

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110420\
 Data File : VL035848.D
 Acq On : 5 Nov 2020 1:20
 Operator : SY/AP
 Sample : L4220-02DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 05 02:59:20 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 04 02:40:06 2020
 QLast Update : Wed Nov 04 02:40:06 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.63	49	792425	10.00	ppbv	-0.04
33) 1,4-Difluorobenzene	7.14	114	3323756	10.00	ppbv	-0.04
55) Chlorobenzene-d5	12.05	117	2993303	10.00	ppbv	-0.04

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.38	95	2108111	9.91	ppbv	-0.04
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.10%

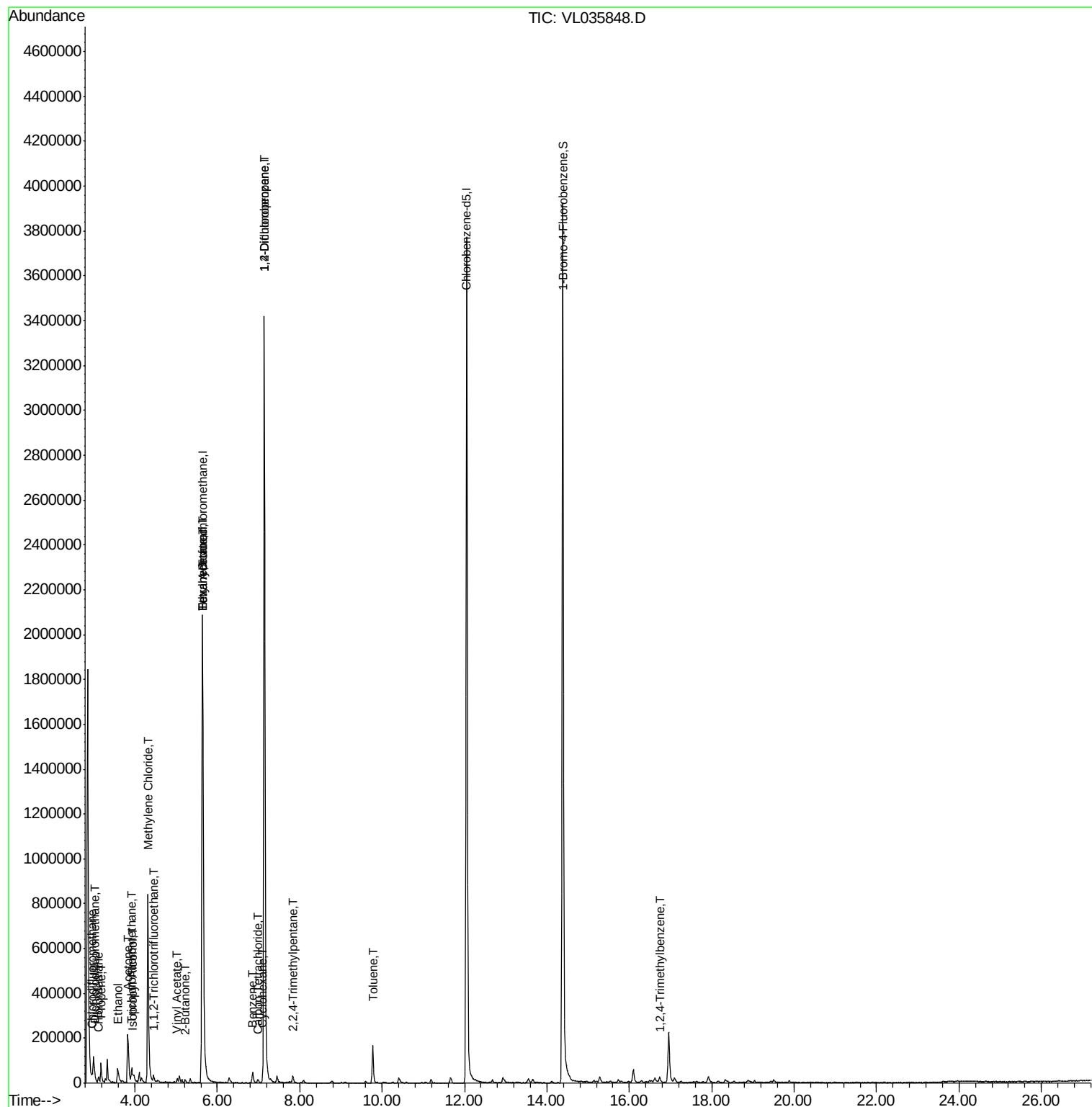
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	36133	0.242	ppbv	95
3) Chlorodifluoromethane	2.96	51	51003	0.537	ppbv #	89
4) Chloromethane	3.11	50	11862	0.257	ppbv #	87
9) Propene	3.18	41	23233	0.669	ppbv	85
11) Trichlorofluoromethane	3.92	101	48959	0.261	ppbv	93
12) 1,1,2-Trichlorotrifluoroet	4.46	101	9970	0.071	ppbv	89
13) Ethanol	3.58	45	94231	12.506	ppbv	96
15) Acetone	3.83	43	270648	3.195	ppbv	96
19) Isopropyl Alcohol	3.95	45	14070	0.270	ppbv #	90
20) Methylene Chloride	4.31	84	466384	7.820	ppbv	99
23) Vinyl Acetate	5.03	43	9283	0.078	ppbv #	46
25) Ethyl Acetate	5.65	43	197876	1.186	ppbv #	73
26) Hexane	5.65	57	343684	3.734	ppbv #	46
30) Cyclohexane	7.10	84	3014	0.030	ppbv #	3
34) 2-Butanone	5.22	43	11409	0.106	ppbv #	67
35) Carbon Tetrachloride	6.99	117	6797	0.038	ppbv	91
36) Benzene	6.86	78	45596	0.185	ppbv	100
39) 1,2-Dichloropropane	7.14	63	623410	7.494	ppbv #	30
41) Tetrahydrofuran	5.65	42	102507	1.673	ppbv #	40
44) 2,2,4-Trimethylpentane	7.83	57	14148	0.043	ppbv #	32
53) Toluene	9.77	91	146561	0.492	ppbv	97
74) 1,2,4-Trimethylbenzene	16.73	105	11139	0.031	ppbv #	63

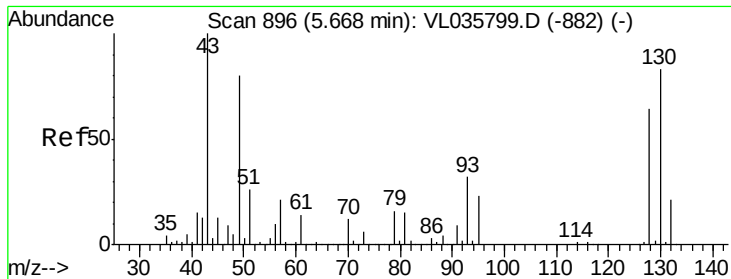
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ClientSampled :

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Nov 04 02:40:06 2020
QLast Update : Wed Nov 04 02:40:06 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.63 min Scan# 885

Delta R.T. -0.04 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :
MSVOA_L
ClientSampled :

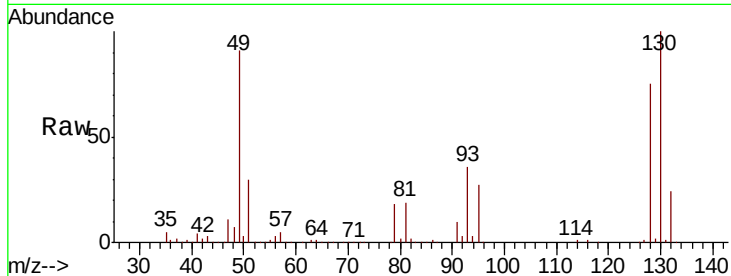
Tot Ion: 49 Resp: 792425

Ion Ratio Lower Upper

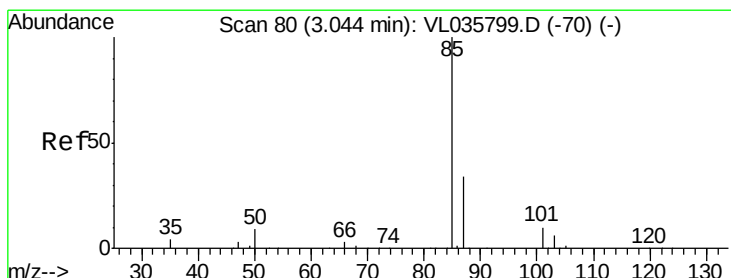
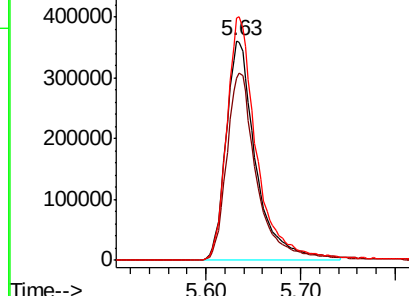
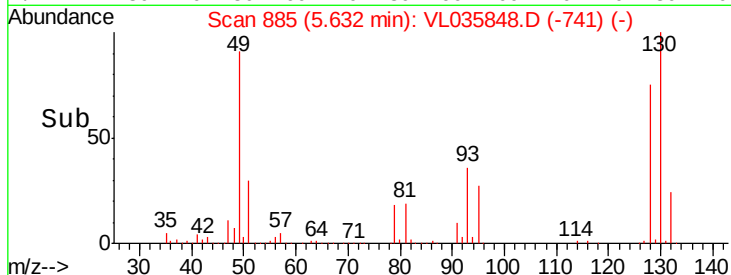
49 100

