

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 :

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%

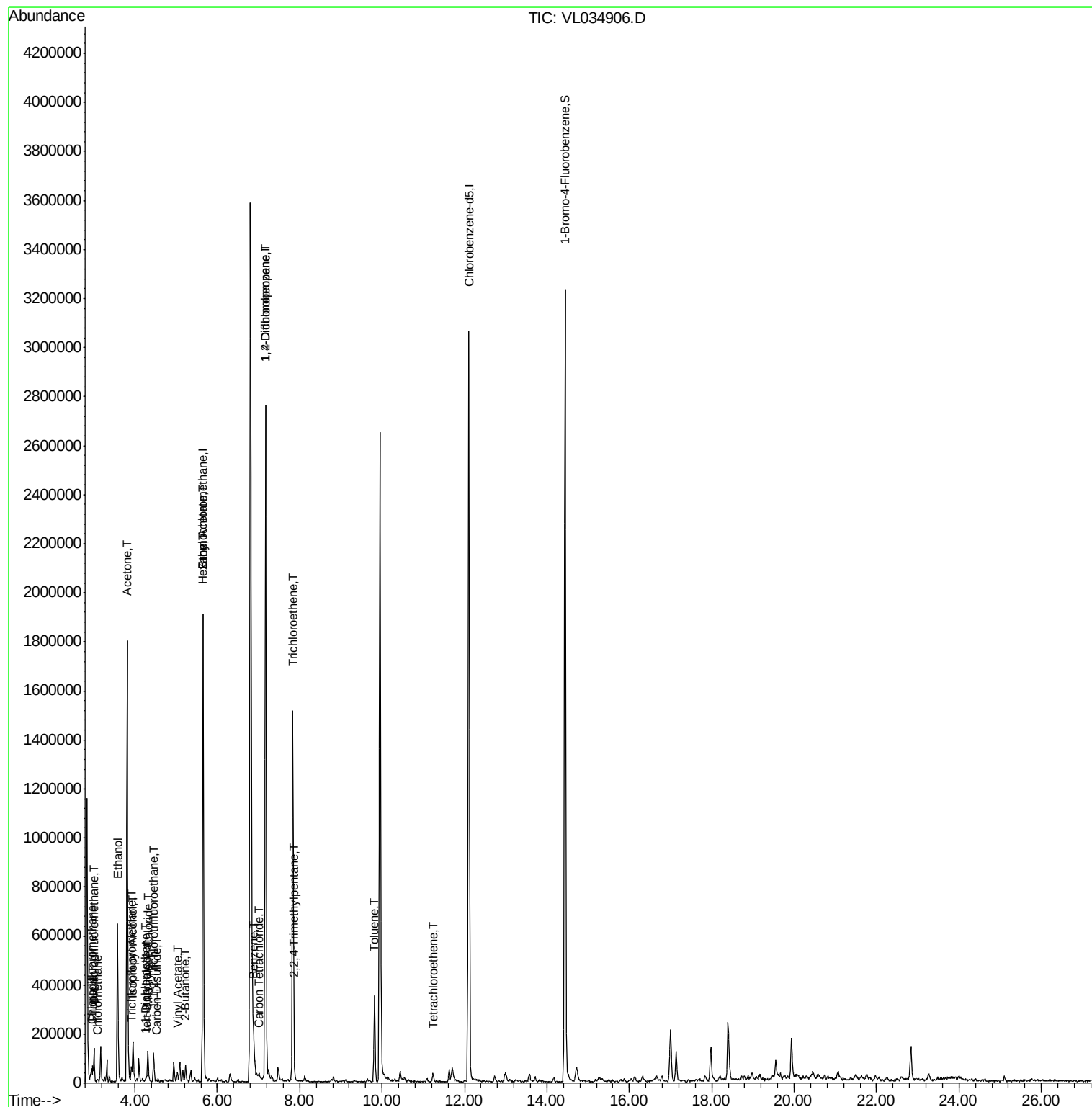
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.01	85	87956	0.762	ppbv	100
3) Chlorodifluoromethane	2.95	51	47466	0.504	ppbv	93
4) Chloromethane	3.10	50	2687	0.050	ppbv	89
9) Propene	2.97	41	10227	0.227	ppbv	91
11) Trichlorofluoromethane	3.92	101	34217	0.279	ppbv	100
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

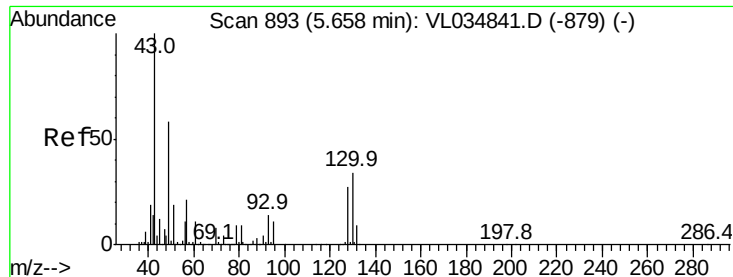
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Mon Mar 09 16:42:53 2020
Response via : Initial Calibration





#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 :

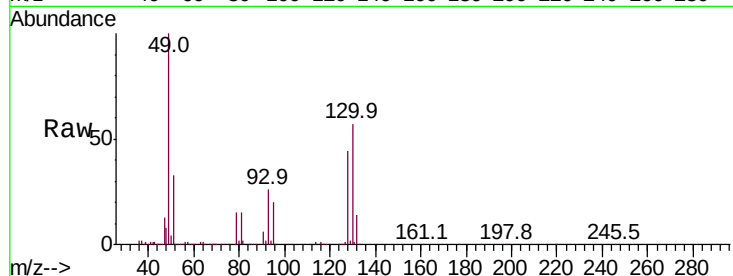
Tot Ion: 49 Resp: 843077

Ion Ratio Lower Upper

49 100

128 44.5 23.4 70.3

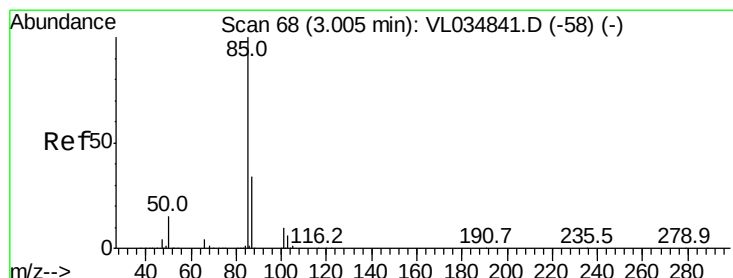
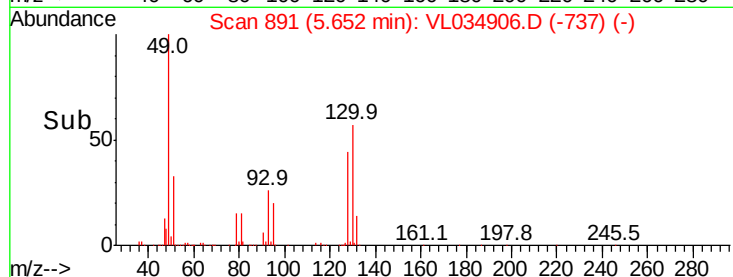
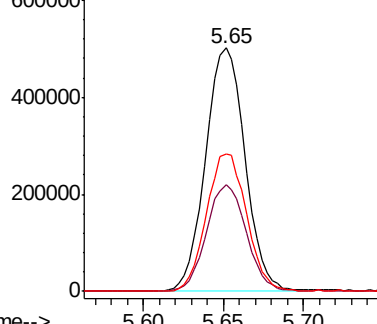
130 57.9 30.0 90.0



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

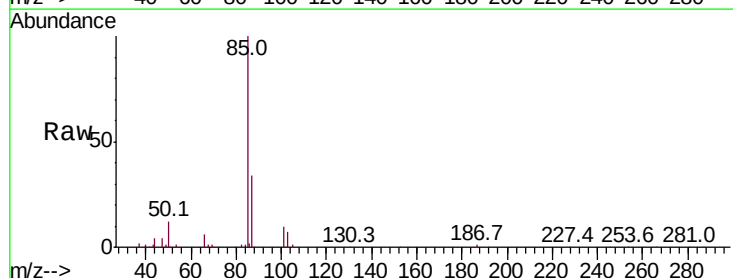
Acq: 17 Mar 2020 1:19

Tgt Ion: 85 Resp: 87956

Ion Ratio Lower Upper

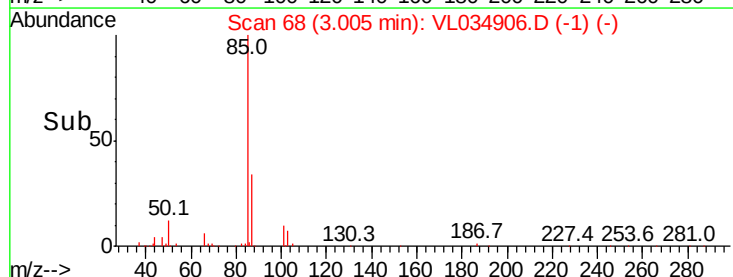
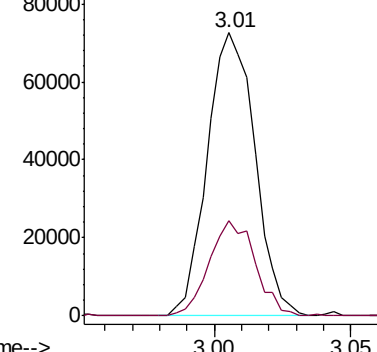
85 100

