

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121621\
 Data File : VL038190.D
 Acq On : 16 Dec 2021 15:23
 Operator : SY/AP
 Sample : M5117-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 17 05:08:31 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Nov 18 13:16:09 2021
 QLast Update : Thu Nov 18 13:16:09 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	960539	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2537709	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	2151050	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	1714728	11.05	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	110.50%

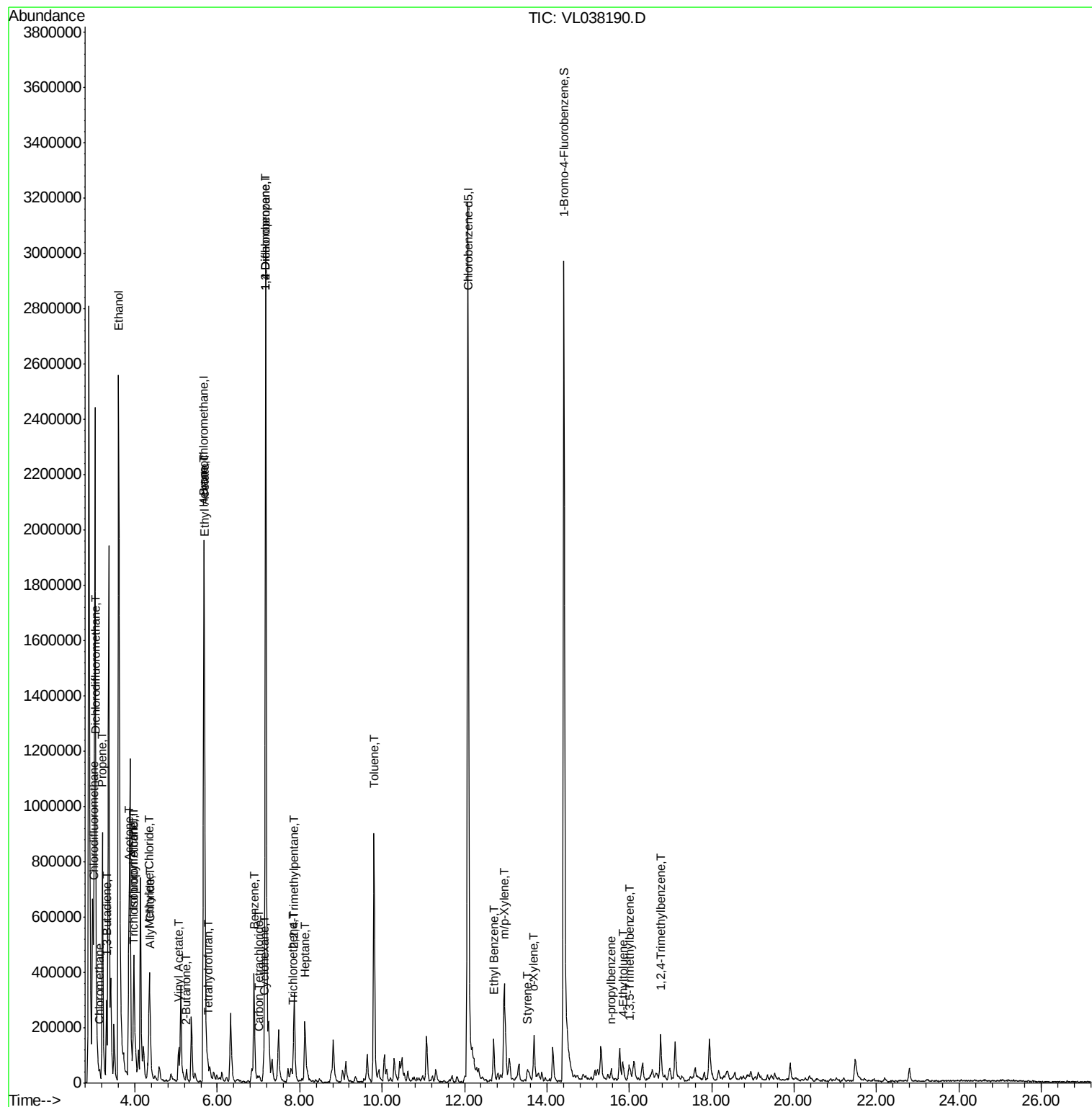
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	34818	0.219	ppbv	96
3) Chlorodifluoromethane	3.00	51	951136	4.715	ppbv #	80
4) Chloromethane	3.15	50	31879	0.464	ppbv	89
9) Propene	3.21	41	310394	4.178	ppbv	99
10) Heptane	8.12	43	76634	0.417	ppbv	97
11) Trichlorofluoromethane	3.95	101	29505	0.196	ppbv	96
13) Ethanol	3.60	45	3691768	514.236	ppbv	89
15) Acetone	3.85	43	529945	6.363	ppbv #	79
16) 1,3-Butadiene	3.31	39	80828	1.244	ppbv #	47
19) Isopropyl Alcohol	3.97	45	564682	9.384	ppbv #	96
20) Methylene Chloride	4.35	84	161512	3.462	ppbv	91
21) Allyl Chloride	4.37	41	19371	0.251	ppbv #	1
23) Vinyl Acetate	5.06	43	48001	0.398	ppbv #	1
25) Ethyl Acetate	5.69	43	367383	1.327	ppbv #	84
26) Hexane	5.69	57	366883	2.750	ppbv #	52
30) Cyclohexane	7.13	84	37652	0.311	ppbv	86
34) 2-Butanone	5.25	43	50196	0.491	ppbv	95
35) Carbon Tetrachloride	7.01	117	8806	0.049	ppbv #	63
36) Benzene	6.89	78	346137	1.367	ppbv	98
38) Trichloroethene	7.83	130	3367	0.035	ppbv #	74
39) 1,2-Dichloropropane	7.18	63	655154	6.747	ppbv #	25
41) Tetrahydrofuran	5.77	42	4668	0.073	ppbv #	37
44) 2,2,4-Trimethylpentane	7.86	57	279073	0.659	ppbv #	87
53) Toluene	9.80	91	670307	2.301	ppbv	97
58) Ethyl Benzene	12.71	91	140726	0.396	ppbv	97
59) m/p-Xylene	12.96	91	369141	1.233	ppbv	98
60) o-Xylene	13.69	91	134588	0.485	ppbv	92
61) Styrene	13.52	104	11787	0.079	ppbv #	40
64) n-propylbenzene	15.55	120	3208	0.032	ppbv #	1
72) 4-Ethyltoluene	15.84	105	38985	0.121	ppbv #	88
73) 1,3,5-Trimethylbenzene	15.99	105	12198	0.041	ppbv	96
74) 1,2,4-Trimethylbenzene	16.76	105	65312	0.216	ppbv #	71

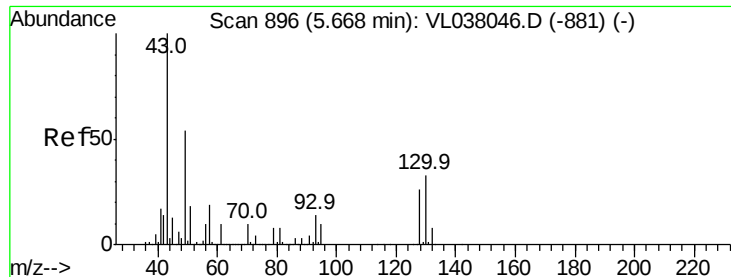
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Thu Nov 18 13:16:09 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67

Delta R.T. MSVOA_L

Lab File:

Acq: 16 Dec 2021 15:23

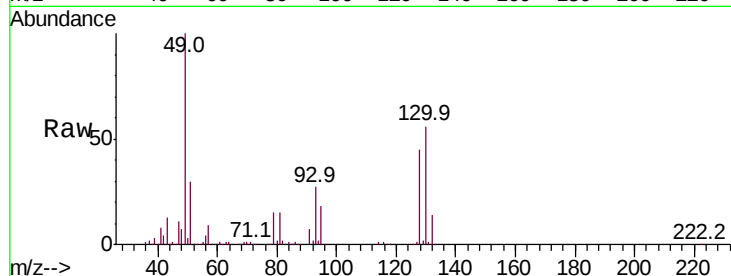
Tot Ion: 49 Resp: 960539

Ion Ratio Lower Upper

49 100

128 47.7 26.5 79.5

130 59.9 32.5 97.4



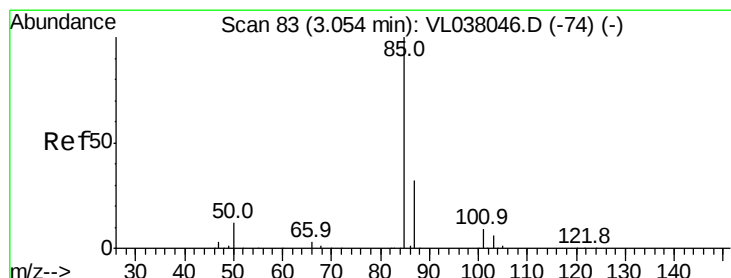
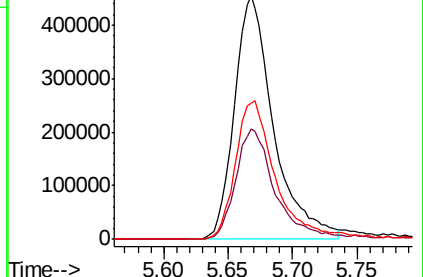
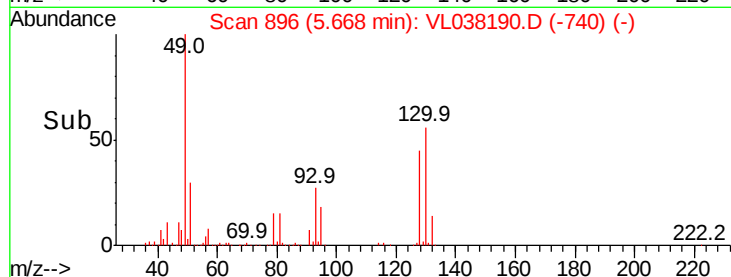
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