128 87.5 41.5 124.6

130 112.5 53.7 161.1



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: 0.242 ppbv

RT: 3.02 min Scan# 74

Delta R.T. -0.02 min

Lab File: VL035848.D

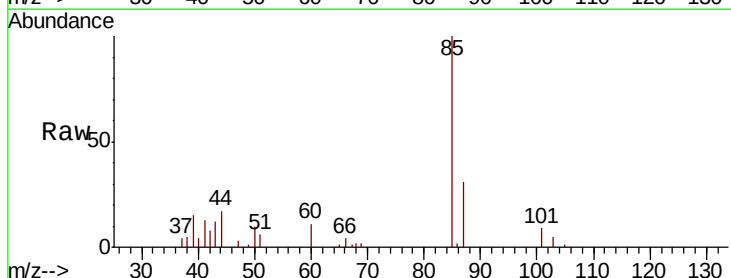
Acq: 5 Nov 2020 1:20

Tgt Ion: 85 Resp: 36133

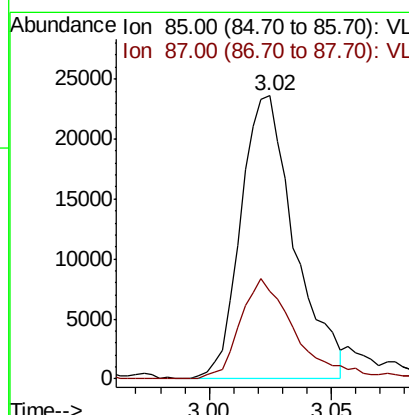
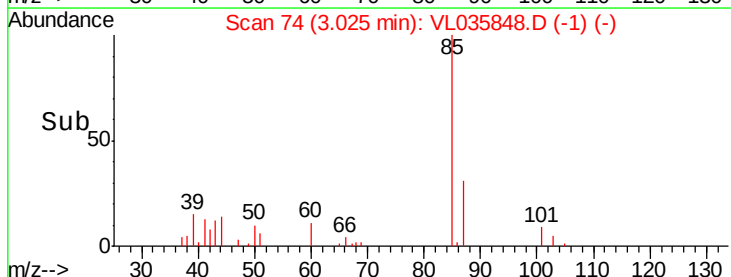
Ion Ratio Lower Upper

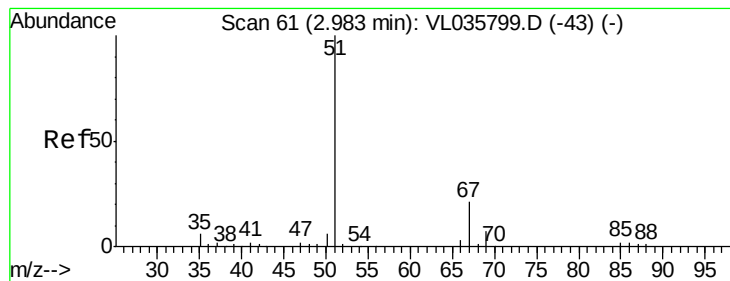
85 100

87 30.9 27.1 40.7



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





#3

Chlorodifluoromethane

Concen: 0.537 ppbv

RT: 2.96 min Scan# 54

Delta R.T. -0.02 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :

MSVOA_L

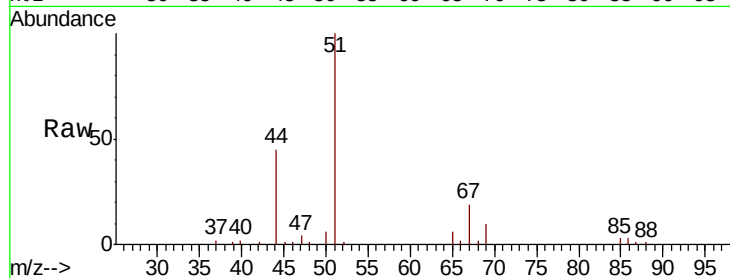
ClientSampleId :

Tot Ion: 51 Resp: 51003

Ion Ratio Lower Upper

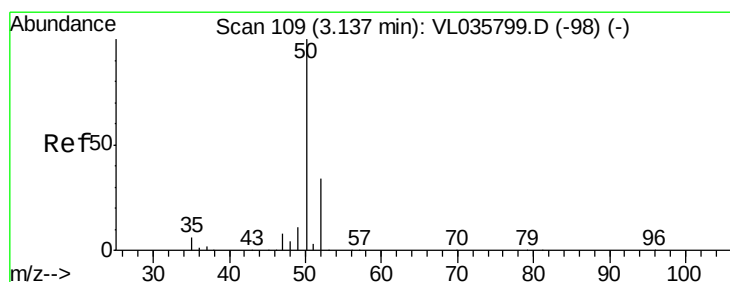
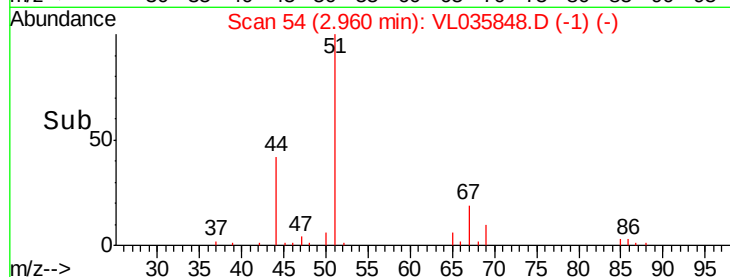
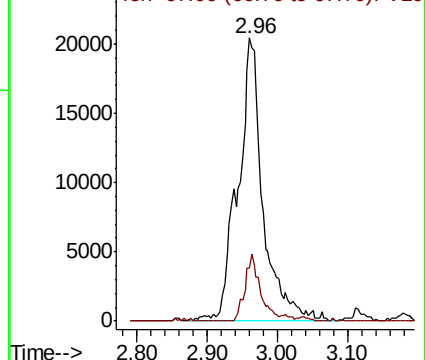
51 100

67 15.8 17.0 25.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.257 ppbv

RT: 3.11 min Scan# 102

Delta R.T. -0.02 min

Lab File: VL035848.D

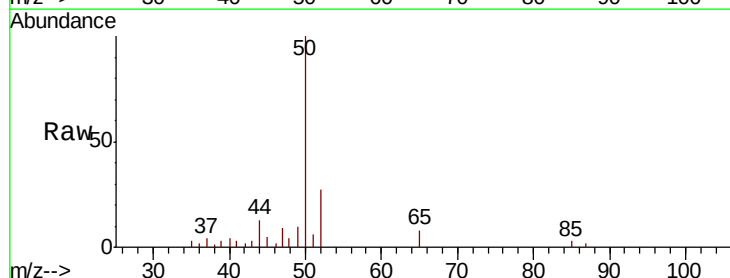
Acq: 5 Nov 2020 1:20

Tgt Ion: 50 Resp: 11862

Ion Ratio Lower Upper

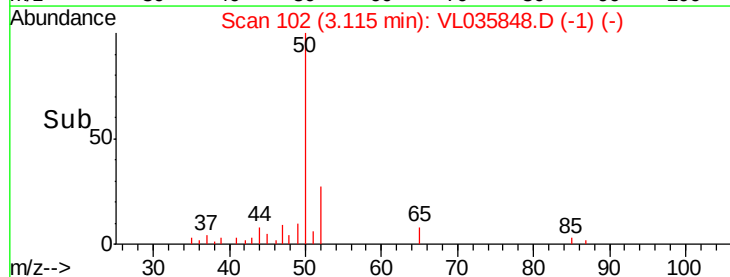
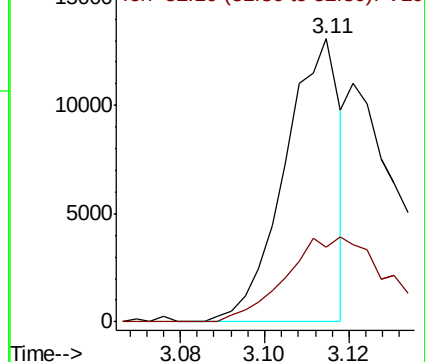
50 100

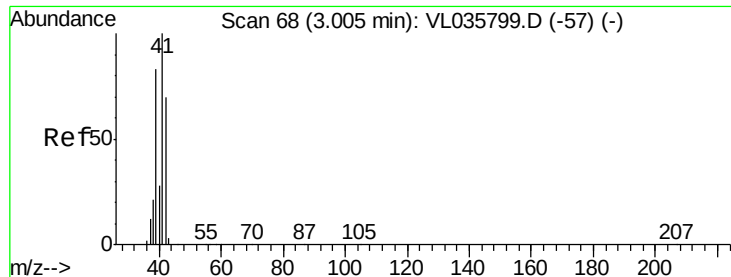
52 26.5 27.1 40.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.669 ppbv

RT: 3.18 min Scan# 121

Delta R.T. 0.17 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :

MSVOA_L

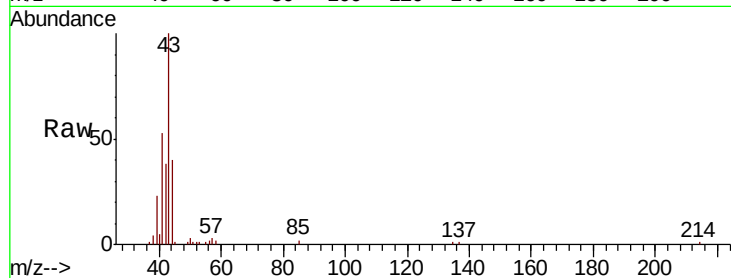
ClientSampleId :

