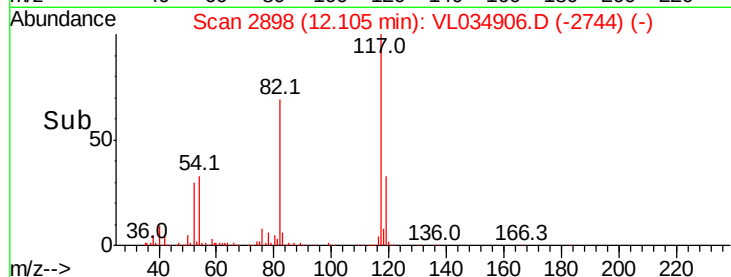
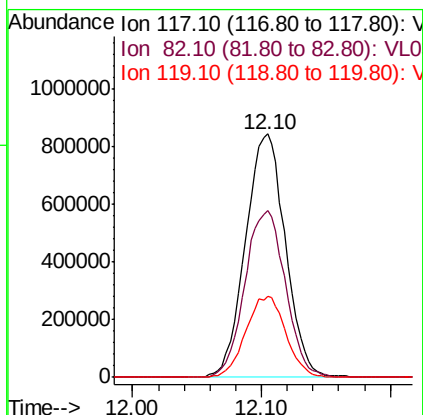
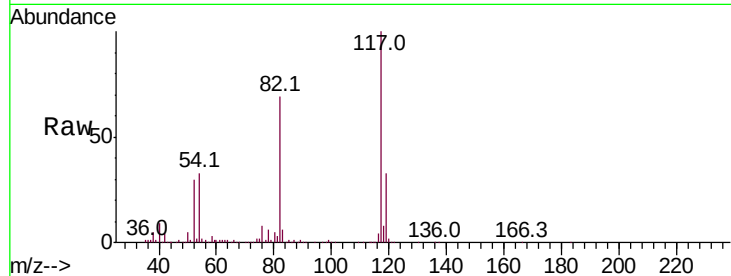




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min Scan# 2898
Delta R.T. -0.01 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

Instrument :
MSVOA_L
ClientSampled :
SV-03

Tot Ion:117 Resp: 1820715
Ion Ratio Lower Upper
117 100
82 70.1 51.1 76.7
119 33.5 27.3 40.9



#68
1-Bromo-4-Fluorobenzene
Concen: 10.682 ppbv
RT: 14.44 min Scan# 3624
Delta R.T. -0.01 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

Tgt Ion: 95 Resp: 1516746
Ion Ratio Lower Upper
95 100
174 63.5 55.2 82.8
175 4.8 4.3 6.5