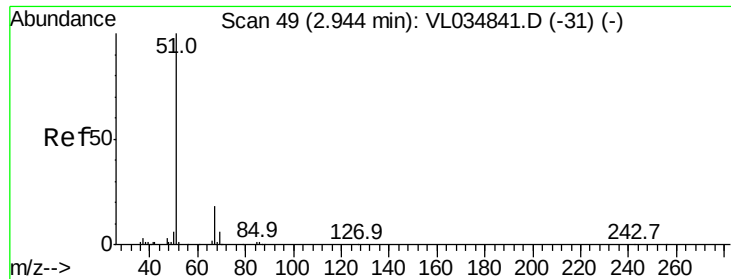
87 33.7 26.9 40.3



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

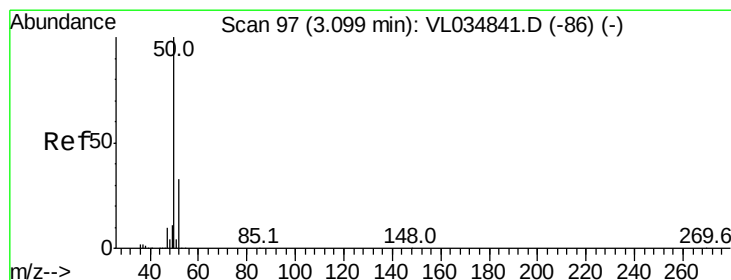
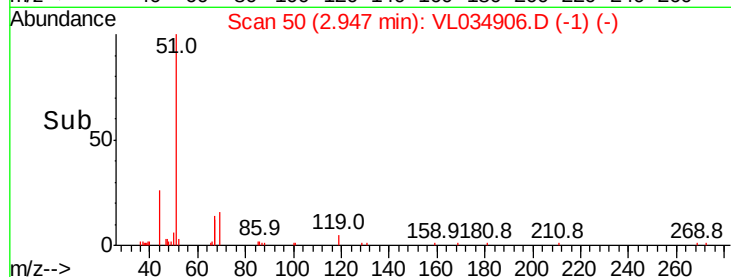
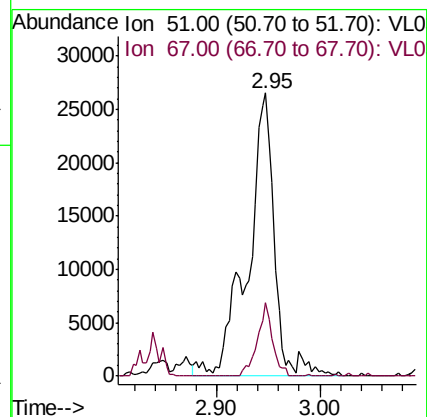
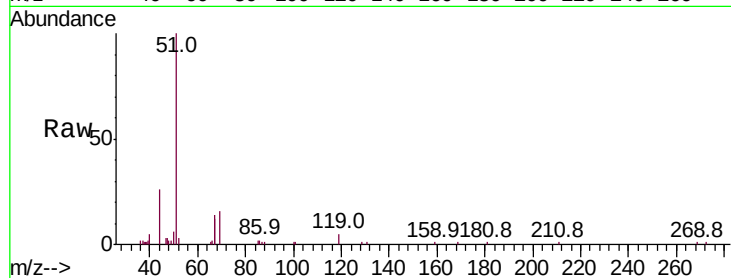
Instrument :
MSVOA_L
ClientSampleId :

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

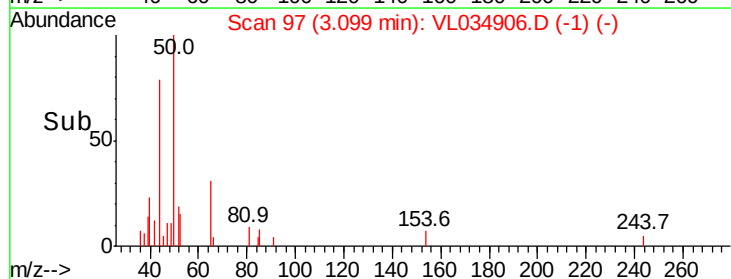
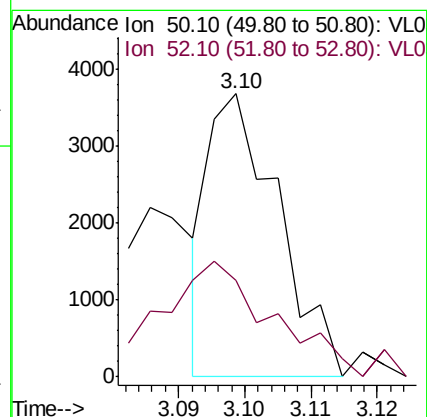
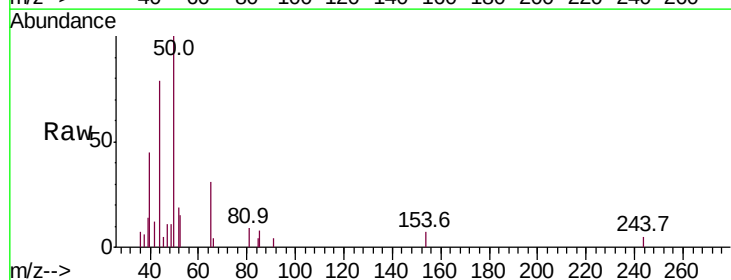
Acq: 17 Mar 2020 1:19

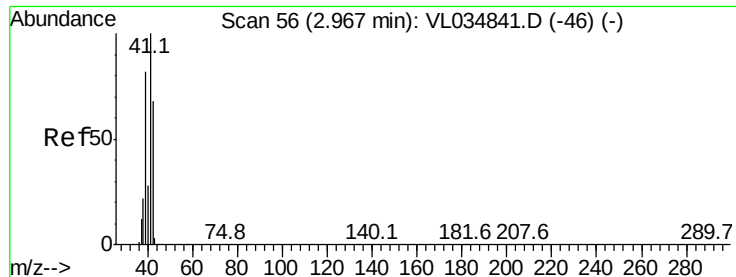
Tgt Ion: 50 Resp: 2687

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

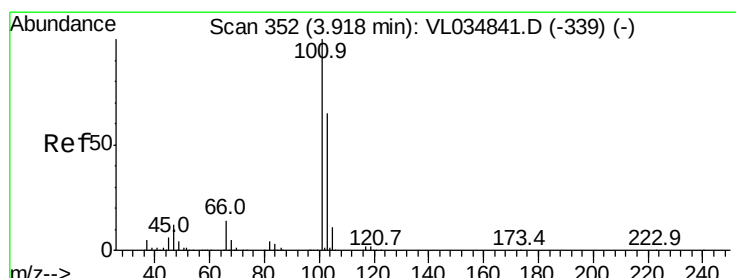
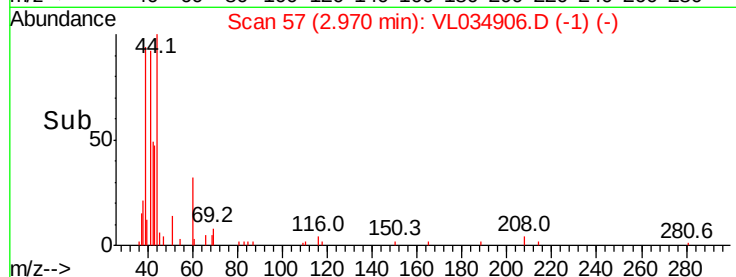
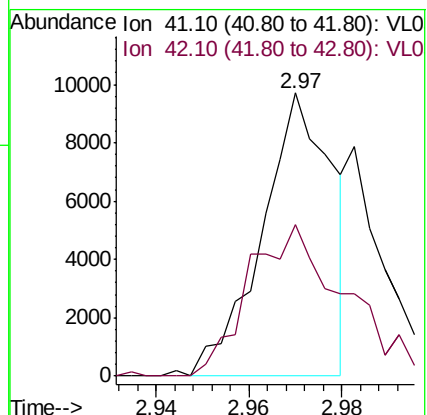
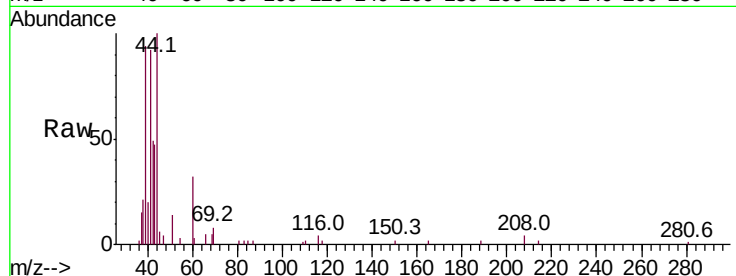
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 41 Resp: 10227

Ion Ratio Lower Upper

41 100

42 76.3 55.2 82.8



#11

Trichlorofluoromethane

Concen: 0.279 ppbv

RT: 3.92 min Scan# 352

Delta R.T. 0.00 min

Lab File: VL034906.D

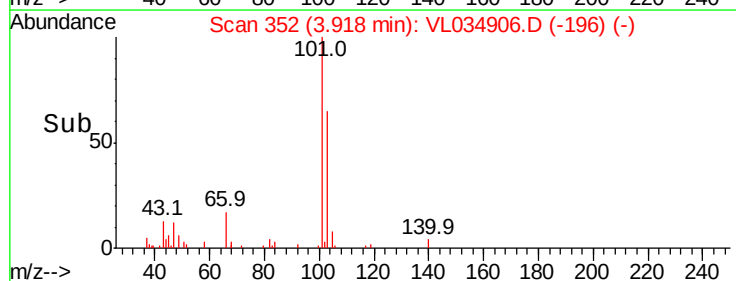
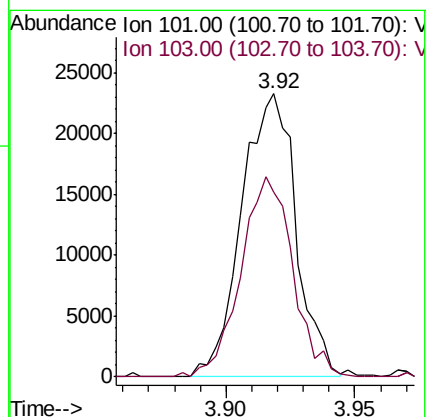
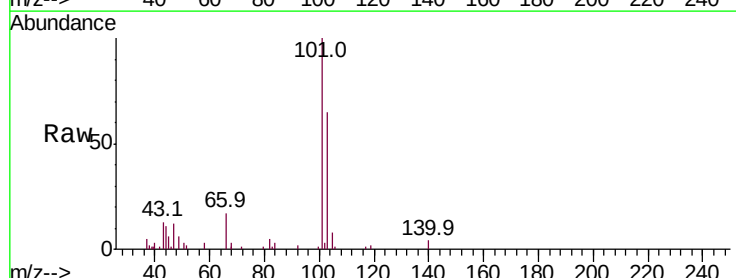
Acq: 17 Mar 2020 1:19