Tot Ion: 41 Resp: 23233

Ion Ratio Lower Upper

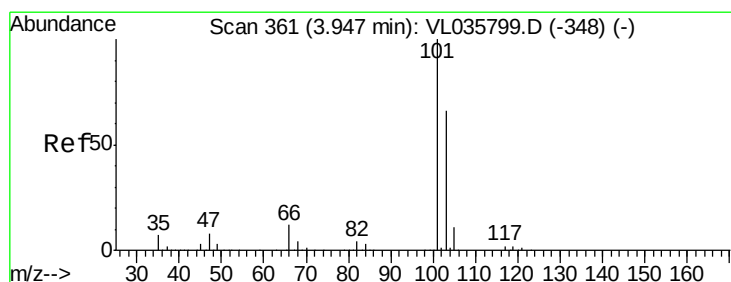
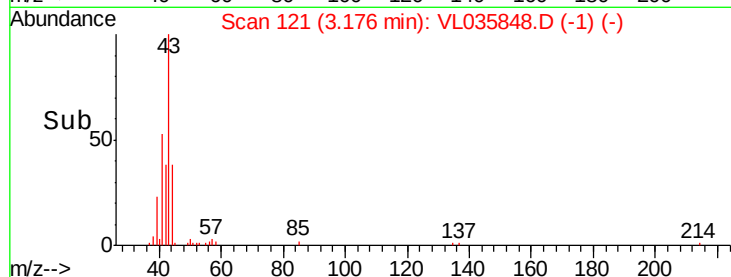
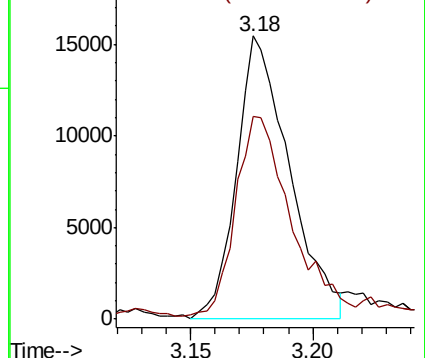
41 100

42 82.7 56.2 84.4



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#11

Trichlorofluoromethane

Concen: 0.261 ppbv

RT: 3.92 min Scan# 353

Delta R.T. -0.03 min

Lab File: VL035848.D

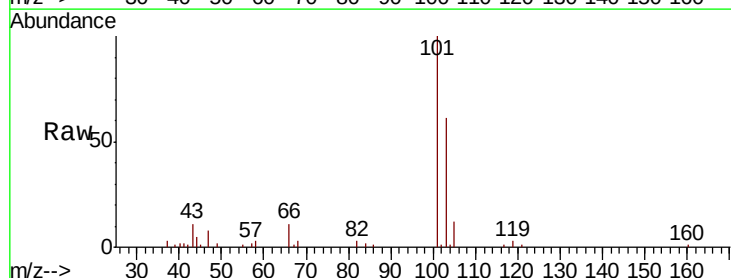
Acq: 5 Nov 2020 1:20

Tgt Ion: 101 Resp: 48959

Ion Ratio Lower Upper

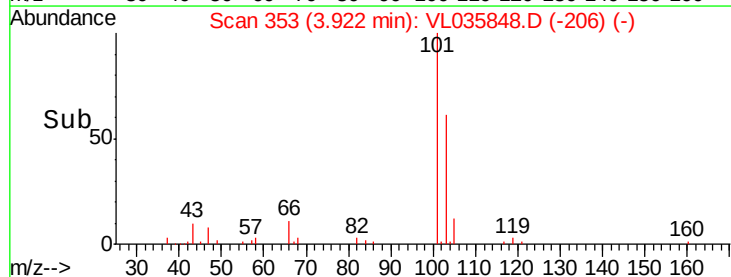
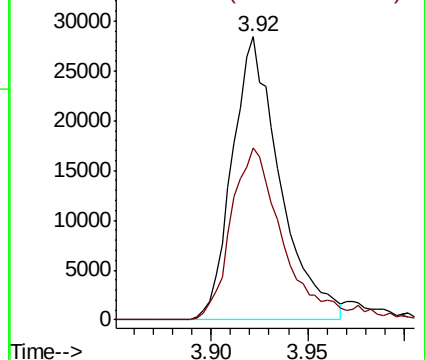
101 100

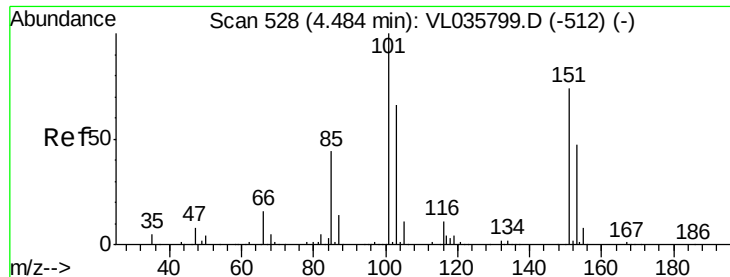
103 60.6 53.0 79.4



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: 0.071 ppbv

RT: 4.46 min Scan# 519

Delta R.T. -0.03 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :

MSVOA_L

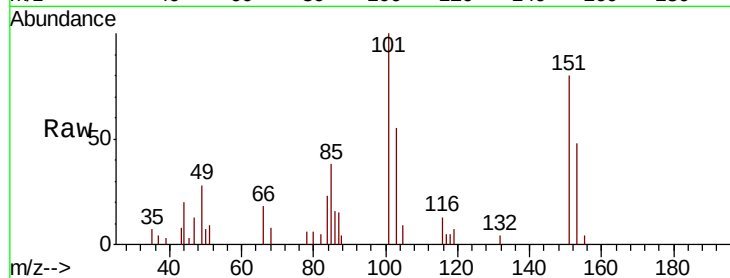
ClientSampleId :

Tot Ion:101 Resp: 9970

Ion Ratio Lower Upper

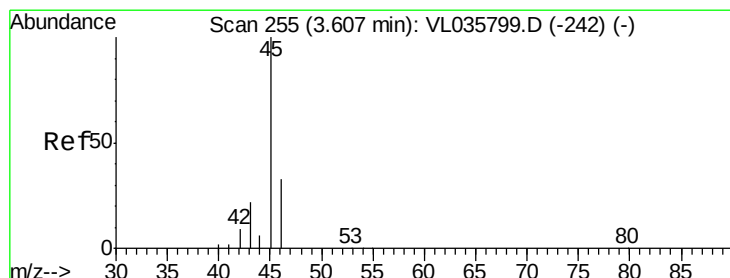
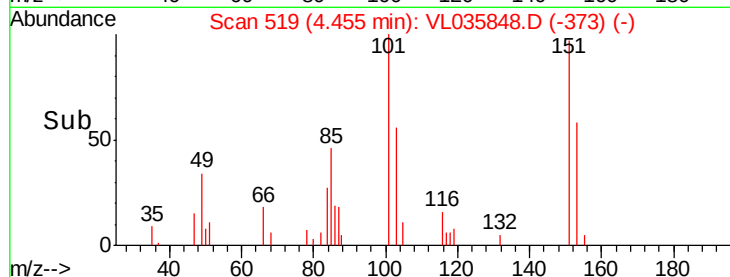
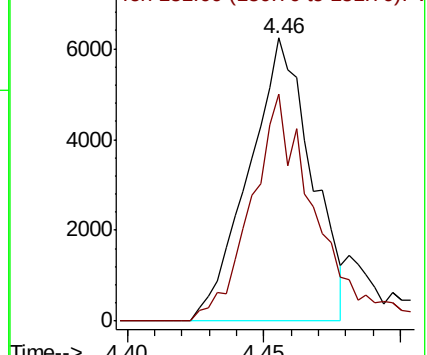
101 100

151 82.7 58.9 88.3



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 12.506 ppbv

RT: 3.58 min Scan# 247

Delta R.T. -0.03 min

Lab File: VL035848.D

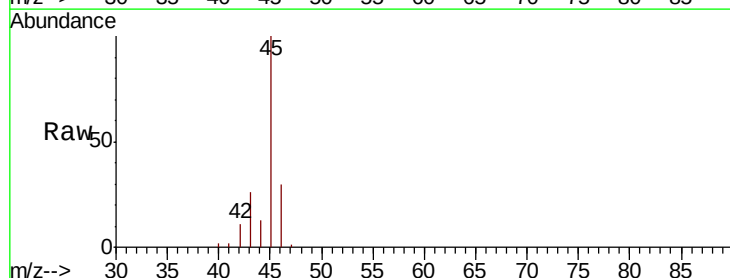
Acq: 5 Nov 2020 1:20

Tgt Ion: 45 Resp: 94231

Ion Ratio Lower Upper

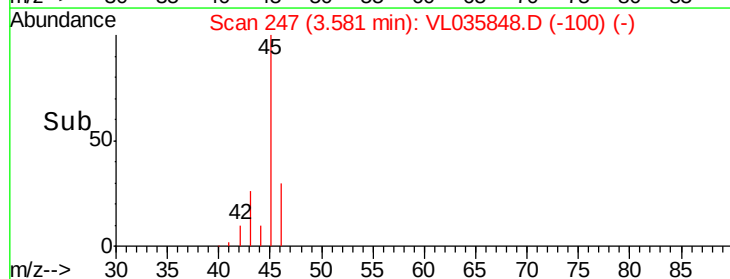
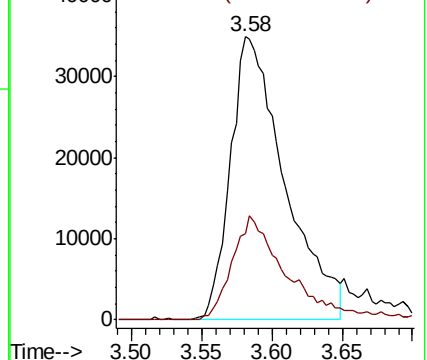
45 100

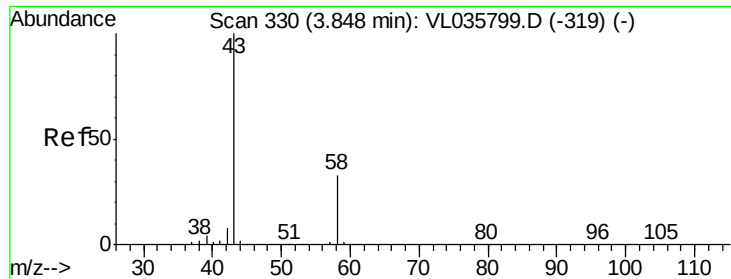
46 38.1 16.1 64.5



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 3.195 ppbv

RT: 3.83 min Scan# 323

Delta R.T. -0.02 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :

MSVOA_L

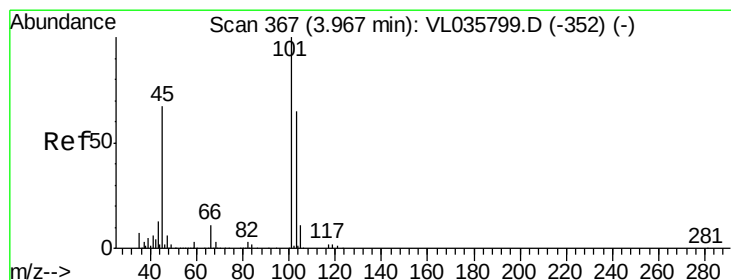
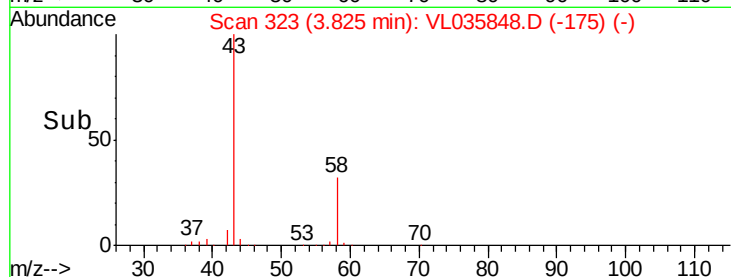
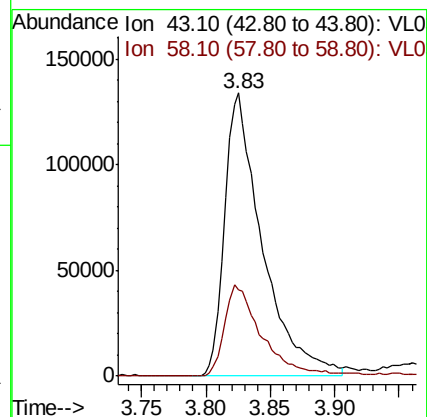
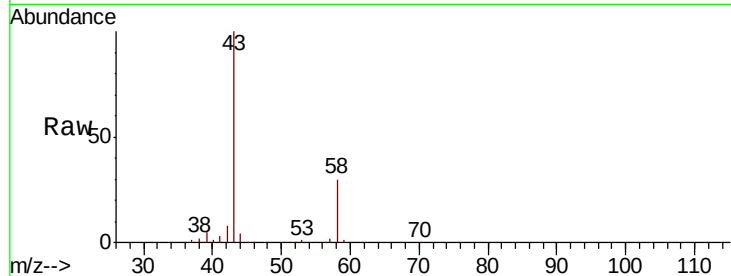
ClientSampleId :

Tot Ion: 43 Resp: 270648

Ion Ratio Lower Upper

43 100

58 32.3 27.5 41.3



#19

Isopropyl Alcohol

Concen: 0.270 ppbv

RT: 3.95 min Scan# 363

Delta R.T. -0.01 min

Lab File: VL035848.D

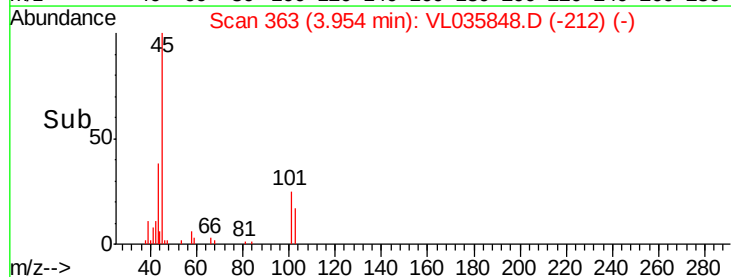
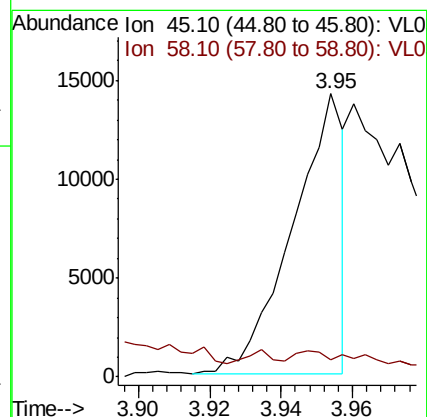
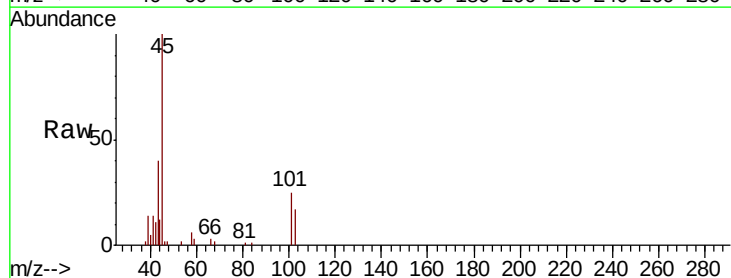
Acq: 5 Nov 2020 1:20

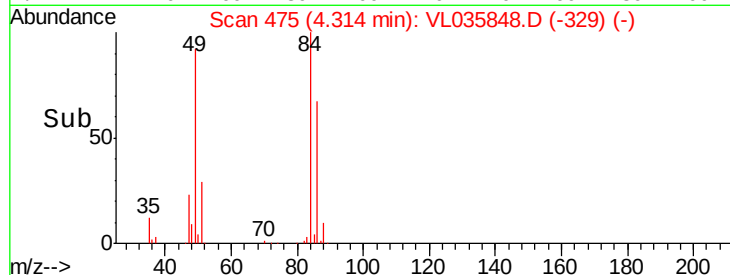
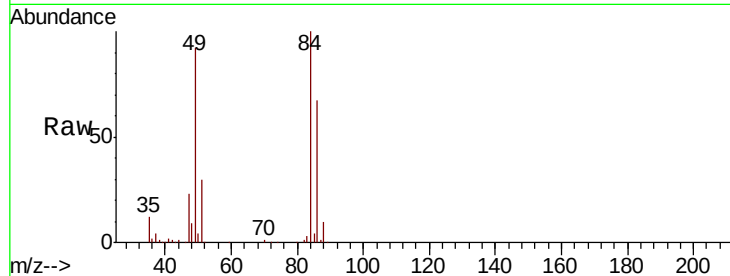
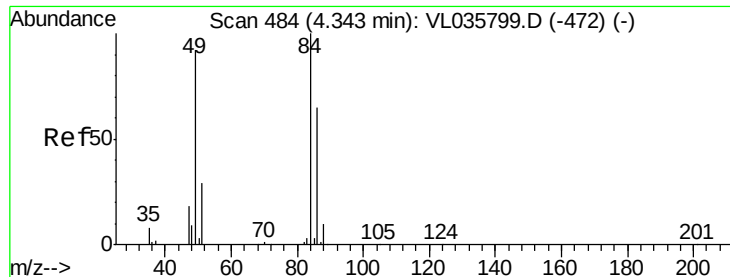
Tgt Ion: 45 Resp: 14070

Ion Ratio Lower Upper

45 100

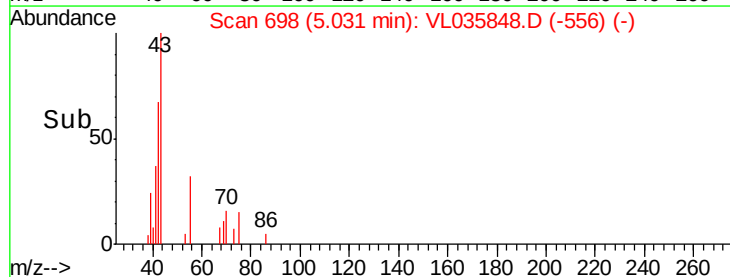
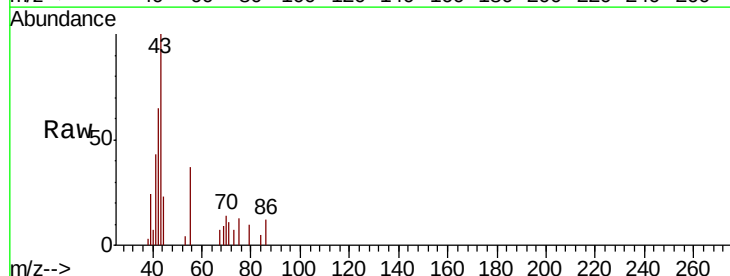
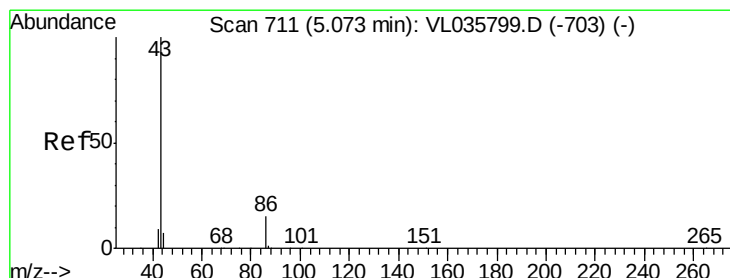
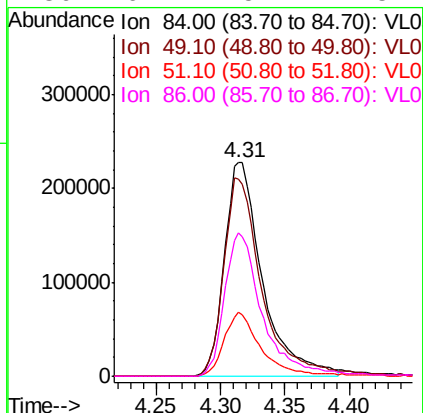
58 0.0 2.6 3.8#