5.67

Time-->



#2

Dichlorodifluoromethane

Concen: 0.219 ppbv

RT: 3.05 min Scan# 83

Delta R.T. 0.00 min

Lab File: VL038190.D

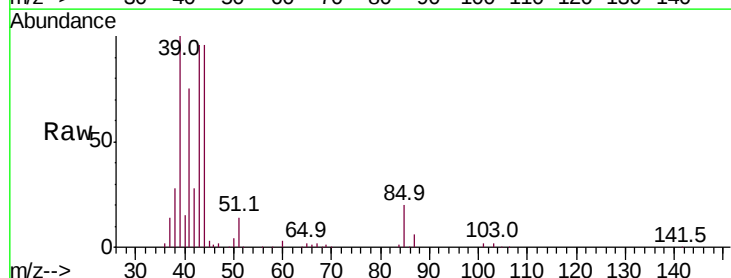
Acq: 16 Dec 2021 15:23

Tgt Ion: 85 Resp: 34818

Ion Ratio Lower Upper

85 100

87 29.7 25.8 38.6

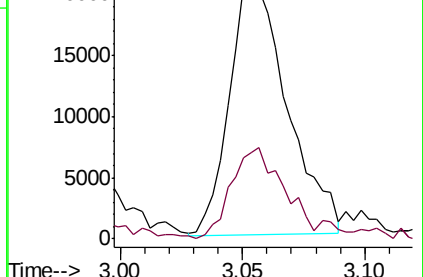
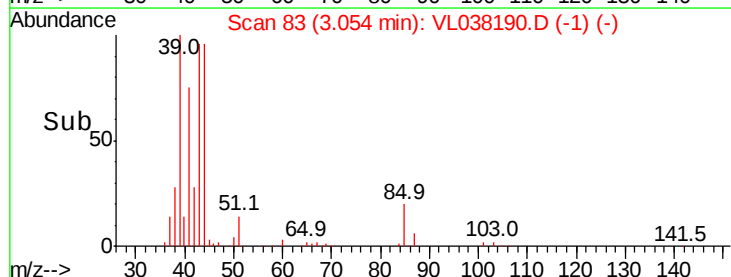


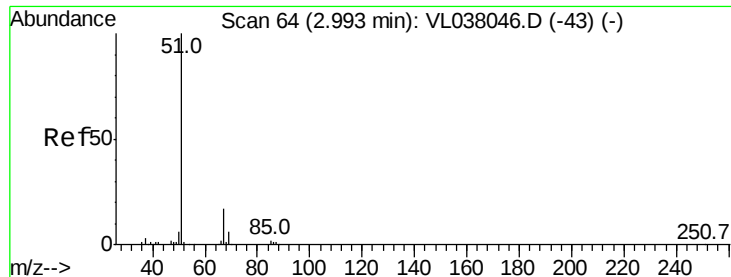
Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.05

Time-->





#3

Chlorodifluoromethane

Concen: 4.715 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

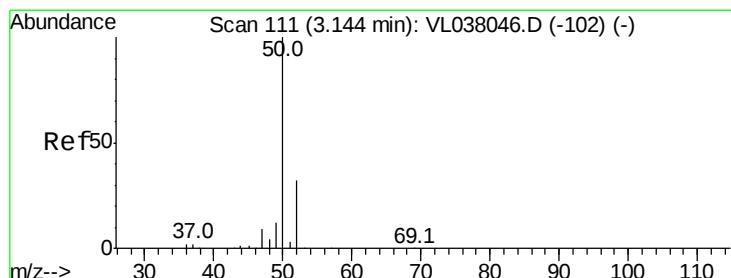
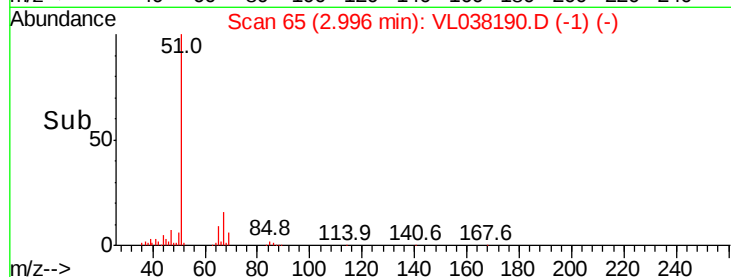
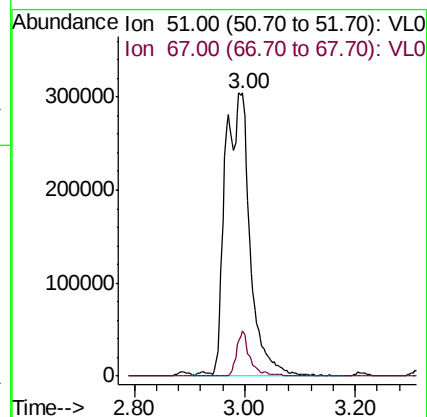
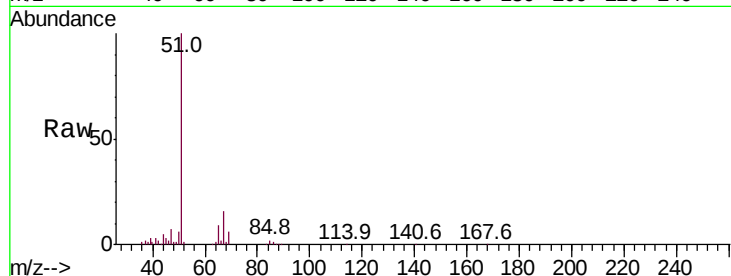
Acq: 16 Dec 2021 15:23

Tot Ion: 51 Resp: 951136

Ion Ratio Lower Upper

51 100

67 8.5 13.8 20.8#



#4

Chloromethane

Concen: 0.464 ppbv

RT: 3.15 min Scan# 112

Delta R.T. 0.00 min

Lab File: VL038190.D

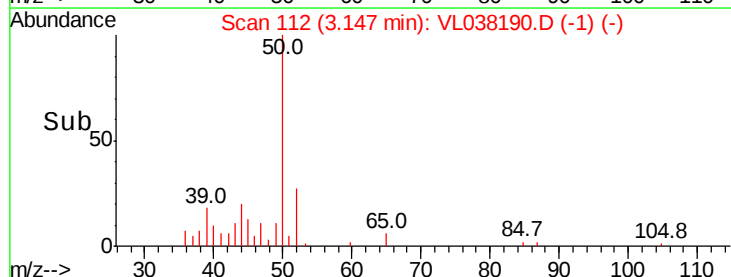
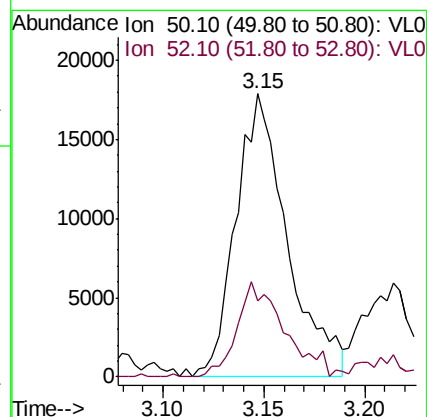
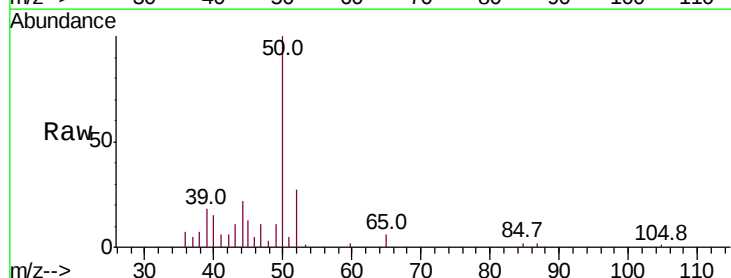
Acq: 16 Dec 2021 15:23