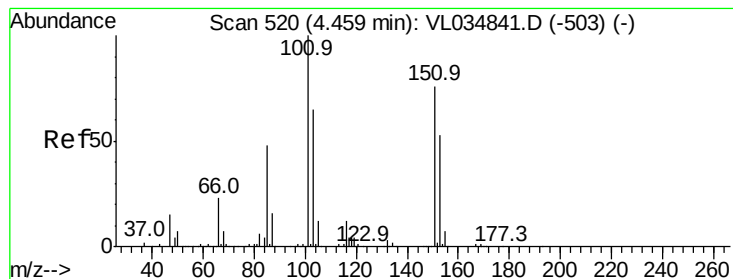
Tgt Ion: 101 Resp: 34217

Ion Ratio Lower Upper

101 100

103 65.2 51.8 77.8





#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

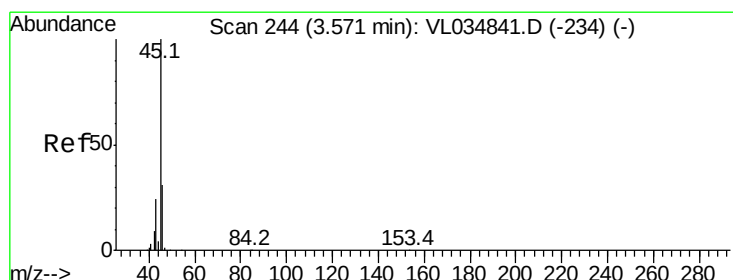
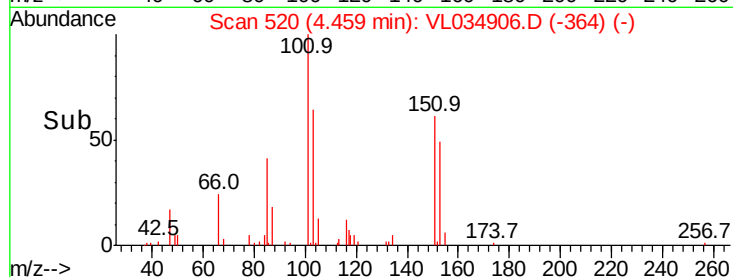
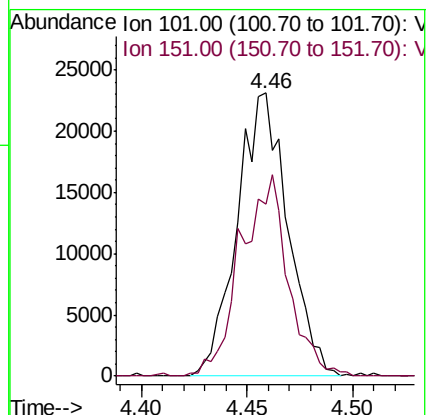
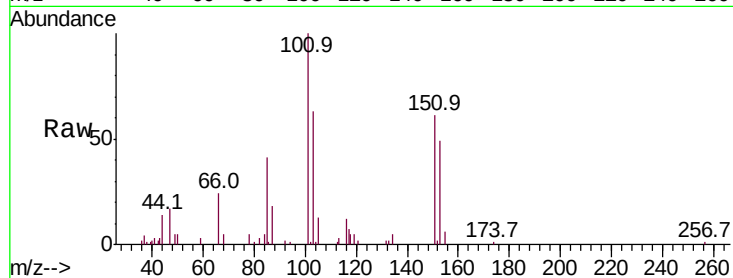
ClientSampleId :

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

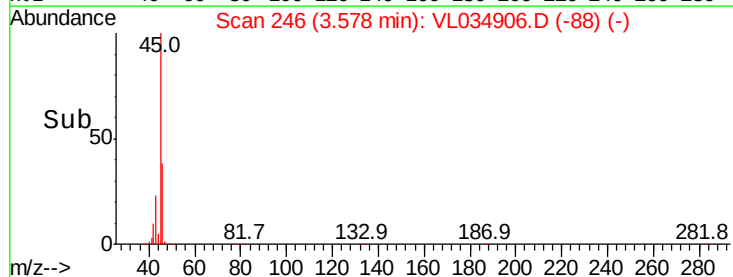
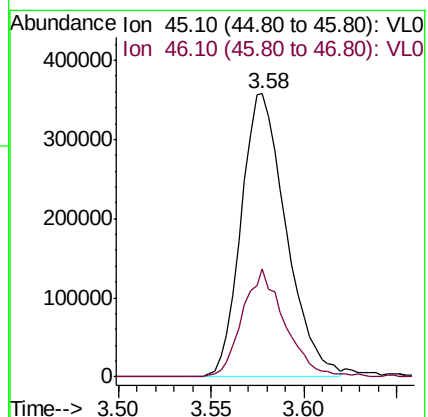
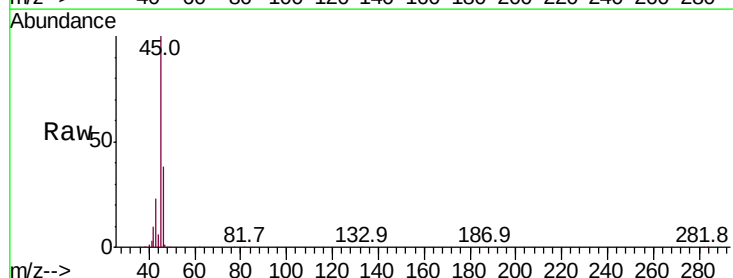
Acq: 17 Mar 2020 1:19

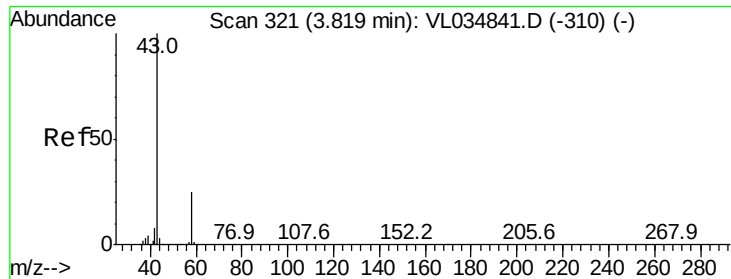
Tgt Ion: 45 Resp: 605363

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

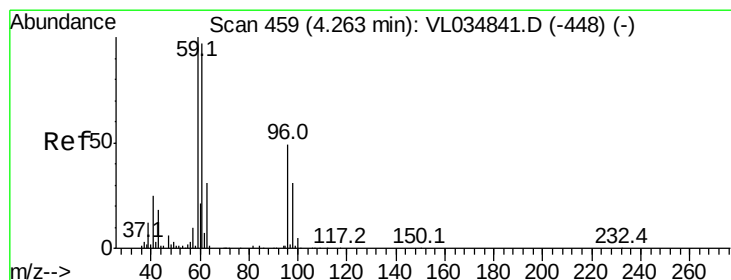
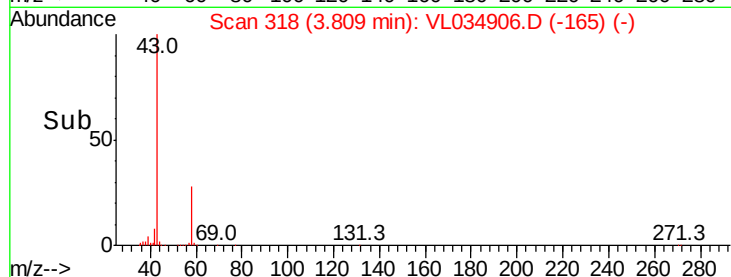
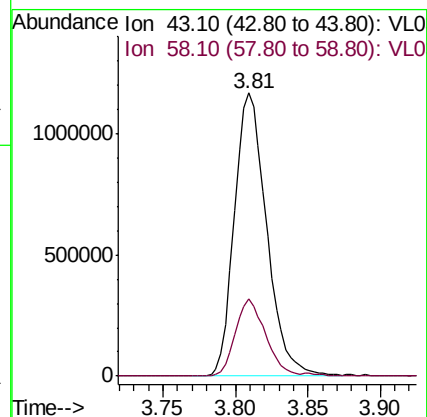
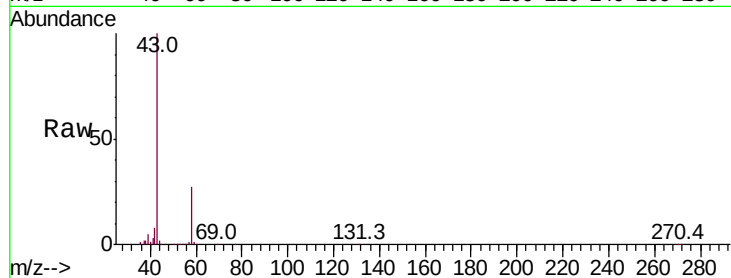
ClientSampleId :