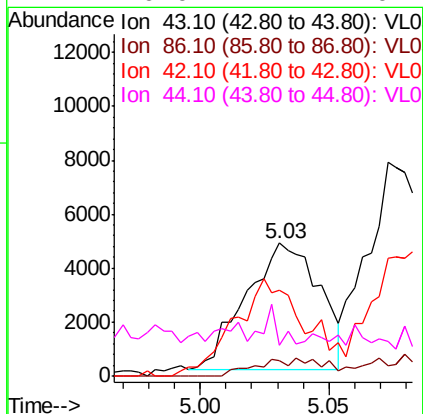
#20
Methylene Chloride
Concen: 7.820 ppbv
RT: 4.31 min Scan# 475
Delta R.T. -0.03 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

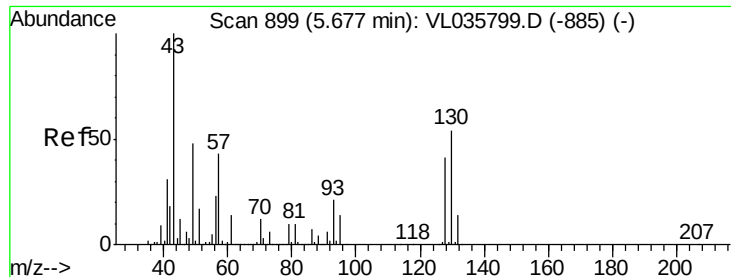
Tot Ion:	84	Resp:	466384
Ion	Ratio	Lower	Upper
84	100		
49	92.2	73.8	110.8
51	29.7	23.0	34.4
86	67.2	52.1	78.1



#23
Vinyl Acetate
Concen: 0.078 ppbv
RT: 5.03 min Scan# 698
Delta R.T. -0.04 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

Tgt Ion:	43	Resp:	9283
Ion	Ratio	Lower	Upper
43	100		
86	12.2	9.8	14.6
42	61.6	8.1	12.1#
44	0.0	4.2	6.4#

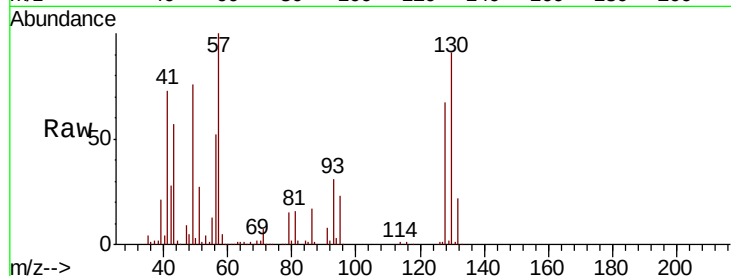




#25
Ethyl Acetate
Concen: 1.186 ppbv
RT: 5.65 min Scan# 892
Delta R.T. -0.02 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	43	Resp:	197876
Ion	Ratio	Lower	Upper
43	100		
45	0.8	8.5	12.7#
61	0.6	10.7	16.1#
70	2.5	8.6	12.8#



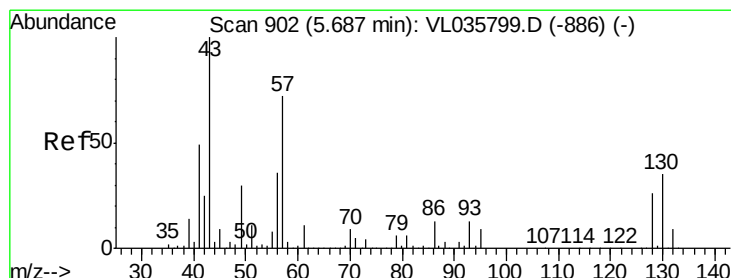
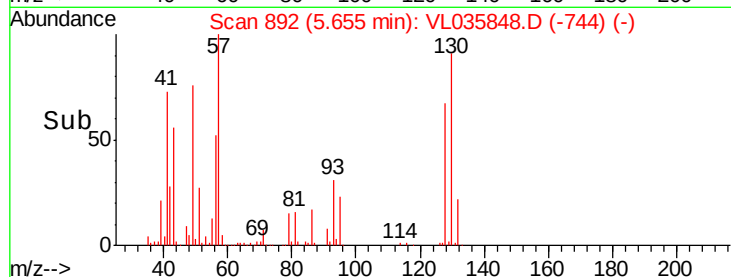
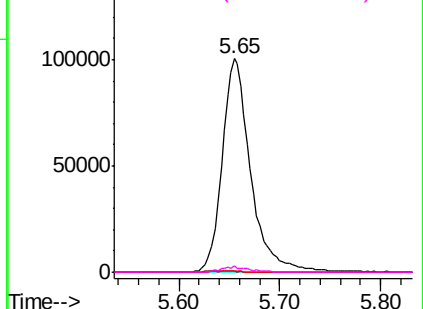
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

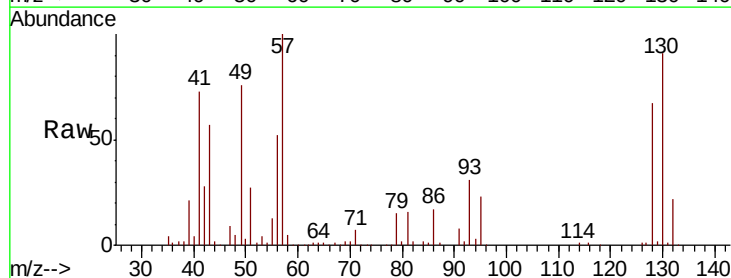
Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26
Hexane
Concen: 3.734 ppbv
RT: 5.65 min Scan# 892
Delta R.T. -0.03 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

Tgt Ion:	57	Resp:	343684
Ion	Ratio	Lower	Upper
57	100		
41	74.1	58.9	88.3
43	57.9	150.2	225.2#
56	55.7	42.4	63.6



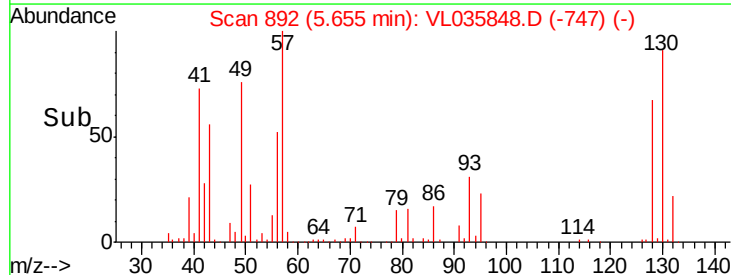
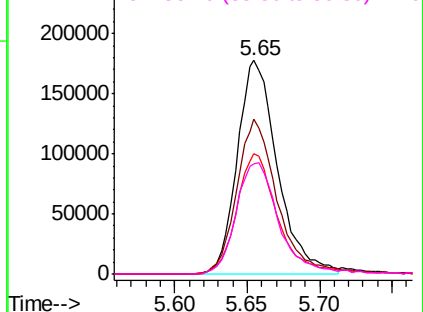
Abundance

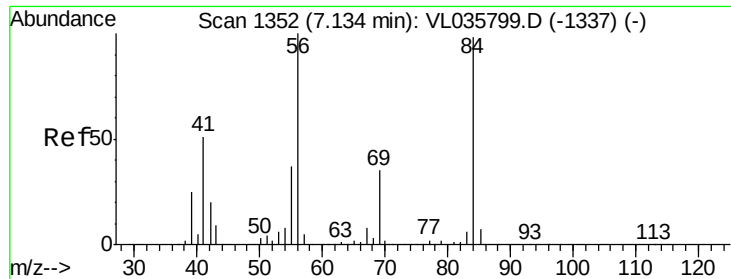
Ion 57.10 (56.80 to 57.80): VL0

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

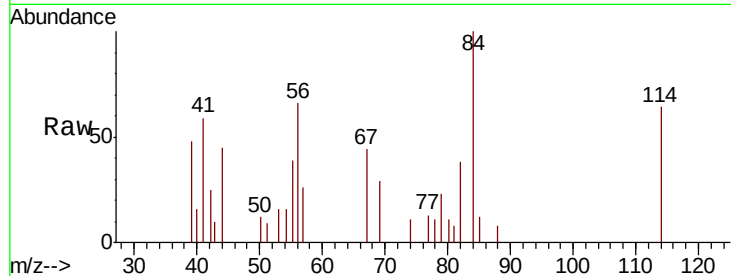




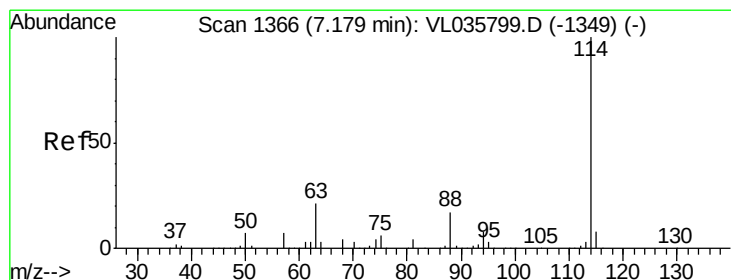
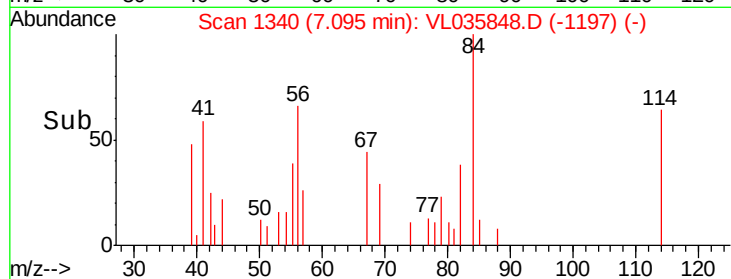
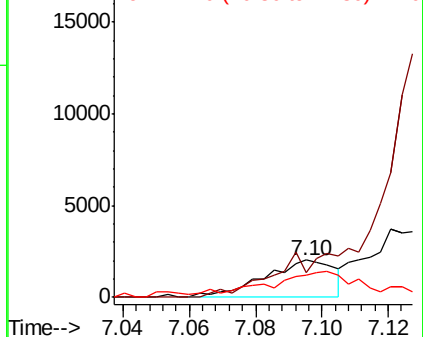
#30
Cyclohexane
Concen: 0.030 ppbv
RT: 7.10 min Scan# 1340
Delta R.T. -0.04 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 84 Resp: 3014
Ion Ratio Lower Upper
84 100
56 0.0 86.4 129.6#
41 110.9 42.1 63.1#