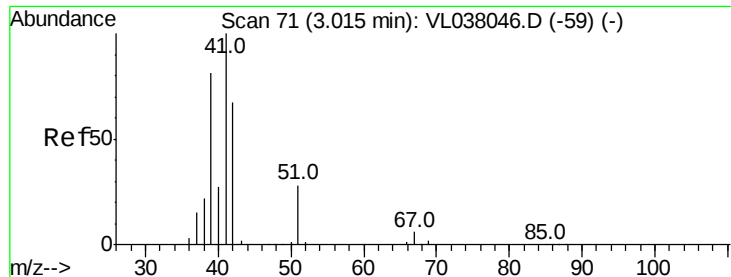
Tgt Ion: 50 Resp: 31879

Ion Ratio Lower Upper

50 100

52 25.7 25.4 38.0





#9

Propene

Concen: 4.178 ppbv

RT: 3.21 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

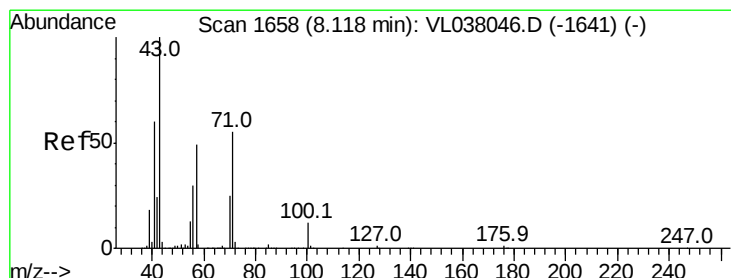
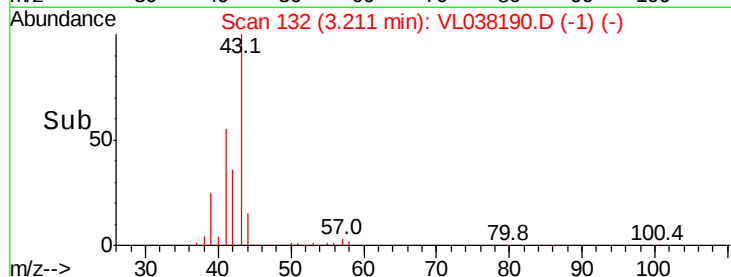
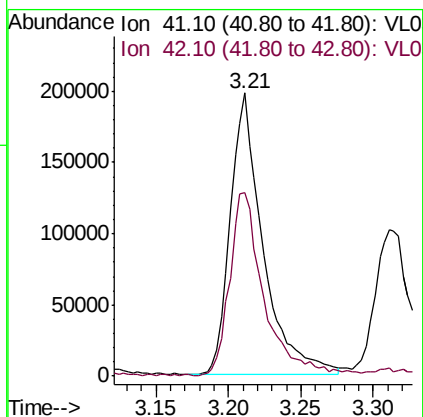
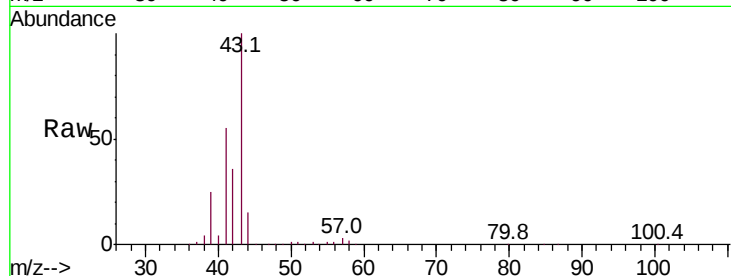
Acq: 16 Dec 2021 15:23

Tot Ion: 41 Resp: 310394

Ion Ratio Lower Upper

41 100

42 68.2 53.8 80.8



#10

Heptane

Concen: 0.417 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. 0.00 min

Lab File: VL038190.D

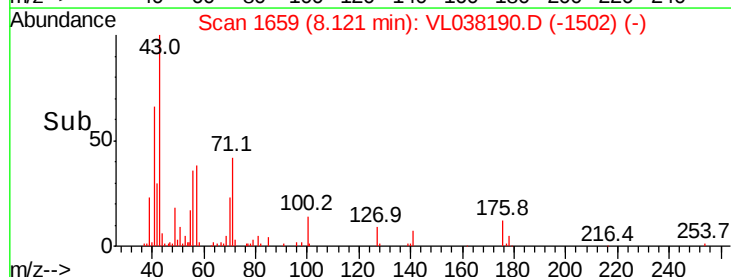
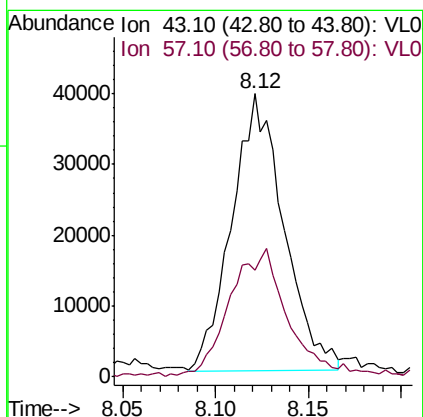
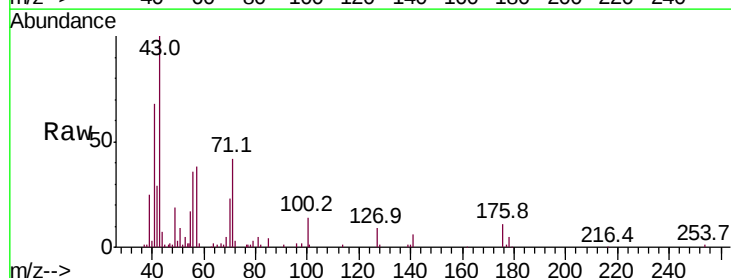
Acq: 16 Dec 2021 15:23

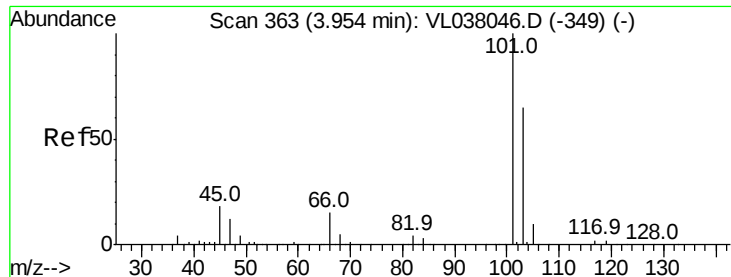
Tgt Ion: 43 Resp: 76634

Ion Ratio Lower Upper

43 100

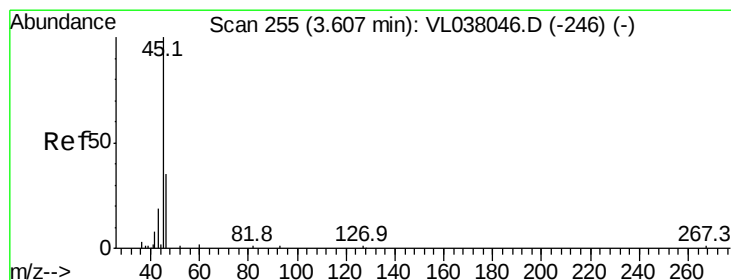
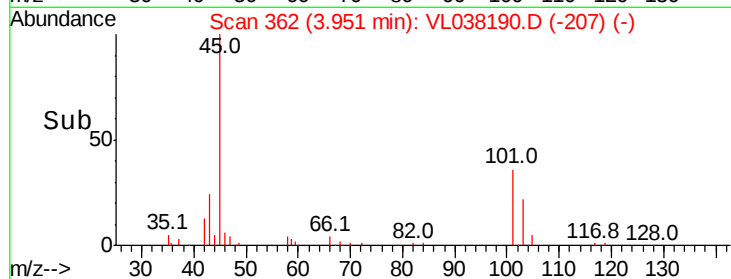
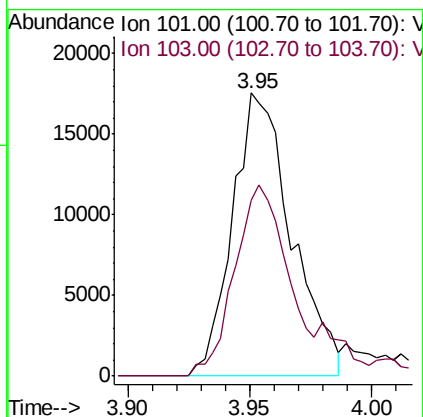
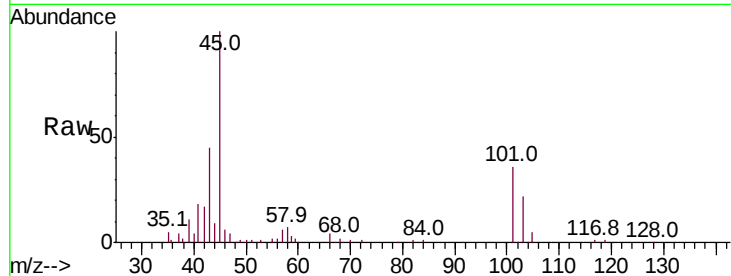
57 48.4 40.4 60.6





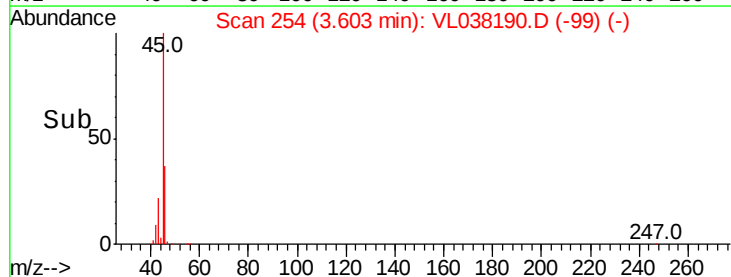
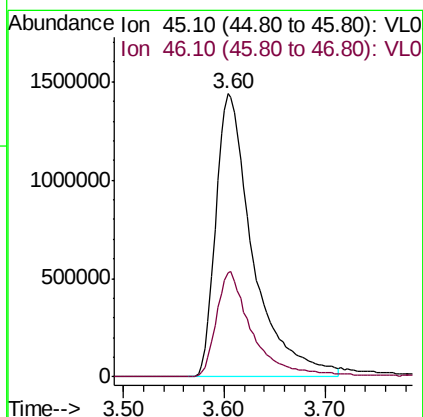
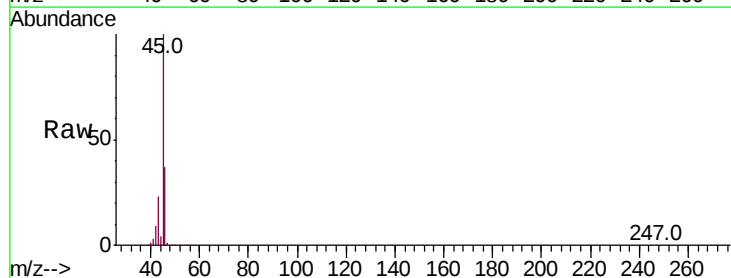
#11
 Trichlorofluoromethane
 Concen: 0.196 ppbv
 RT: 3.95 Instrument :
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Dec 2021 15:23