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

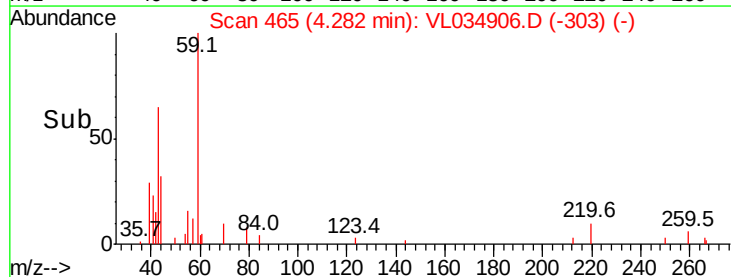
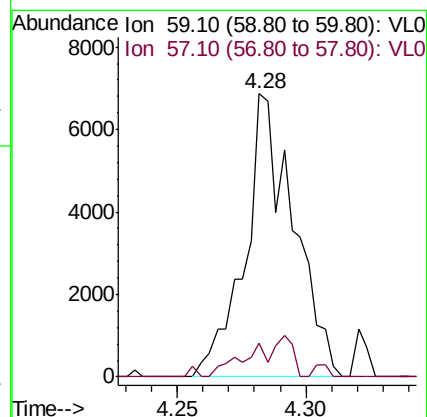
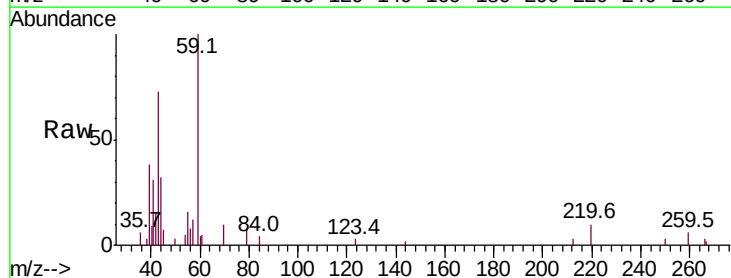
Acq: 17 Mar 2020 1:19

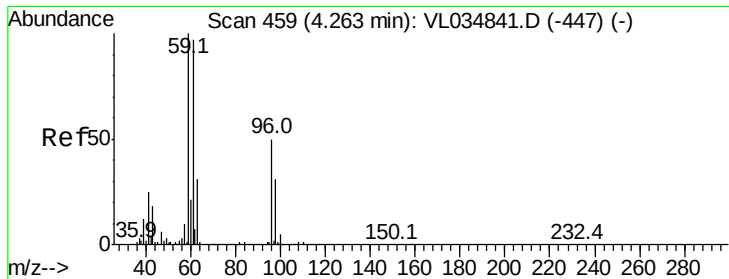
Tgt Ion: 59 Resp: 9012

Ion Ratio Lower Upper

59 100

57 13.8 8.3 12.5#

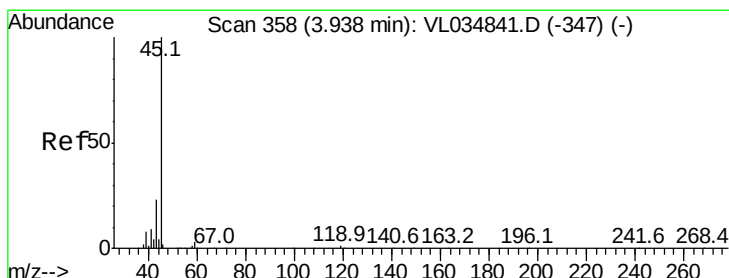
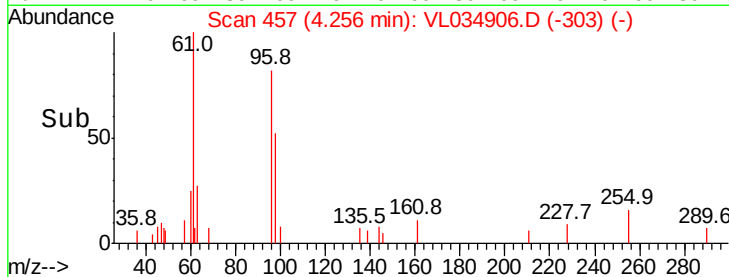
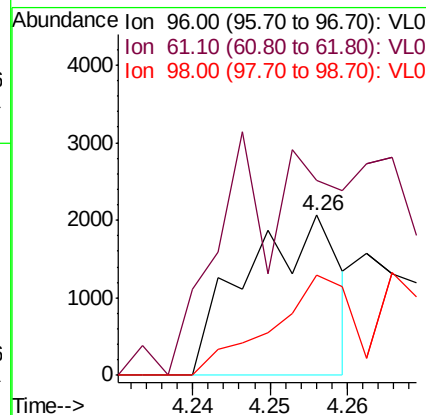
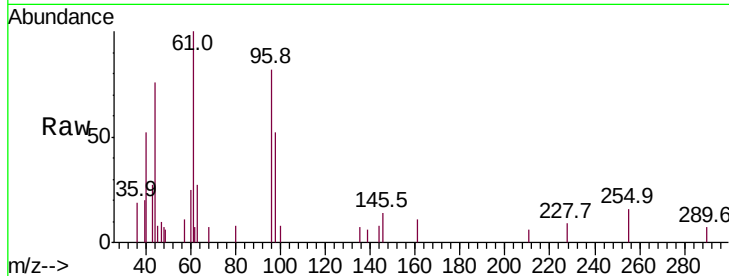




#18
 1,1-Dichloroethene
 Concen: 0.045 ppbv
 RT: 4.26 min Scan# 457
 Delta R.T. -0.01 min
 Lab File: VL034906.D
 Acq: 17 Mar 2020 1:19

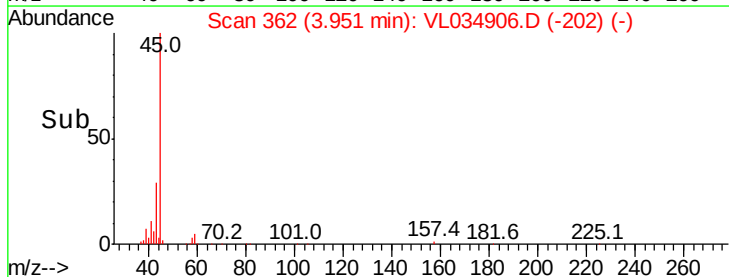
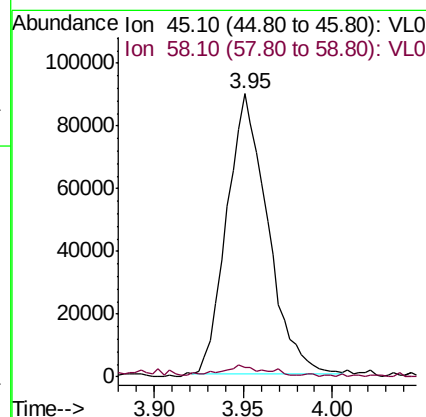
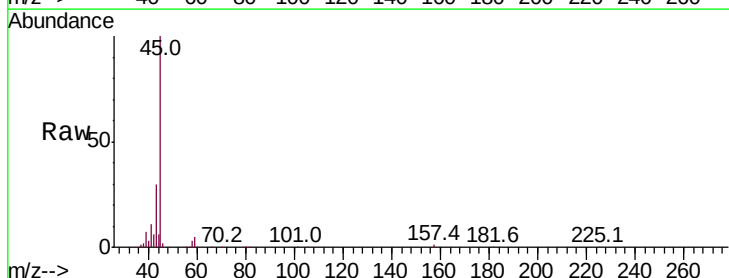
Instrument :
 MSVOA_L
 ClientSampleId :

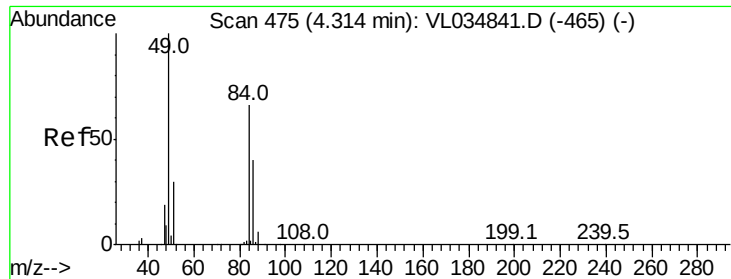
Tot Ion: 96 Resp: 1730
 Ion Ratio Lower Upper
 96 100
 61 76.6 157.3 235.9#
 98 63.0 50.2 75.4



#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#

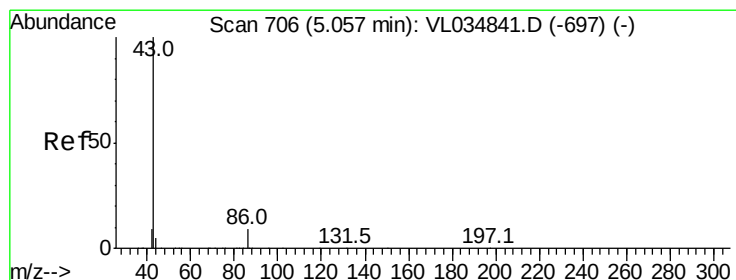
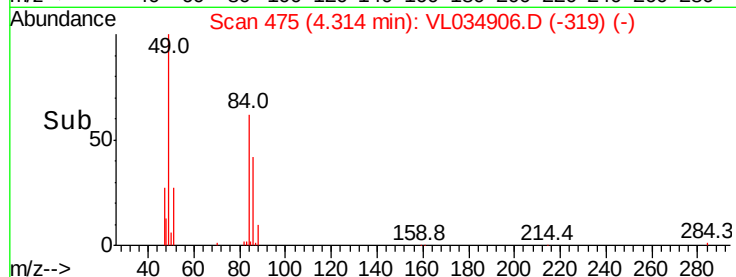
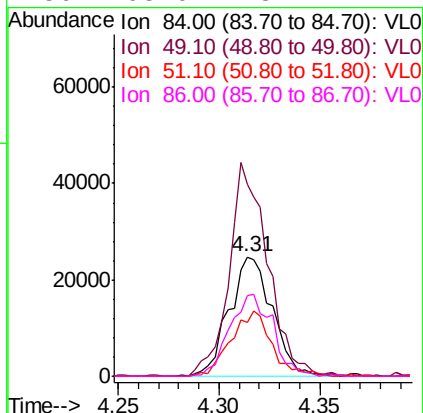
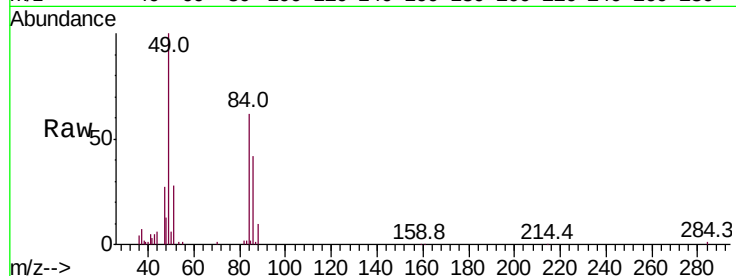