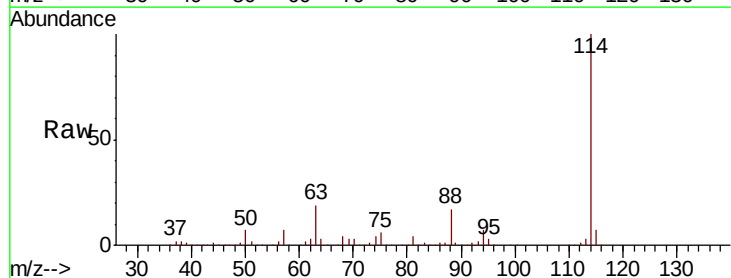


Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

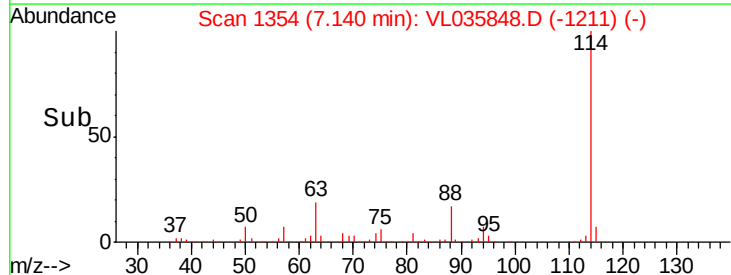
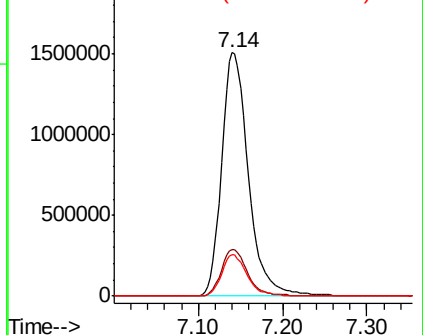


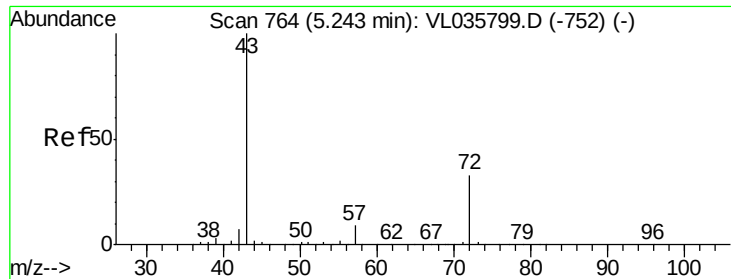
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.14 min Scan# 1354
Delta R.T. -0.04 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

Tgt Ion: 114 Resp: 3323756
Ion Ratio Lower Upper
114 100
63 18.9 16.1 24.1
88 16.6 13.7 20.5



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

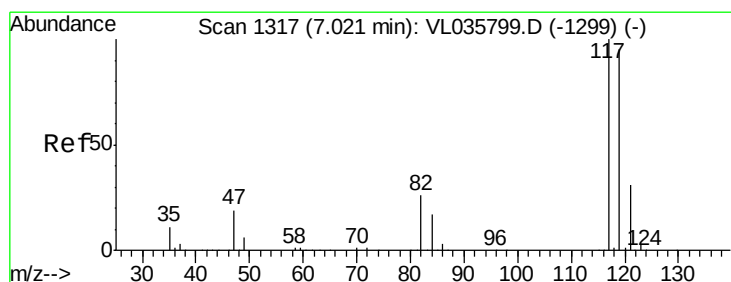
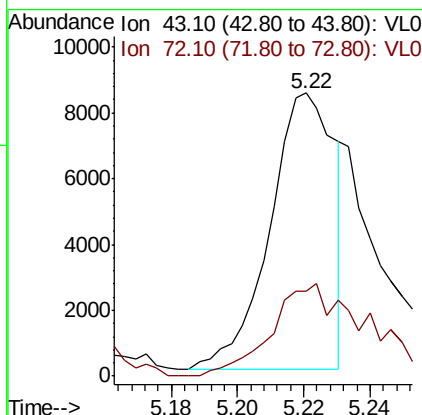
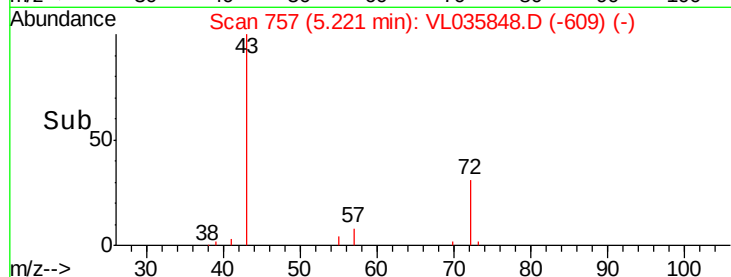
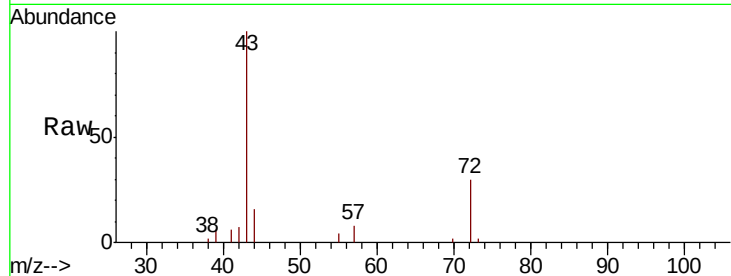




#34
2-Butanone
Concen: 0.106 ppbv
RT: 5.22 min Scan# 757
Delta R.T. -0.02 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

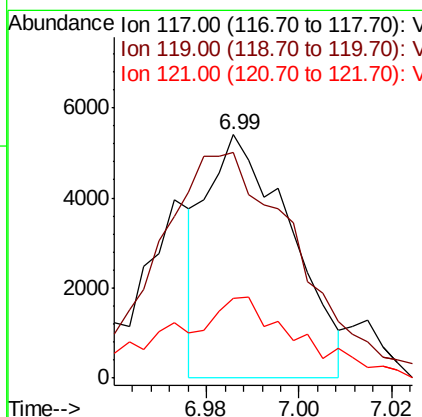
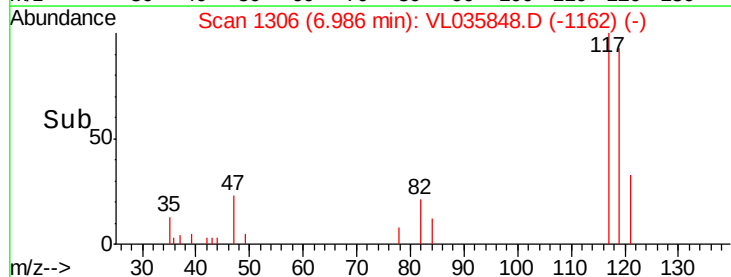
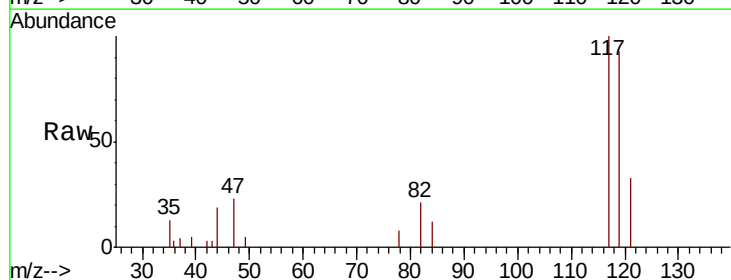
Instrument :
MSVOA_L
ClientSampleId :

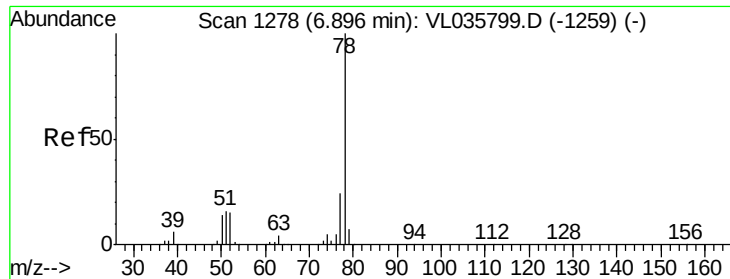
Tot Ion: 43 Resp: 11409
Ion Ratio Lower Upper
43 100
72 51.8 26.5 39.7#



#35
Carbon Tetrachloride
Concen: 0.038 ppbv
RT: 6.99 min Scan# 1306
Delta R.T. -0.04 min
Lab File: VL035848.D
Acq: 5 Nov 2020 1:20

Tgt Ion: 117 Resp: 6797
Ion Ratio Lower Upper
117 100
119 86.4 75.6 113.4
121 25.5 25.1 37.7





#36

Benzene

Concen: 0.185 ppbv

RT: 6.86 min Scan# 1267

Delta R.T. -0.04 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :

MSVOA_L

ClientSampled :