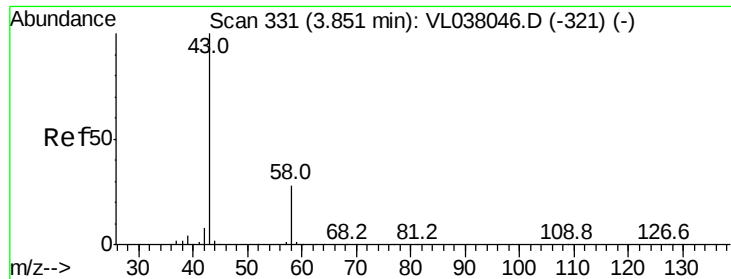
Tot Ion: 101 Resp: 29505
 Ion Ratio Lower Upper
 101 100
 103 61.9 51.8 77.6



#13
 Ethanol
 Concen: 514.236 ppbv
 RT: 3.60 min Scan# 254
 Delta R.T. -0.00 min
 Lab File: VL038190.D
 Acq: 16 Dec 2021 15:23

Tgt Ion: 45 Resp: 3691768
 Ion Ratio Lower Upper
 45 100
 46 37.0 17.6 70.2





#15

Acetone

Concen: 6.363 ppbv

RT: 3.85 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

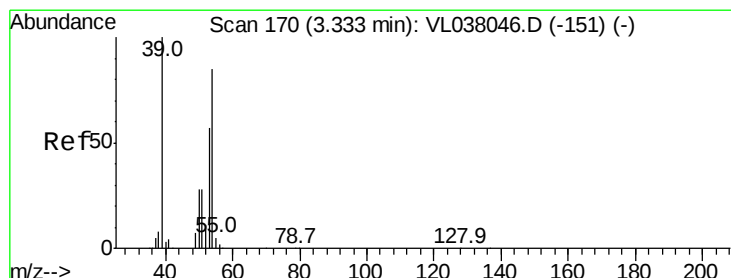
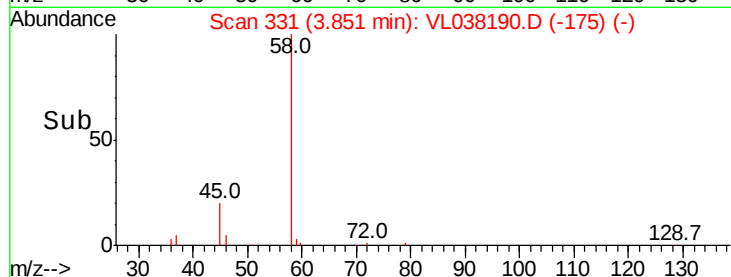
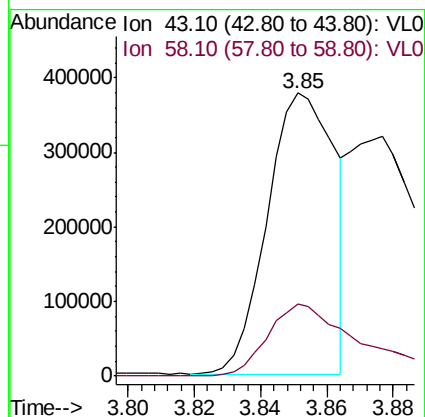
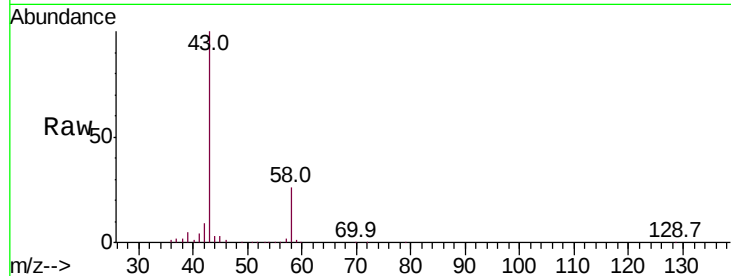
Acq: 16 Dec 2021 15:23

Tot Ion: 43 Resp: 529945

Ion Ratio Lower Upper

43 100

58 38.9 22.4 33.6#



#16

1,3-Butadiene

Concen: 1.244 ppbv

RT: 3.31 min Scan# 163

Delta R.T. -0.02 min

Lab File: VL038190.D

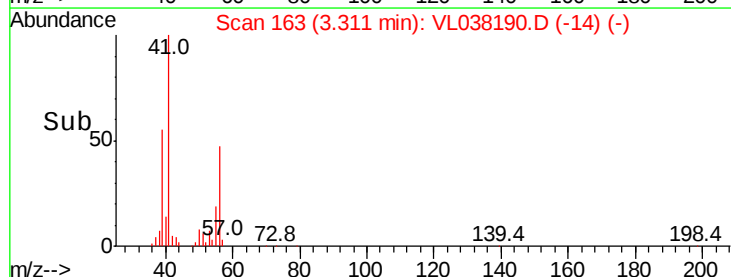
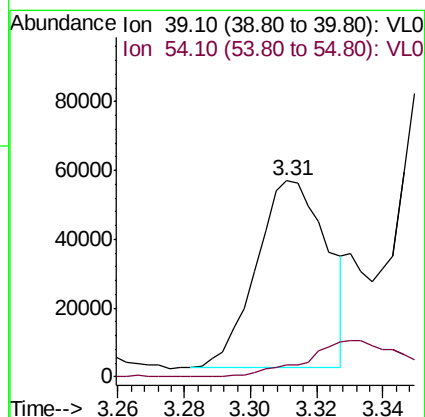
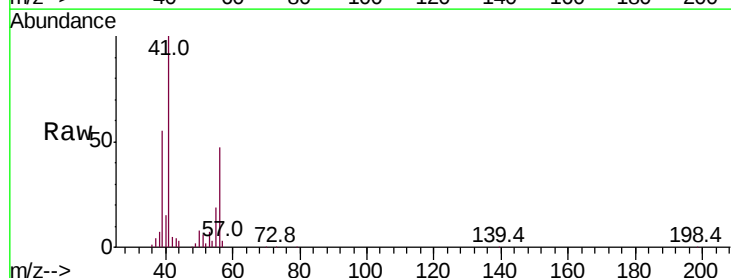
Acq: 16 Dec 2021 15:23

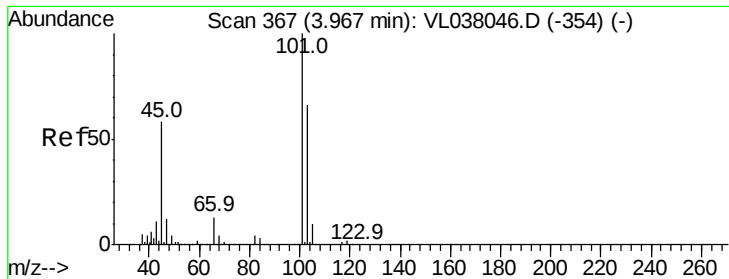
Tgt Ion: 39 Resp: 80828

Ion Ratio Lower Upper

39 100

54 33.8 64.4 96.6#





#19

Isopropyl Alcohol

Concen: 9.384 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

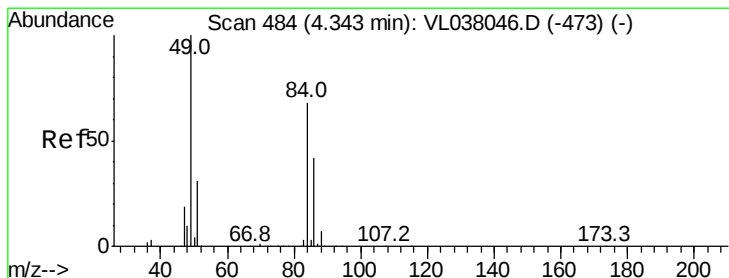
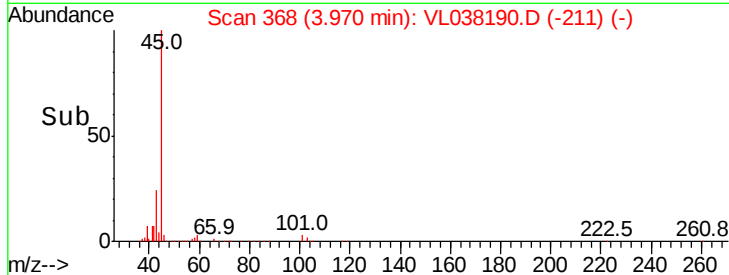
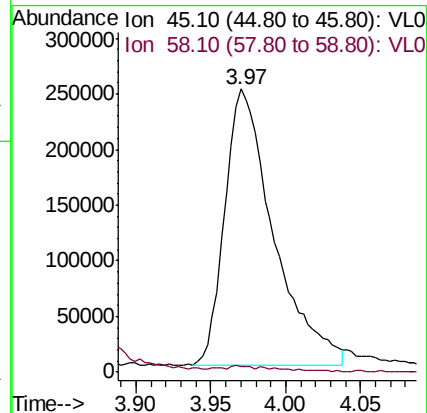
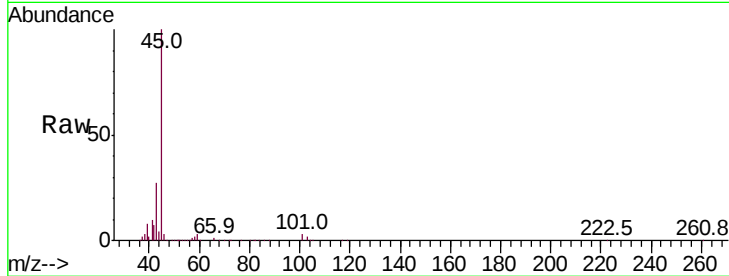
Acq: 16 Dec 2021 15:23