#20
Methvlene Chloride
Concen: 1.074 ppbv
RT: 4.31 min Scan# 475
Delta R.T. 0.00 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

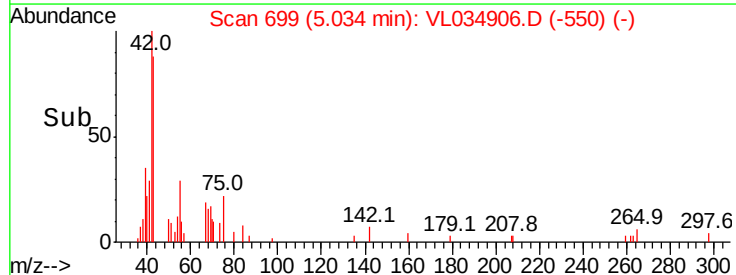
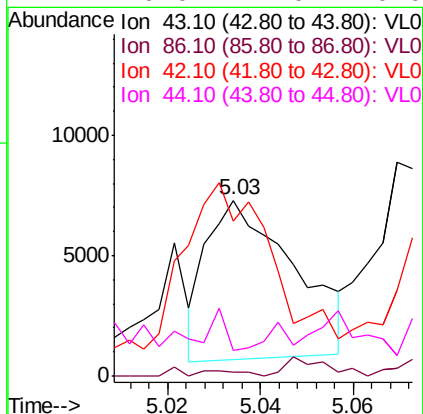
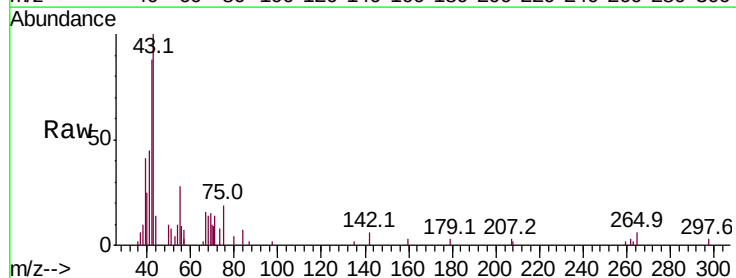
Instrument :
MSVOA_L
ClientSampleId :

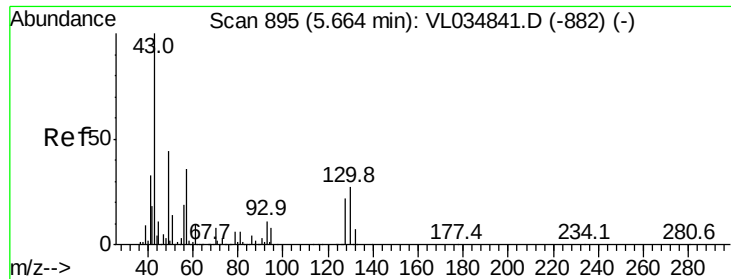
Tot Ion:	84	Resp:	37093
Ion	Ratio	Lower	Upper
84	100		
49	161.2	121.5	182.3
51	45.0	36.6	55.0
86	68.0	48.2	72.2



#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#

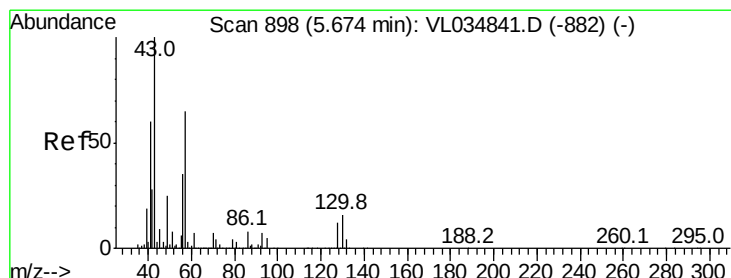
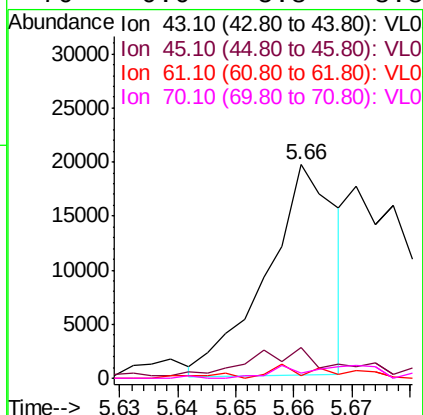
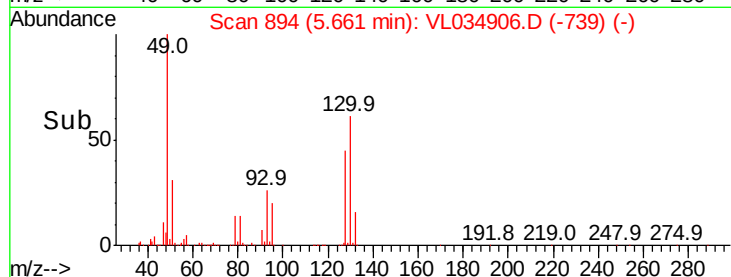
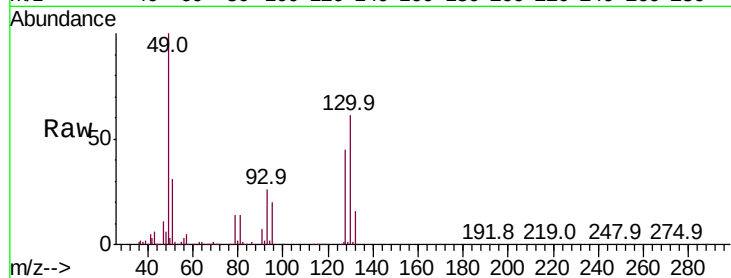




#25
Ethyl Acetate
Concen: 0.083 ppbv
RT: 5.66 min Scan# 894
Delta R.T. -0.00 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

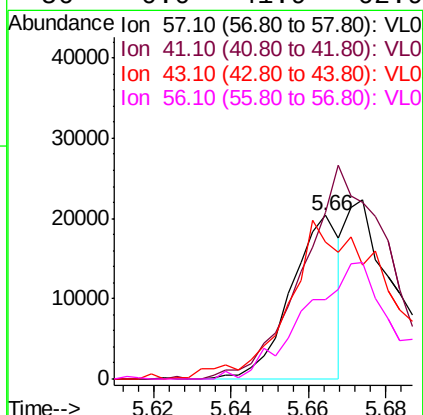
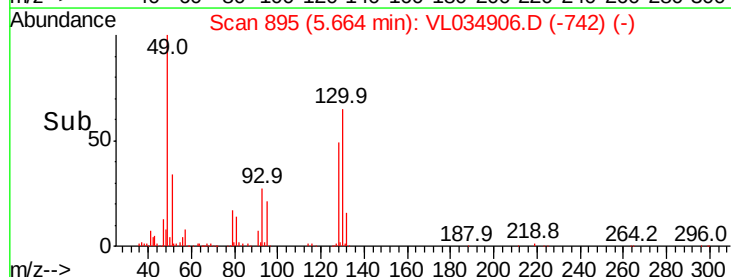
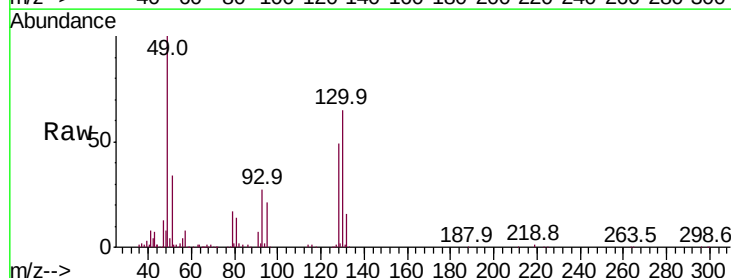
Instrument :
MSVOA_L
ClientSampleId :

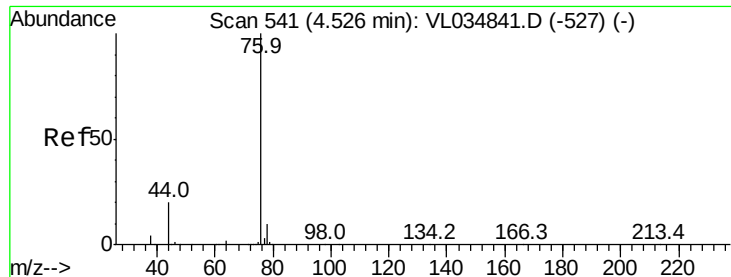
Tot Ion: 43 Resp: 16232
Ion Ratio Lower Upper
43 100
45 24.7 8.2 12.2#
61 8.3 7.8 11.6
70 0.0 5.8 8.8#



#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#





#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

ClientSampled :