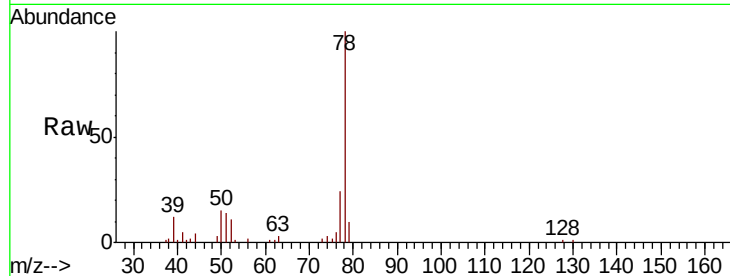
Tot Ion: 78 Resp: 45596

Ion Ratio Lower Upper

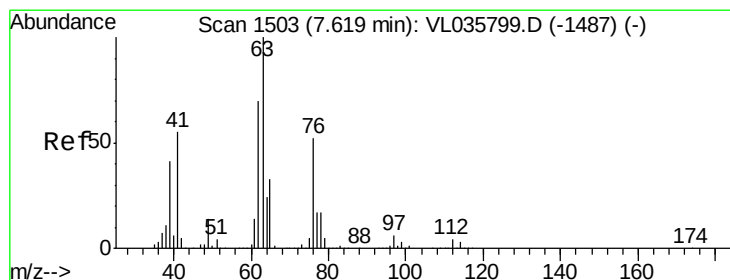
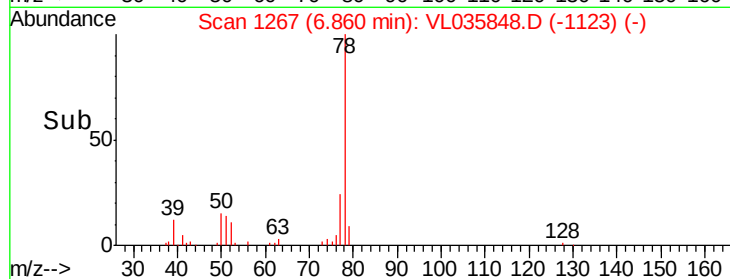
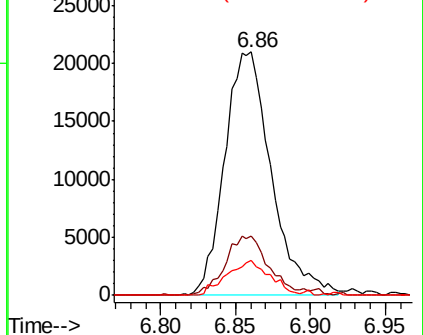
78 100

77 24.2 19.3 28.9

50 14.5 11.4 17.2



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 7.494 ppbv

RT: 7.14 min Scan# 1354

Delta R.T. -0.48 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

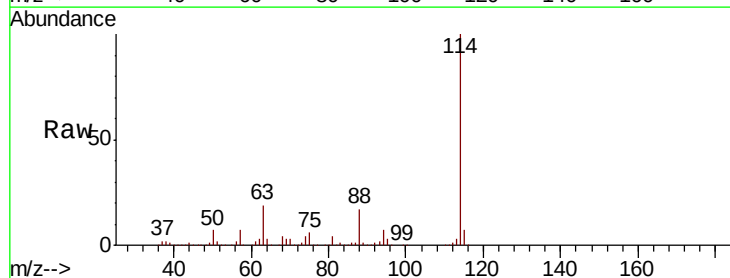
Tgt Ion: 63 Resp: 623410

Ion Ratio Lower Upper

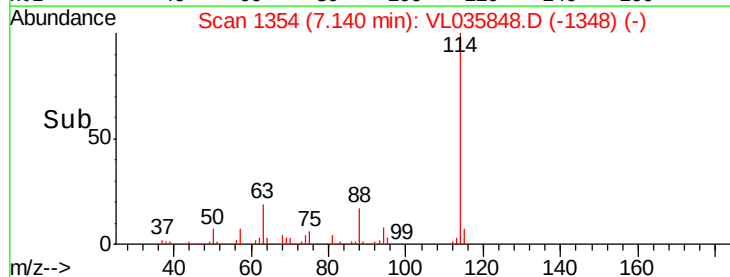
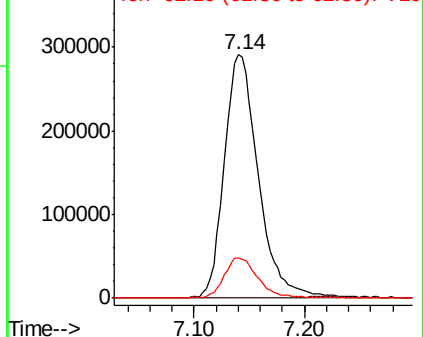
63 100

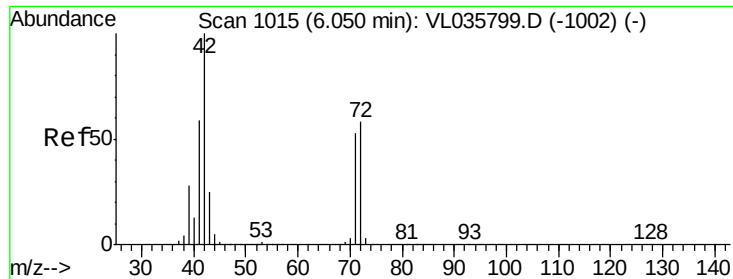
41 0.0 43.8 65.6#

62 16.5 56.2 84.2#



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





#41

Tetrahydrofuran

Concen: 1.673 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.40 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :

MSVOA_L

ClientSampleId :

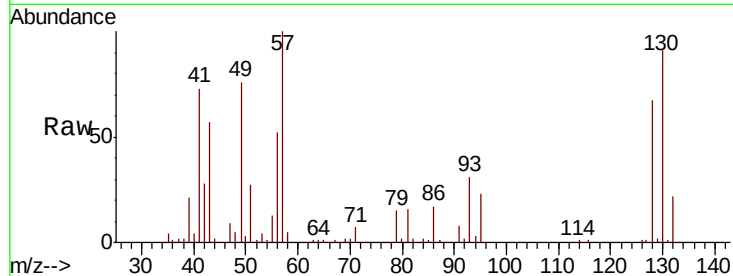
Tot Ion: 42 Resp: 102507

Ion Ratio Lower Upper

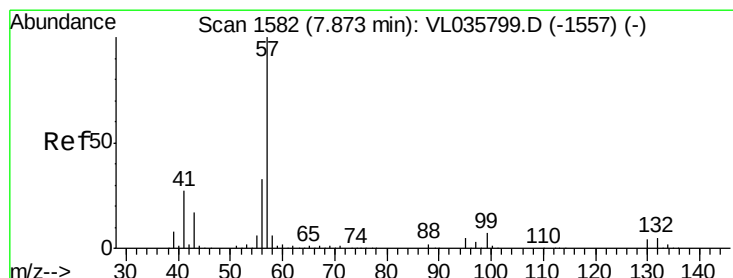
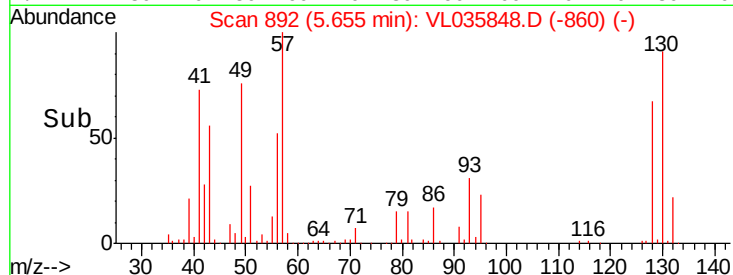
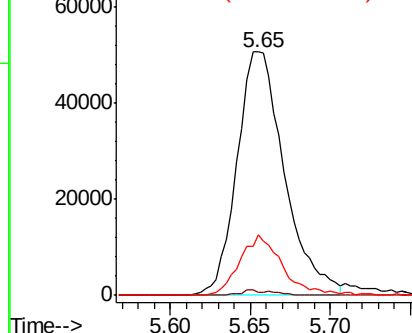
42 100

72 1.5 45.4 68.0#

71 22.4 43.4 65.2#



Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.043 ppbv

RT: 7.83 min Scan# 1570

Delta R.T. -0.04 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

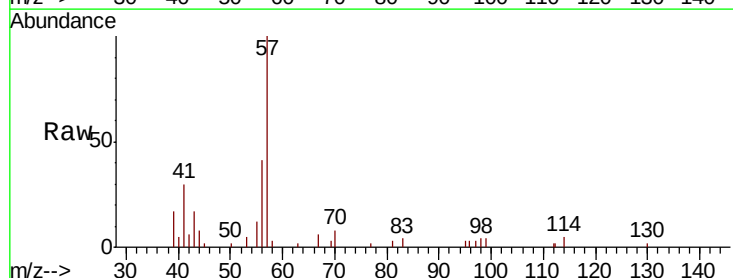
Tgt Ion: 57 Resp: 14148

Ion Ratio Lower Upper

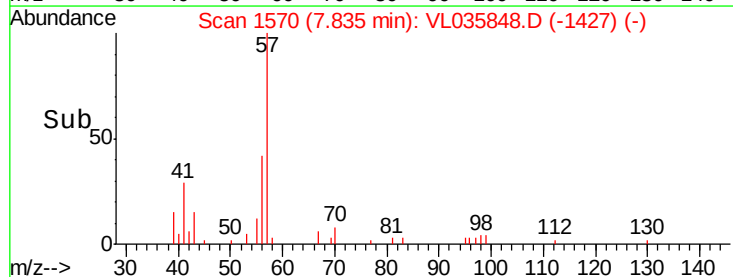
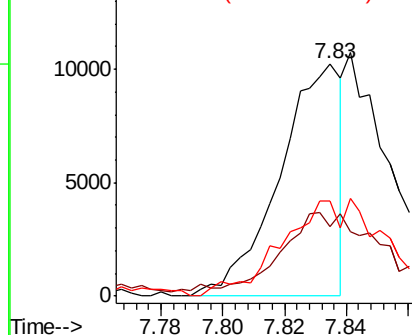
57 100