Tot Ion: 45 Resp: 564682

Ion Ratio Lower Upper

45 100

58 3.1 1.4 2.0#



#20

Methylene Chloride

Concen: 3.462 ppbv

RT: 4.35 min Scan# 486

Delta R.T. 0.01 min

Lab File: VL038190.D

Acq: 16 Dec 2021 15:23

Tgt Ion: 84 Resp: 161512

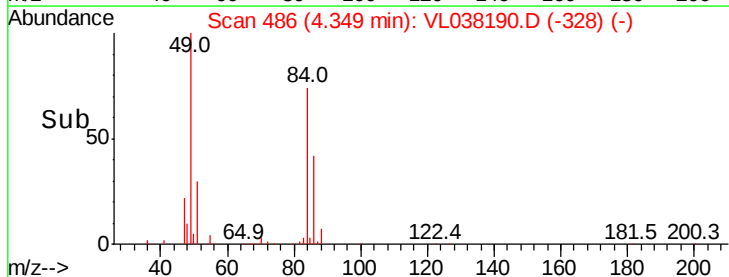
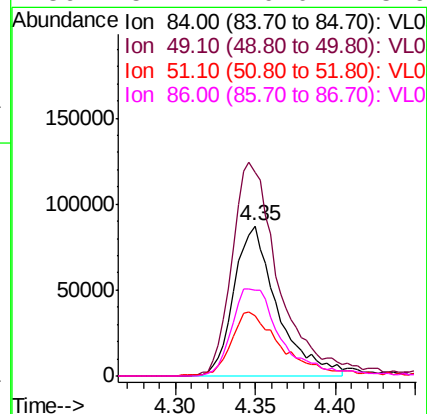
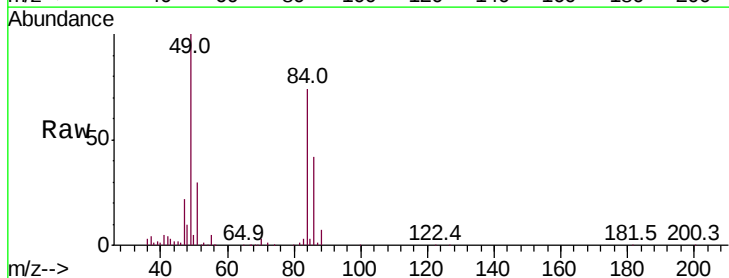
Ion Ratio Lower Upper

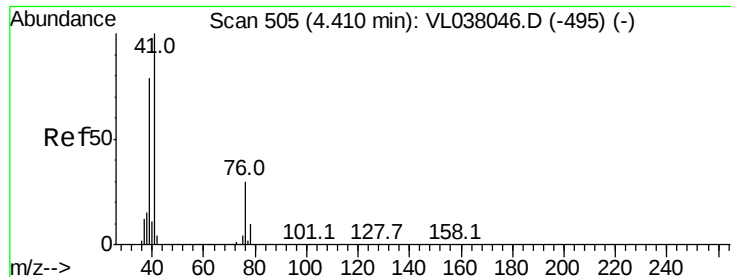
84 100

49 134.9 118.2 177.2

51 39.3 36.8 55.2

86 57.1 49.0 73.6





#21

Allvl Chloride

Concen: 0.251 ppbv

RT: 4.37 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 15:23

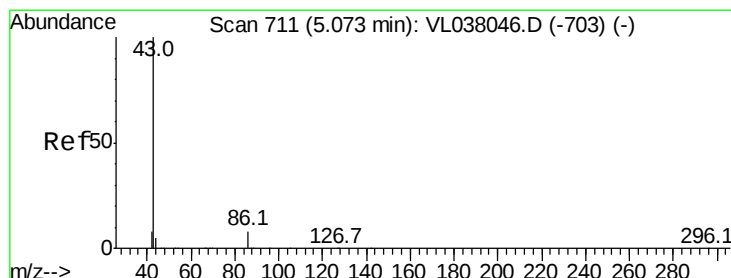
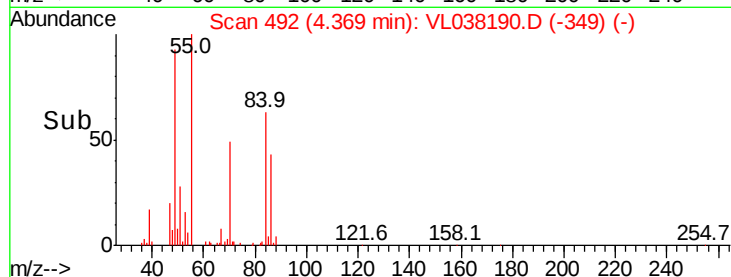
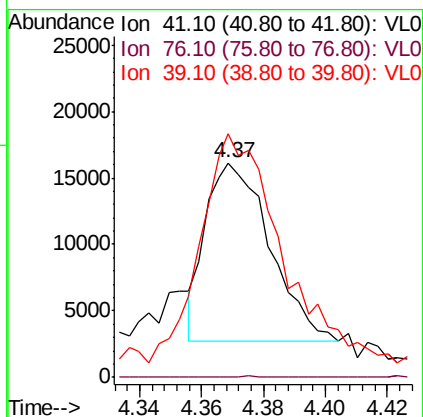
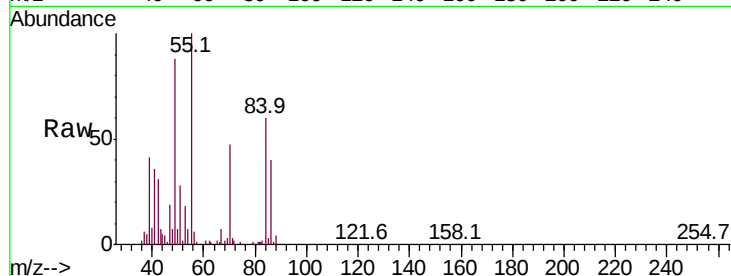
Tot Ion: 41 Resp: 19371

Ion Ratio Lower Upper

41 100

76 0.0 24.6 36.8#

39 201.6 63.4 95.0#



#23

Vinyl Acetate

Concen: 0.398 ppbv

RT: 5.06 min Scan# 708

Delta R.T. -0.01 min

Lab File: VL038190.D

Acq: 16 Dec 2021 15:23

Tgt Ion: 43 Resp: 48001

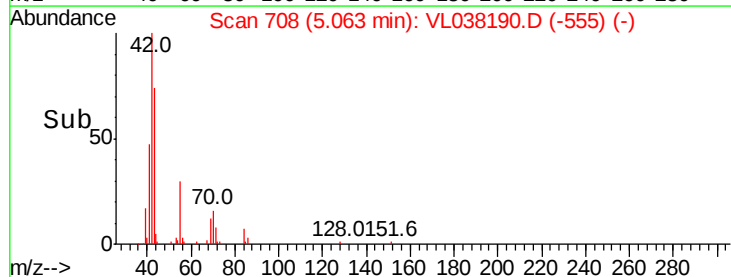
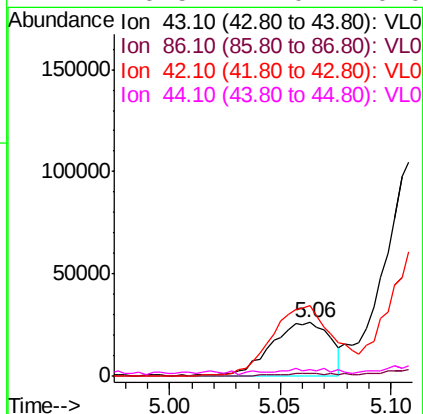
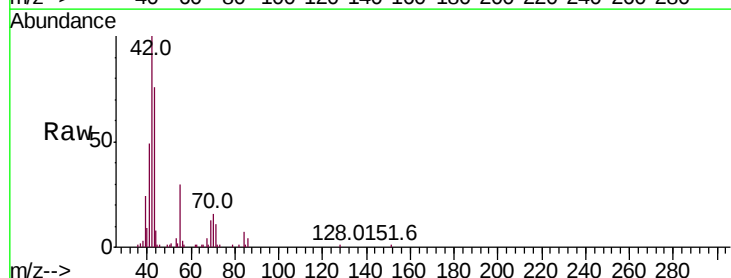
Ion Ratio Lower Upper