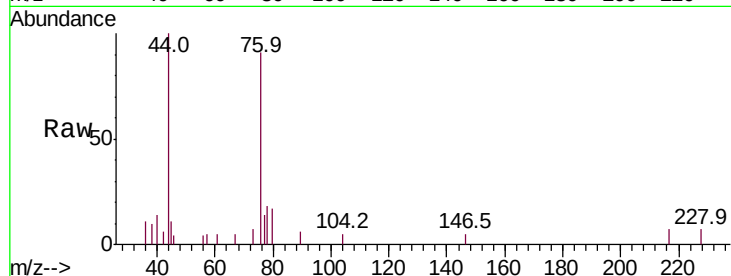
Tot Ion: 76 Resp: 6376

Ion Ratio Lower Upper

76 100

44 72.8 16.2 24.2#

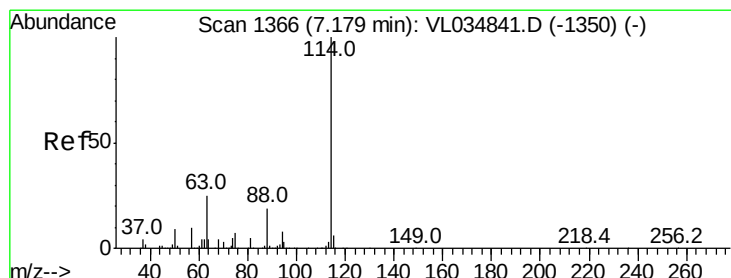
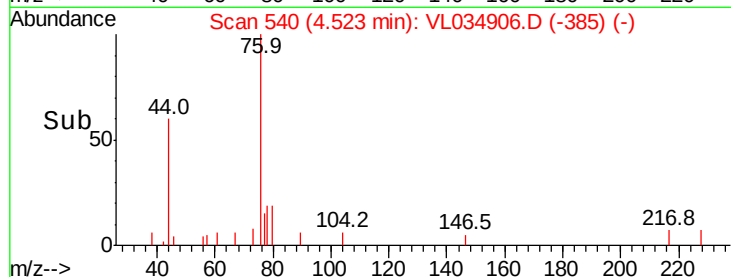
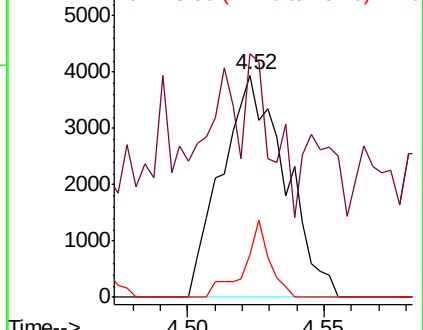
78 13.8 7.8 11.6#



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



#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

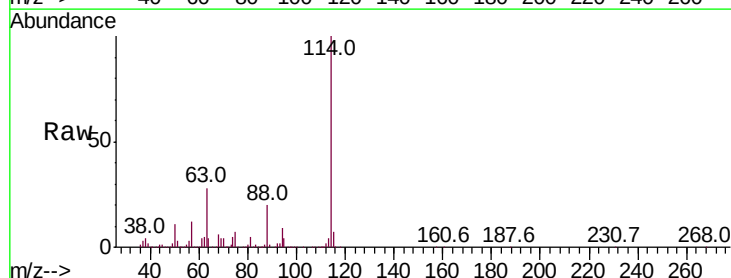
Tgt Ion: 114 Resp: 1865147

Ion Ratio Lower Upper

114 100

63 27.5 20.6 31.0

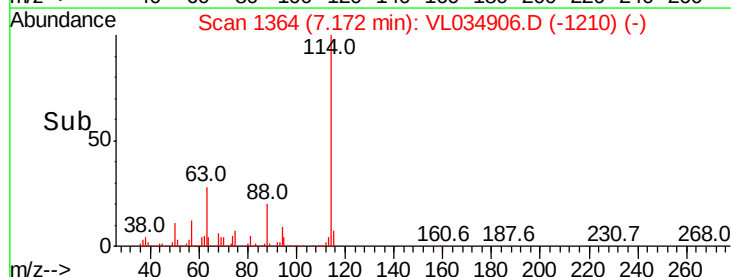
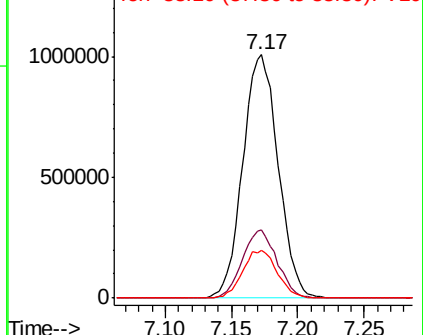
88 19.4 15.0 22.6

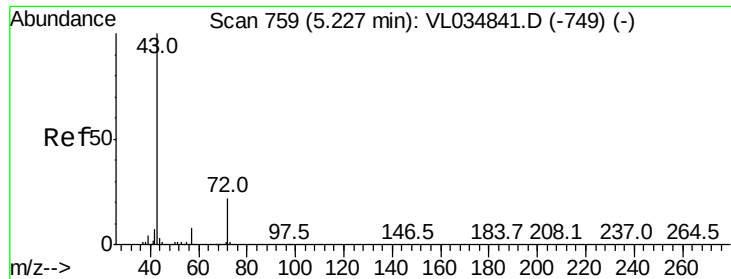


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

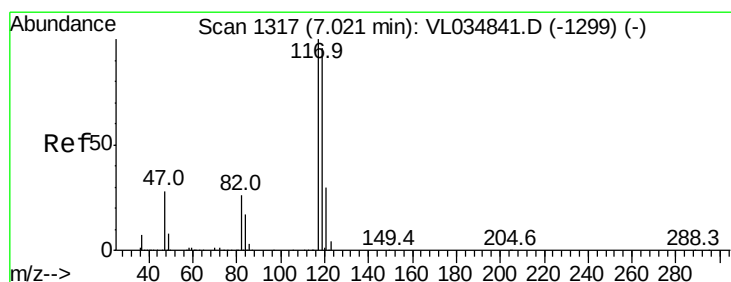
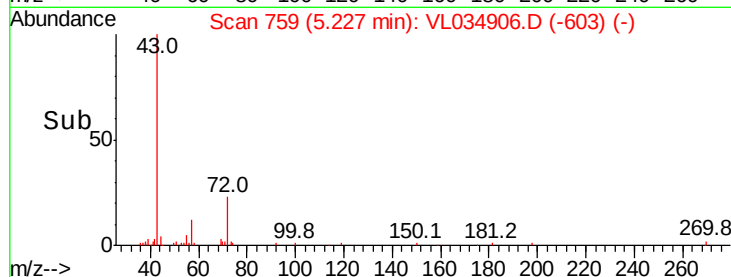
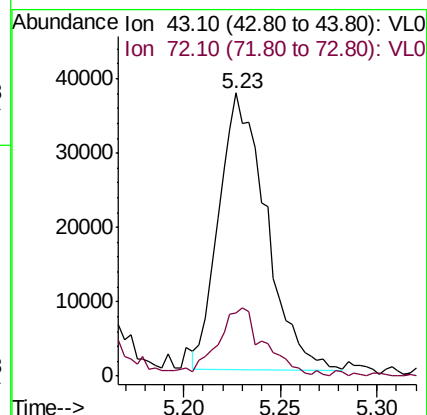
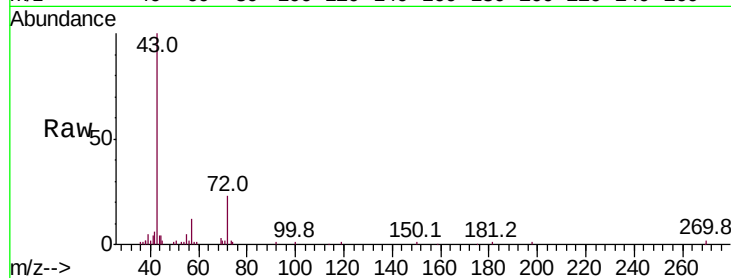




#34
2-Butanone
Concen: 0.508 ppbv
RT: 5.23 min Scan# 759
Delta R.T. 0.00 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

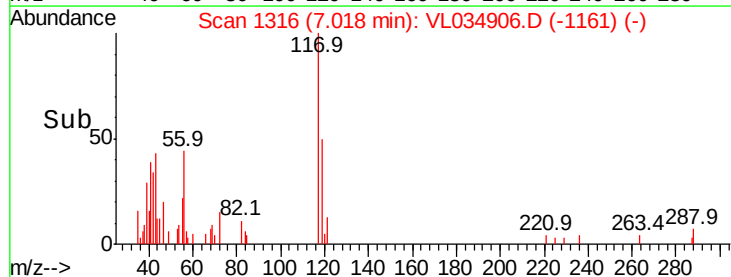
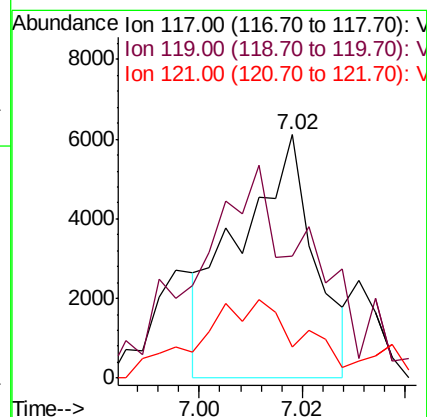
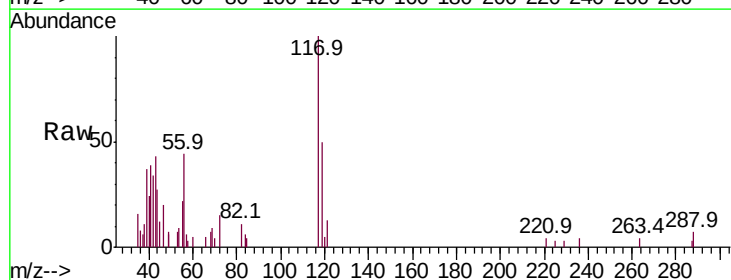
Instrument :
MSVOA_L
ClientSampleId :