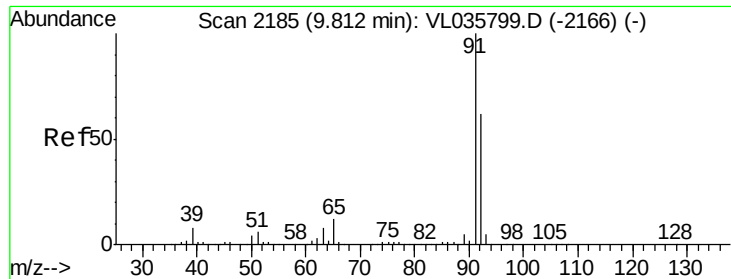
41 67.9 21.0 31.4#

56 0.0 25.4 38.0#



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





#53

Toluene

Concen: 0.492 ppbv

RT: 9.77 min Scan# 2173

Delta R.T. -0.04 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Instrument :

MSVOA_L

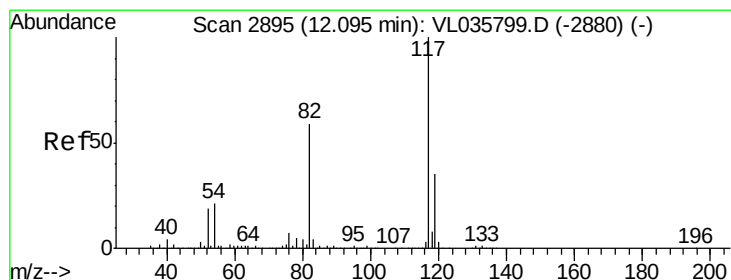
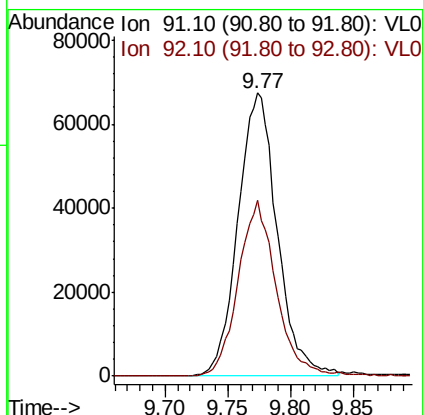
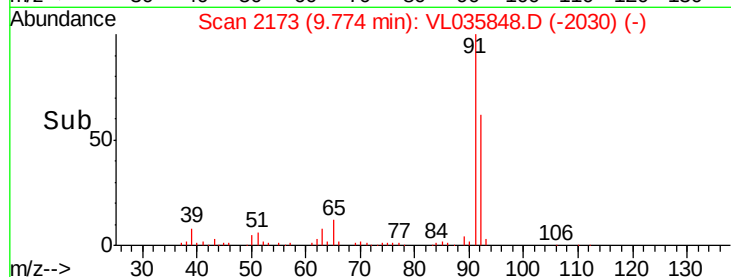
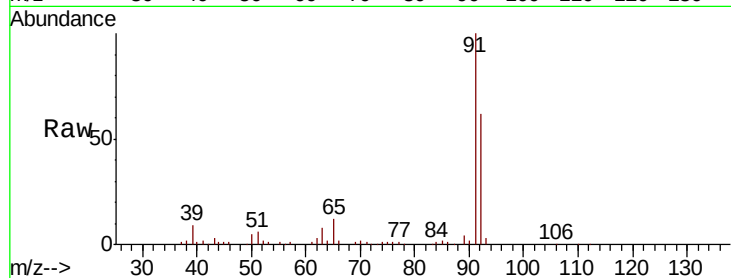
ClientSampleId :

Tot Ion: 91 Resp: 146561

Ion Ratio Lower Upper

91 100

92 60.2 49.8 74.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.05 min Scan# 2882

Delta R.T. -0.04 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

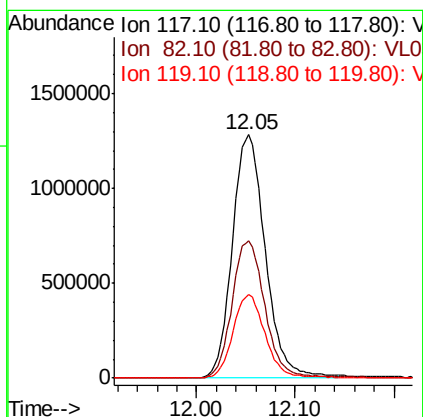
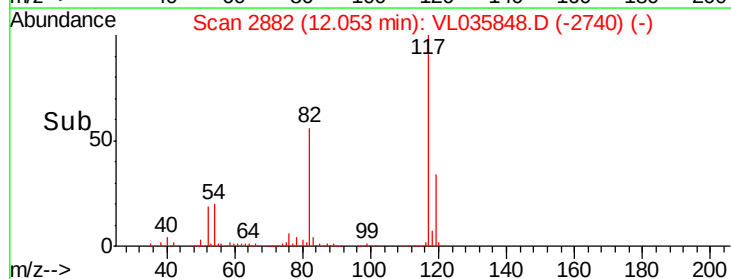
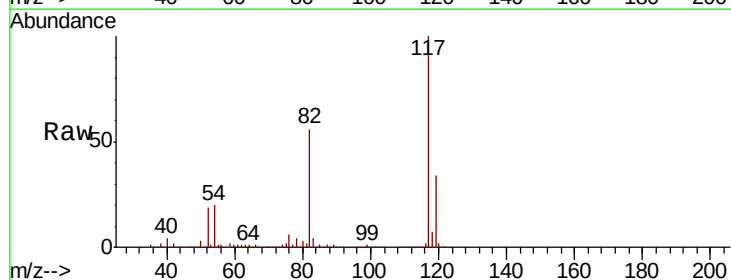
Tgt Ion: 117 Resp: 2993303

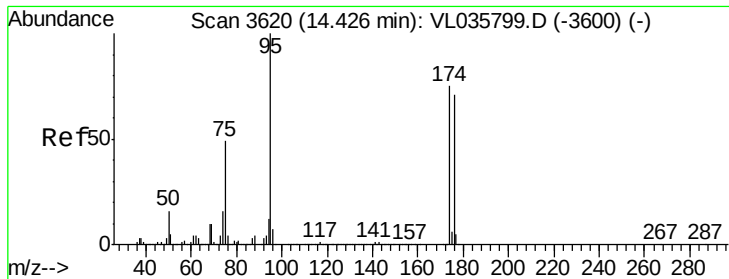
Ion Ratio Lower Upper

117 100

82 57.1 50.6 76.0

119 34.1 52.6 78.8#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.913 ppbv

RT: 14.38 min Scan# 3607

Delta R.T. -0.04 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

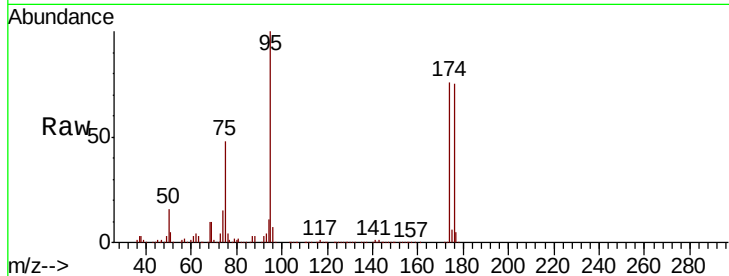
Instrument :

MSVOA_L

ClientSampled :

Tot Ion: 95 Resp: 2108111

Ion	Ratio	Lower	Upper
95	100		
174	79.5	59.8	89.6
175	5.7	4.3	6.5

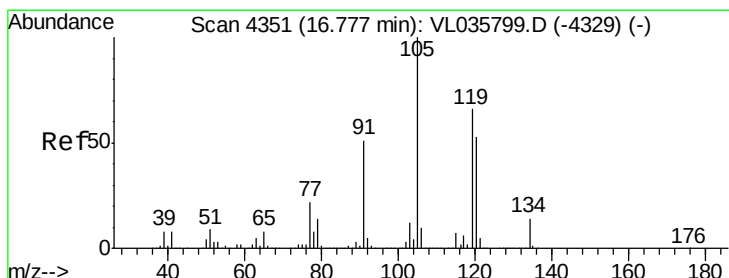
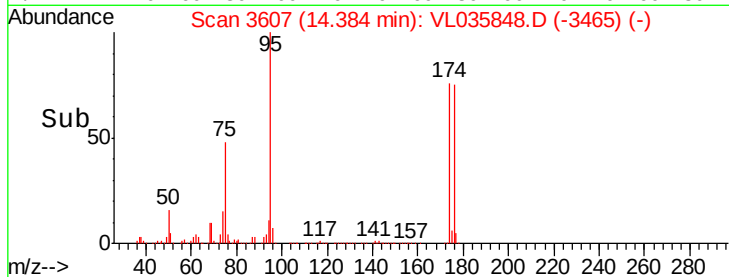


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

Time-->



#74

1,2,4-Trimethylbenzene

Concen: 0.031 ppbv

RT: 16.73 min Scan# 4336

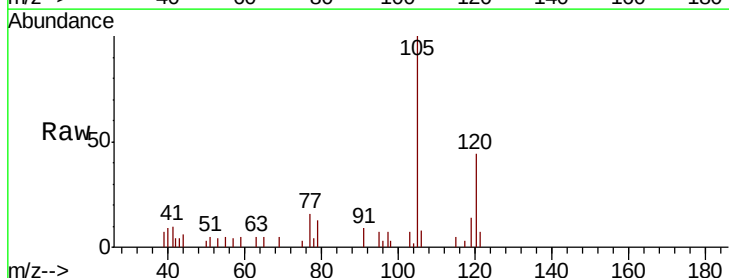
Delta R.T. -0.05 min

Lab File: VL035848.D

Acq: 5 Nov 2020 1:20

Tgt Ion: 105 Resp: 11139

Ion	Ratio	Lower	Upper
105	100		
120	41.9	42.0	63.0#
91	5.1	41.0	61.6#
77	12.6	17.3	25.9#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Time-->