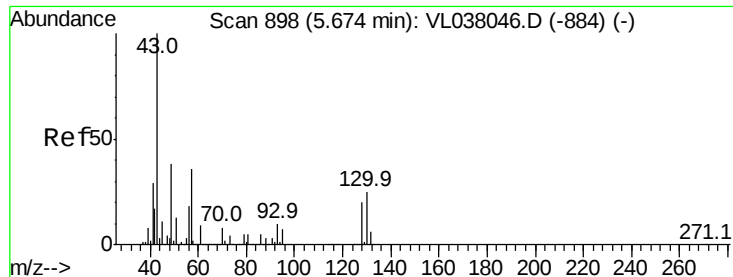
43 100

86 5.1 5.3 7.9#

42 132.8 7.0 10.6#

44 6.5 4.0 6.0#





#25

Ethyl Acetate

Concen: 1.327 ppbv

RT: 5.69 Instrument:

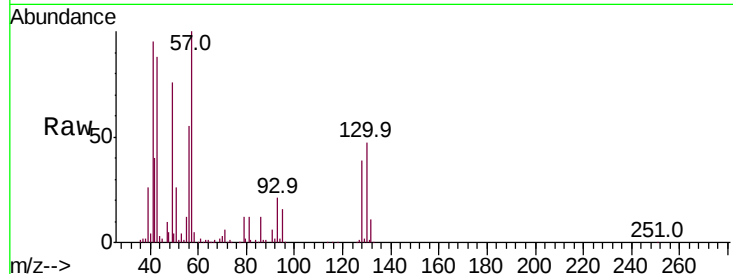
Delta R.T. MSVOA_L

Lab File:

Acq: 16 Dec 2021 15:23

Tot Ion: 43 Resp: 367383

Ion	Ratio	Lower	Upper
43	100		
45	4.0	7.9	11.9#
61	3.0	7.8	11.6#
70	3.3	5.8	8.8#



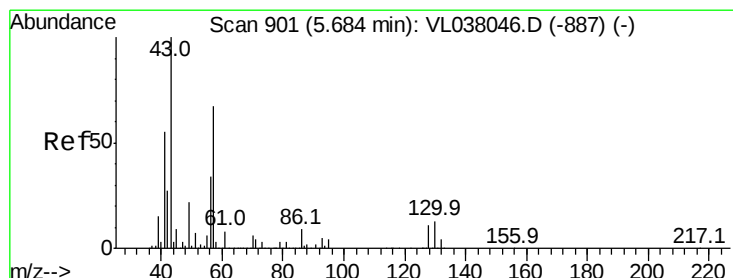
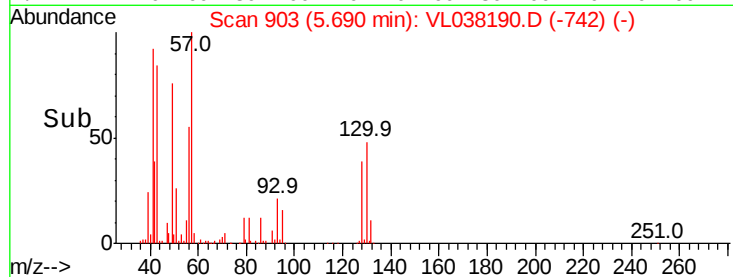
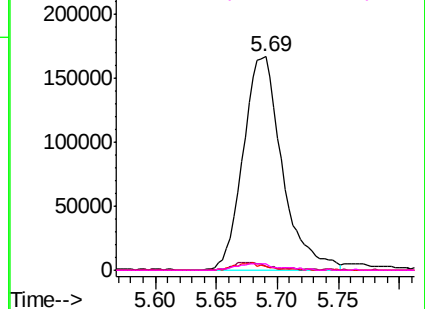
Abundance

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: 2.750 ppbv

RT: 5.69 min Scan# 902

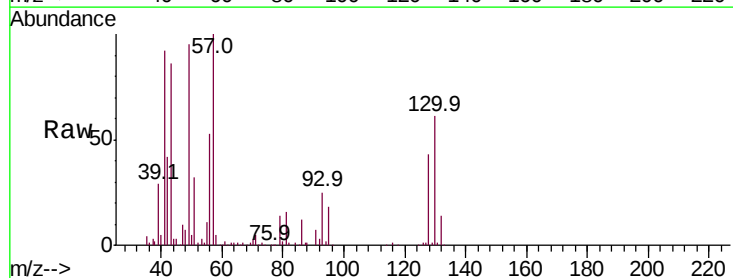
Delta R.T. 0.00 min

Lab File: VL038190.D

Acq: 16 Dec 2021 15:23

Tgt Ion: 57 Resp: 366883

Ion	Ratio	Lower	Upper
57	100		
41	100.6	71.4	107.2
43	102.9	174.6	261.8#
56	59.8	43.2	64.8



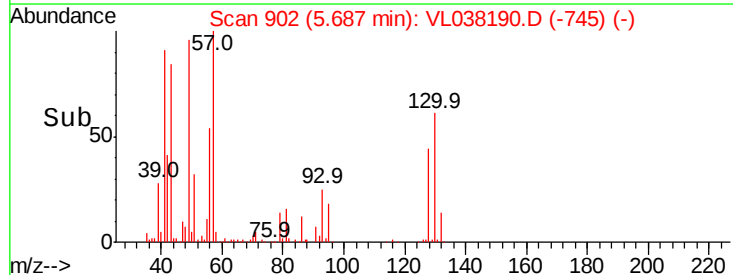
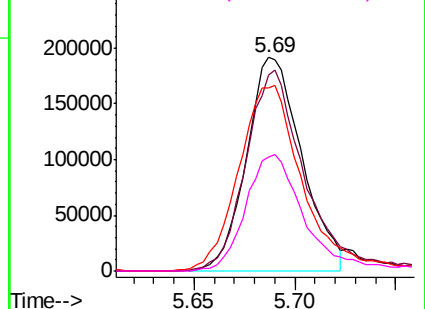
Abundance

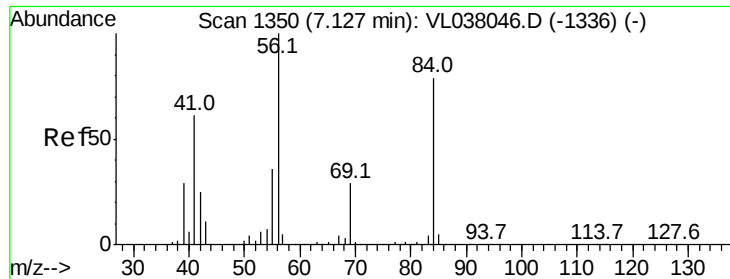
Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

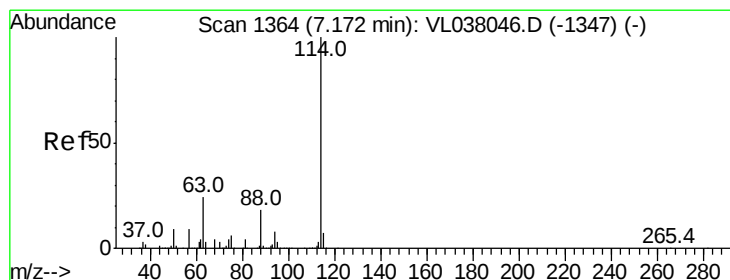
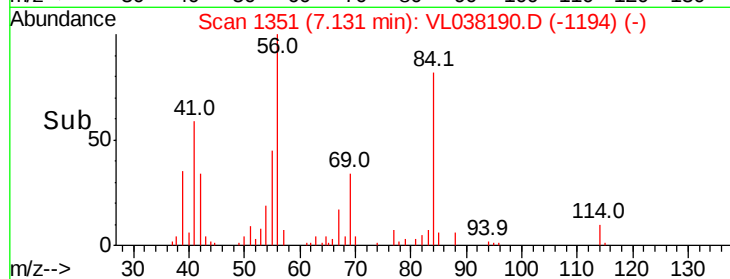
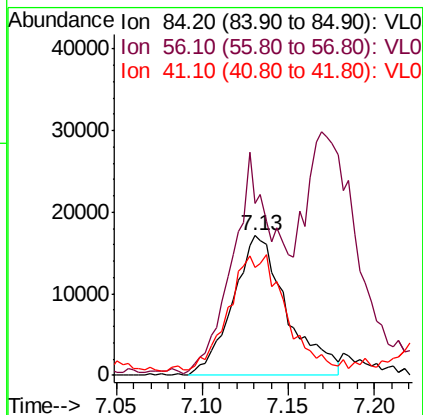
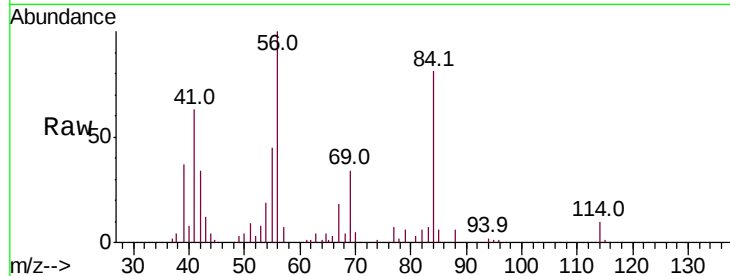
Ion 56.10 (55.80 to 56.80): VL0