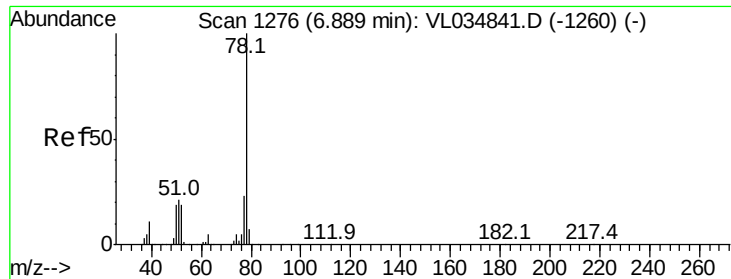
Tot Ion: 43 Resp: 62934
Ion Ratio Lower Upper
43 100
72 24.2 17.6 26.4



#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

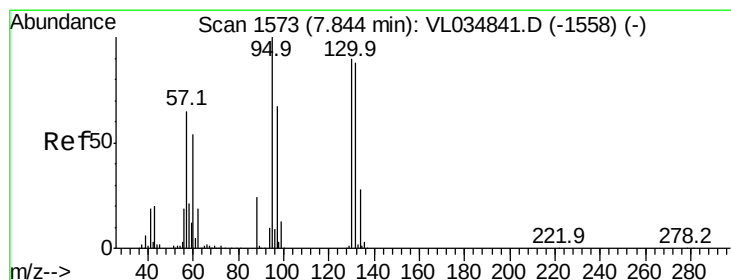
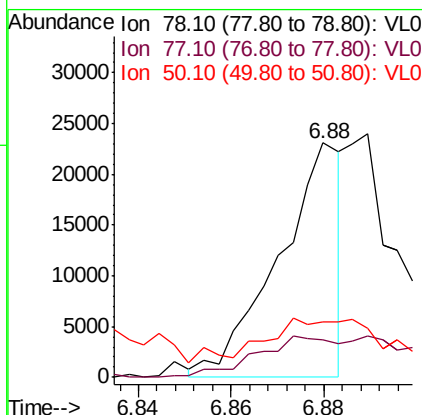
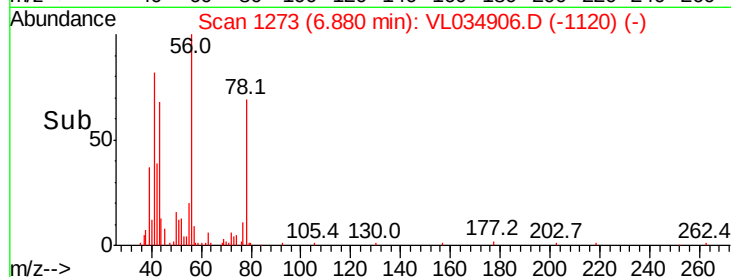
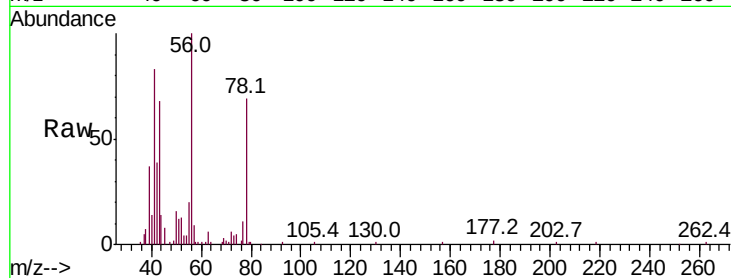
Instrument :

MSVOA_L

ClientSampleId :

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

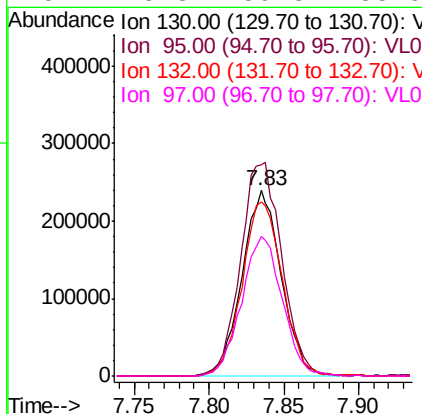
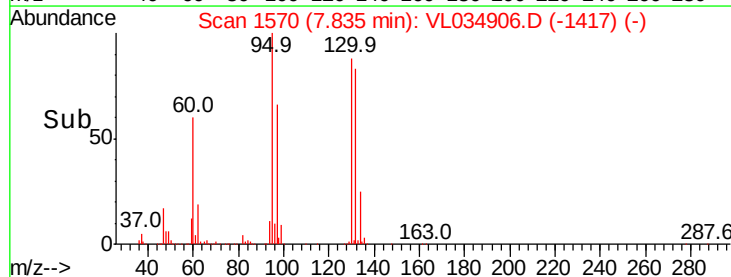
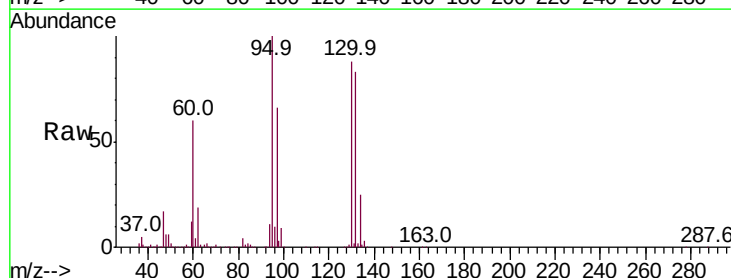
Delta R.T. -0.01 min

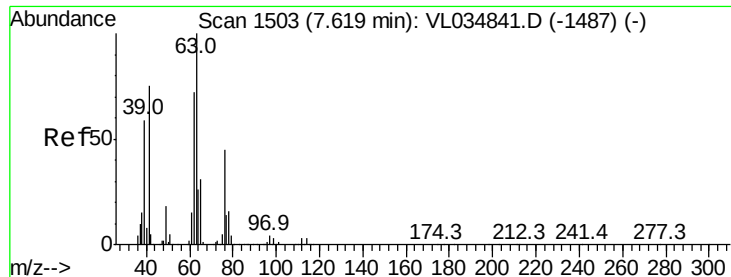
Lab File: VL034906.D

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 :

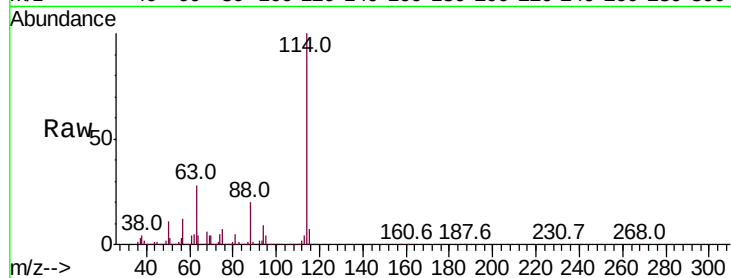
Tot Ion: 63 Resp: 509281

Ion Ratio Lower Upper

63 100

41 0.0 59.8 89.8#

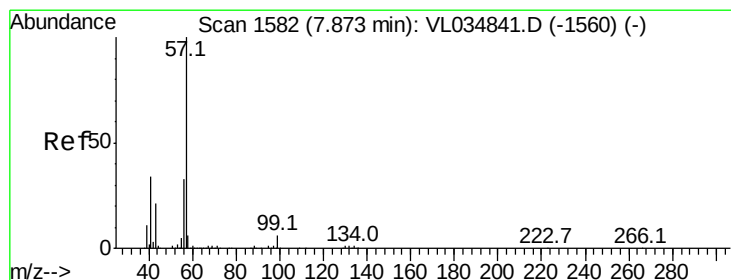
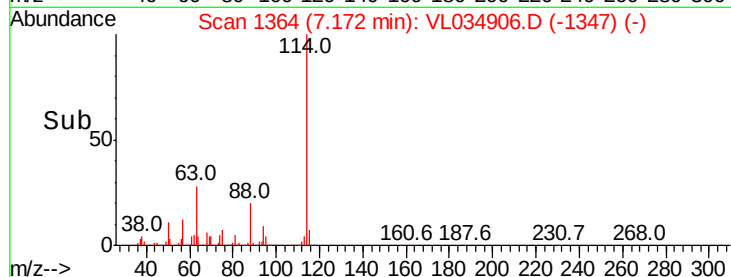
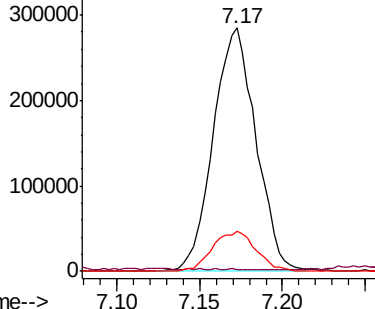
62 16.7 57.6 86.4#