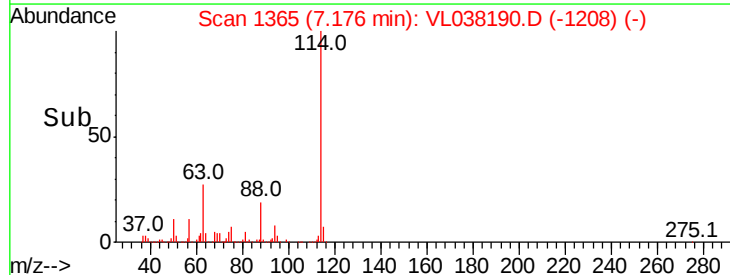
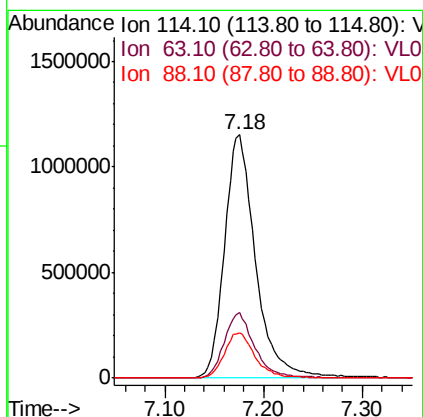
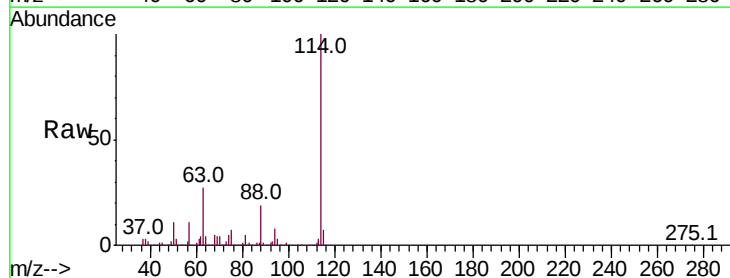
#30
Cvclohexane
Concen: 0.311 ppbv
RT: 7.13 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 15:23

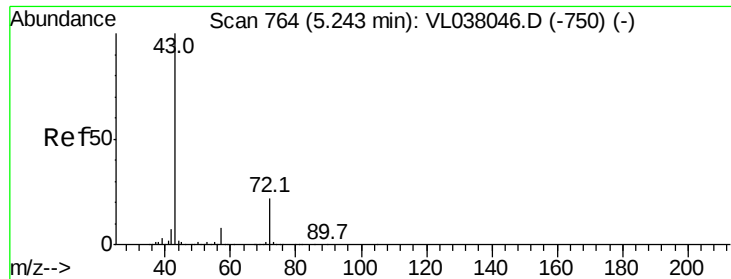
Tot Ion	84	Resp	37652
Ion	Ratio	Lower	Upper
84	100		
56	115.7	108.1	162.1
41	90.5	64.4	96.6



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1365
Delta R.T.: 0.00 min
Lab File: VL038190.D
Acq: 16 Dec 2021 15:23

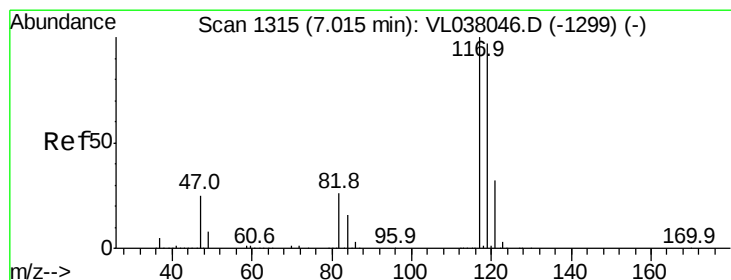
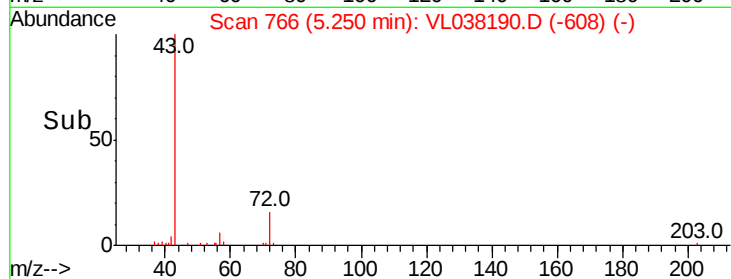
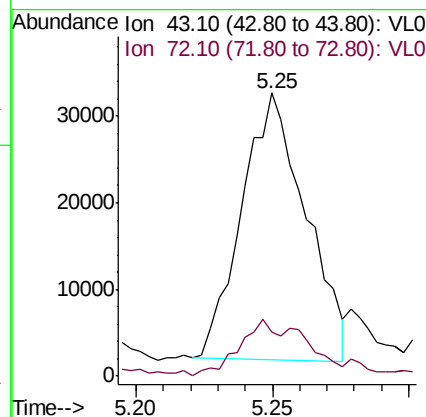
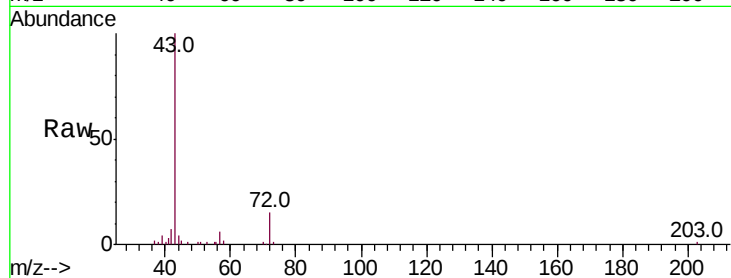
Tgt Ion	114	Resp	2537709
Ion	Ratio	Lower	Upper
114	100		
63	26.8	19.7	29.5
88	18.8	14.4	21.6





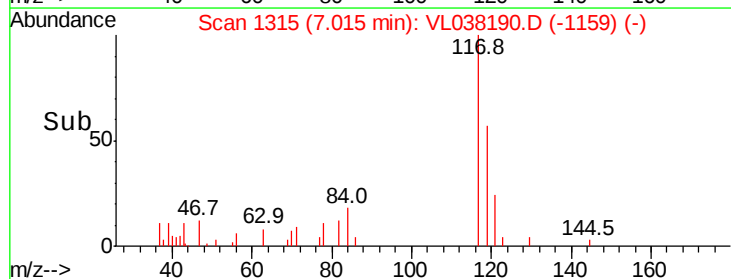
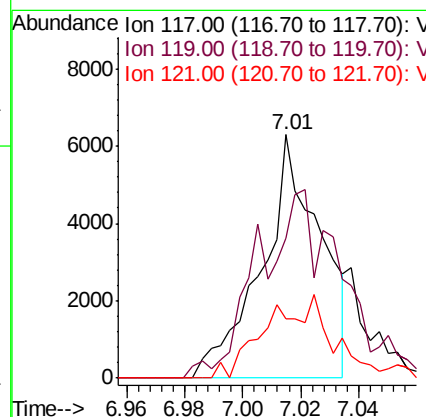
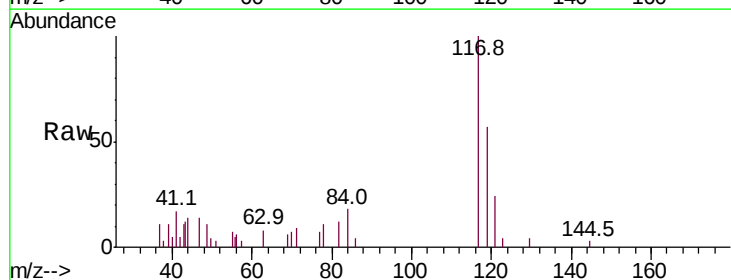
#34
2-Butanone
Concen: 0.491 ppbv
RT: 5.25
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 15:23

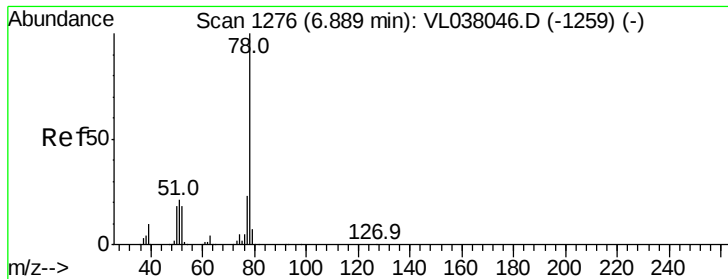
Tot Ion: 43 Resp: 50196
Ion Ratio Lower Upper
43 100
72 26.0 18.8 28.2



#35
Carbon Tetrachloride
Concen: 0.049 ppbv
RT: 7.01 min Scan# 1315
Delta R.T. 0.00 min
Lab File: VL038190.D
Acq: 16 Dec 2021 15:23

Tgt Ion: 117 Resp: 8806
Ion Ratio Lower Upper
117 100
119 52.7 77.7 116.5#
121 24.4 25.6 38.4#





#36

Benzene

Concen: 1.367 ppbv

RT: 6.89 Instrument:

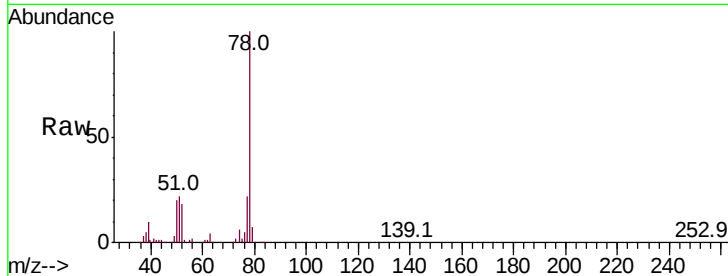
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 15:23