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

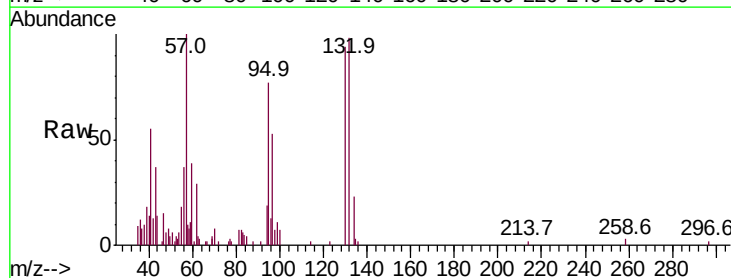
Tgt Ion: 57 Resp: 9182

Ion Ratio Lower Upper

57 100

41 0.0 26.2 39.4#

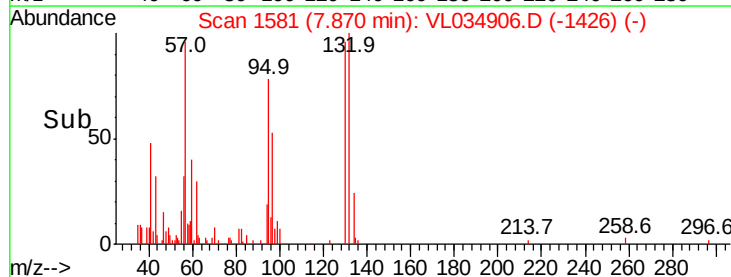
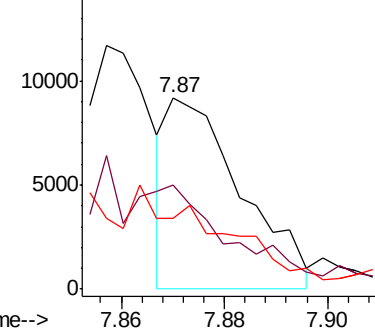
56 113.7 25.0 37.4#

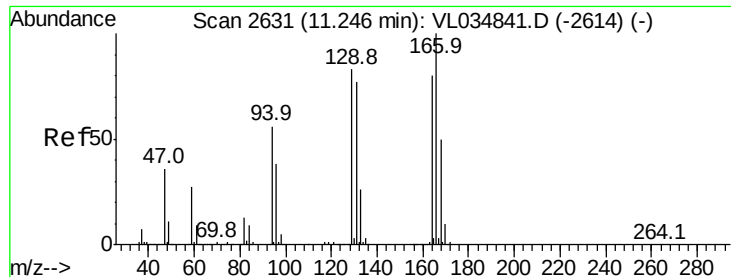


Abundance Ion 57.10 (56.80 to 57.80): VL0

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

ClientSampled :

Tot Ion:164 Resp: 3134

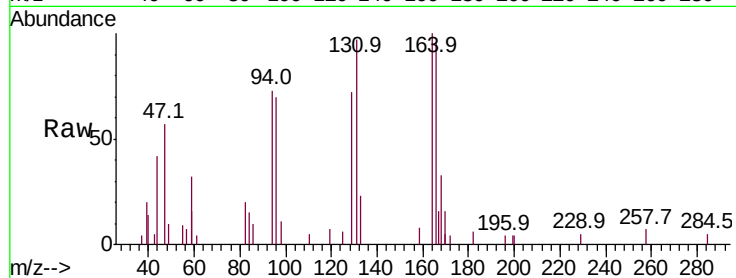
Ion Ratio Lower Upper

164 100

166 33.5 100.0 150.0#

129 37.8 83.1 124.7#

131 86.8 77.2 115.8

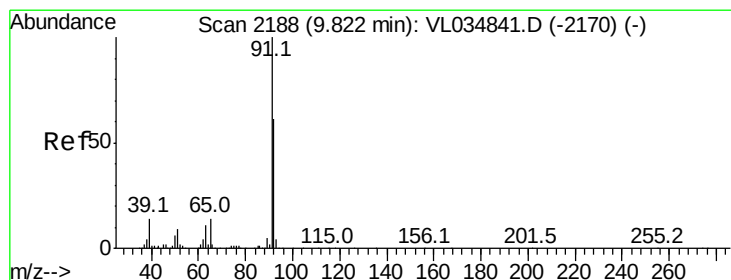
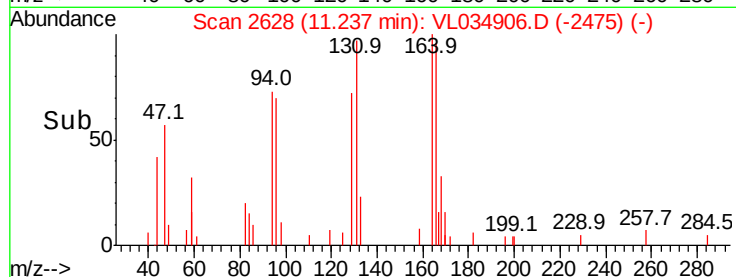
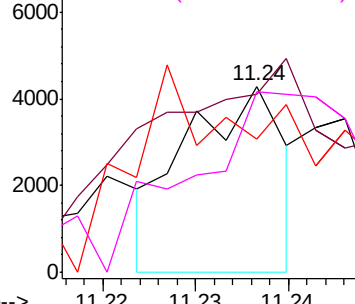


Abundance Ion 163.90 (163.60 to 164.60): V

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

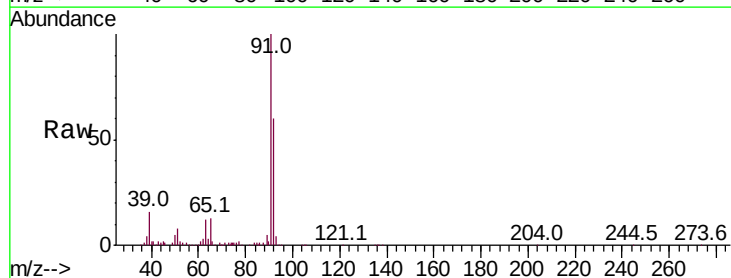
Acq: 17 Mar 2020 1:19

Tgt Ion: 91 Resp: 260702

Ion Ratio Lower Upper

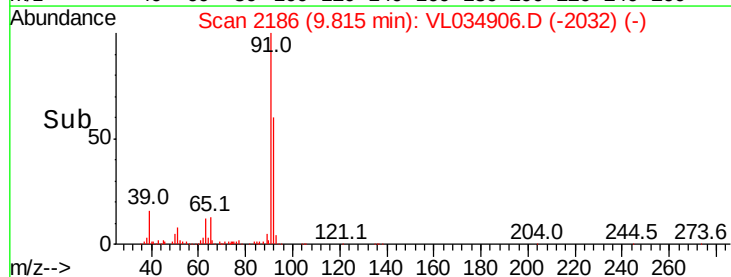
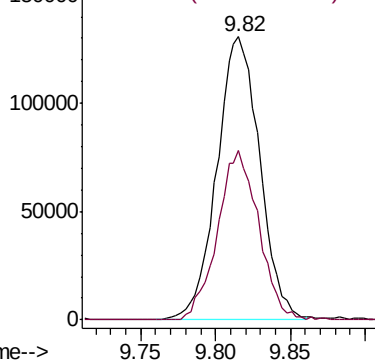
91 100

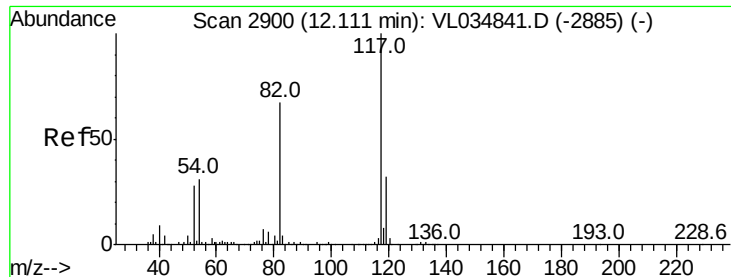
92 57.4 48.6 72.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

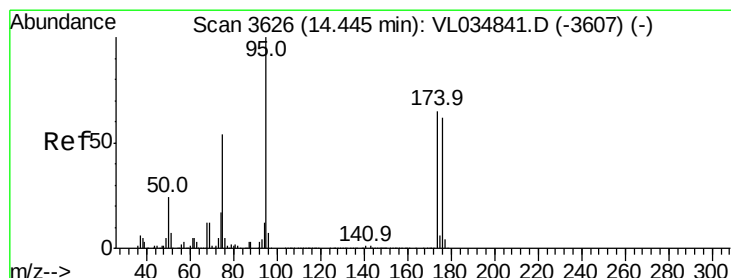
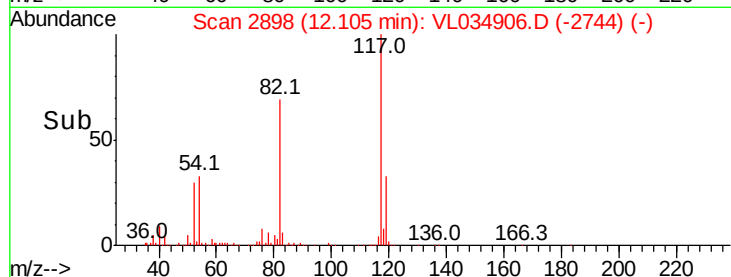
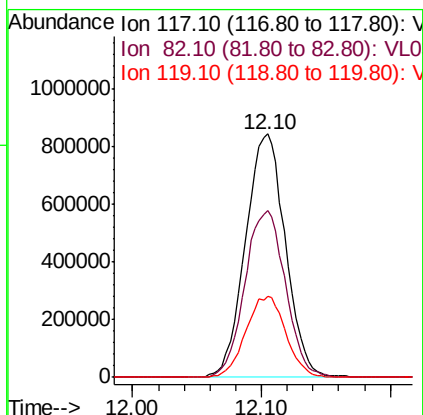
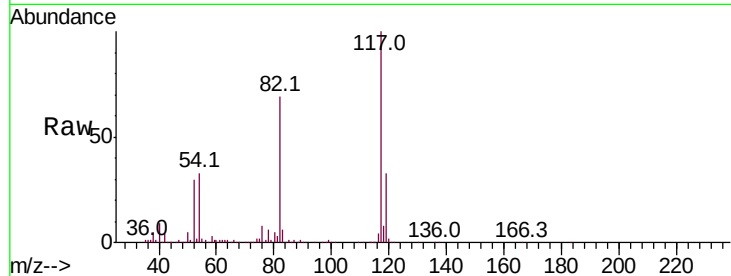




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min Scan# 2898
Delta R.T. -0.01 min
Lab File: VL034906.D
Acq: 17 Mar 2020 1:19

Instrument :
MSVOA_L
ClientSampleId :

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