Tot Ion: 78 Resp: 346137

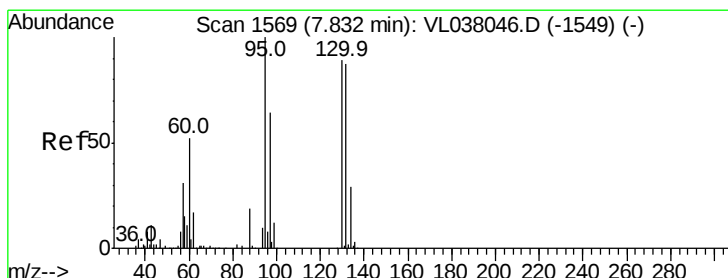
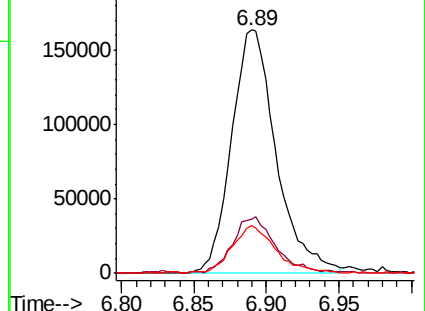
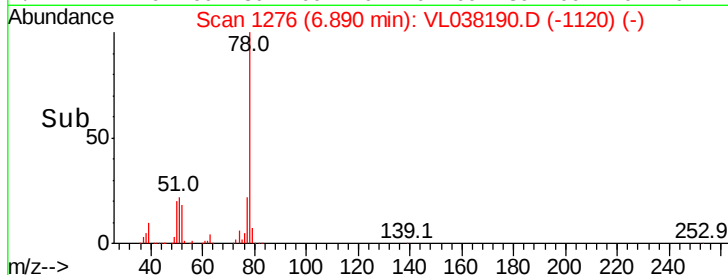
Ion	Ratio	Lower	Upper
78	100		
77	21.6	18.2	27.4
50	19.3	14.7	22.1



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



#38

Trichloroethene

Concen: 0.035 ppbv

RT: 7.83 min Scan# 1570

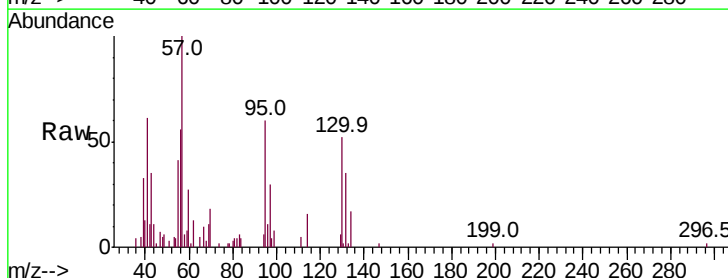
Delta R.T. 0.00 min

Lab File: VL038190.D

Acq: 16 Dec 2021 15:23

Tgt Ion:130 Resp: 3367

Ion	Ratio	Lower	Upper
130	100		
95	109.4	89.4	134.2
132	66.2	78.2	117.2#
97	25.7	57.0	85.4#

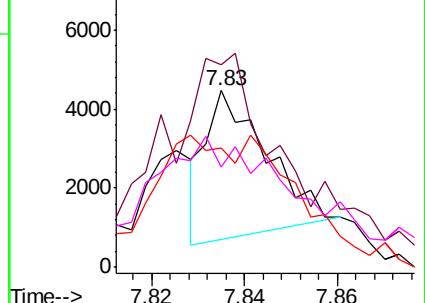
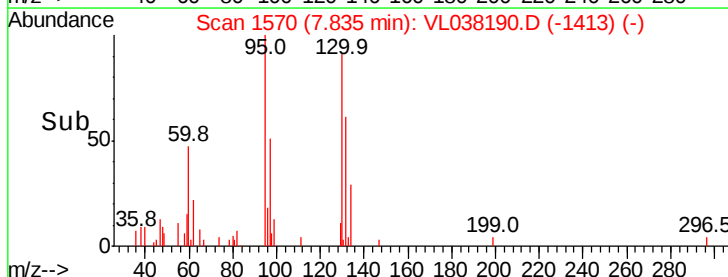


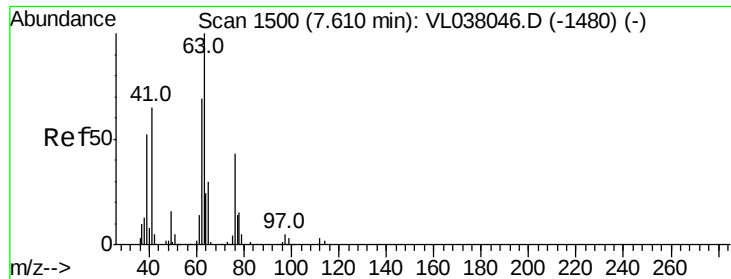
Abundance Ion 130.00 (129.70 to 130.70): V

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: 6.747 ppbv

RT: 7.18 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 15:23

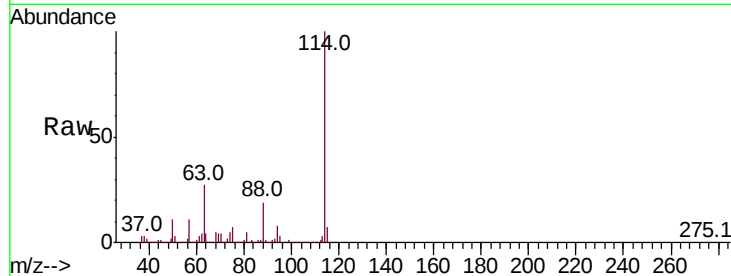
Tot Ion: 63 Resp: 655154

Ion Ratio Lower Upper

63 100

41 0.0 52.3 78.5#

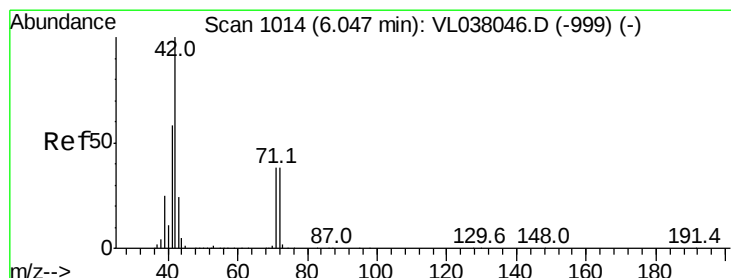
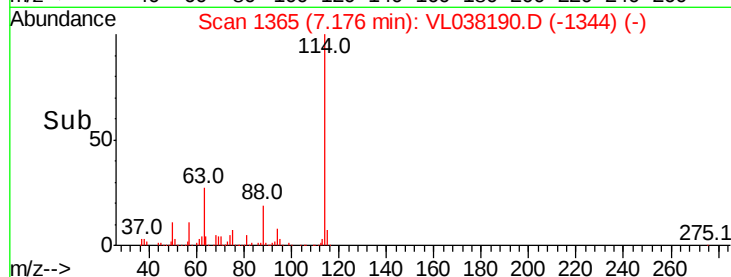
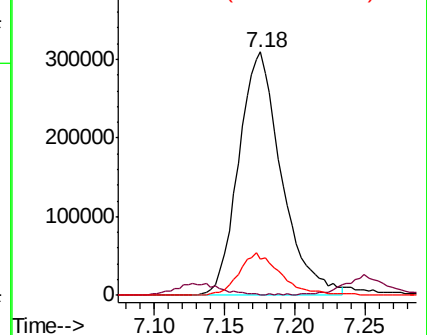
62 14.5 55.1 82.7#



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: 0.073 ppbv

RT: 5.77 min Scan# 929

Delta R.T. -0.27 min

Lab File: VL038190.D

Acq: 16 Dec 2021 15:23

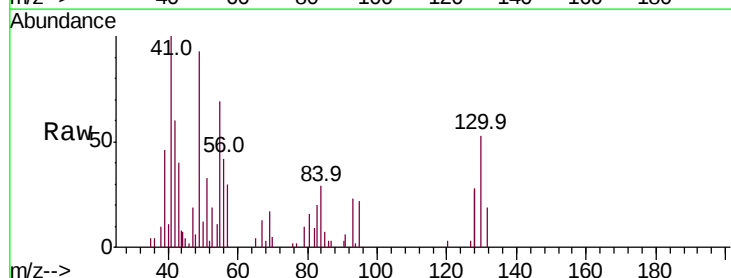
Tgt Ion: 42 Resp: 4668

Ion Ratio Lower Upper

42 100

72 1.5 31.7 47.5#

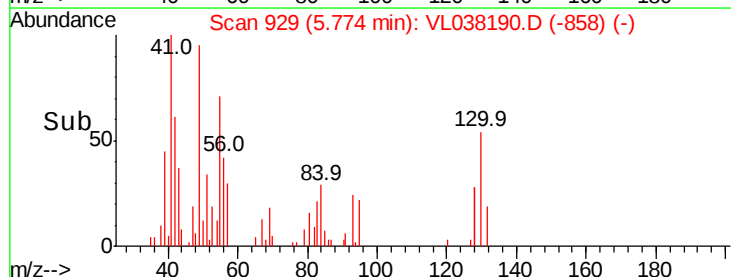
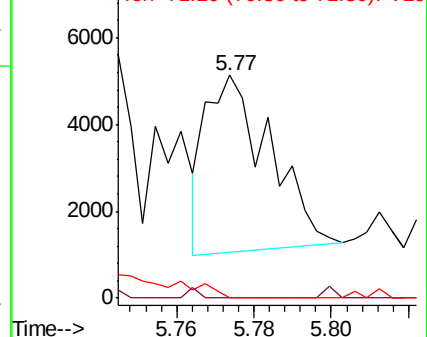
71 0.0 30.6 46.0#

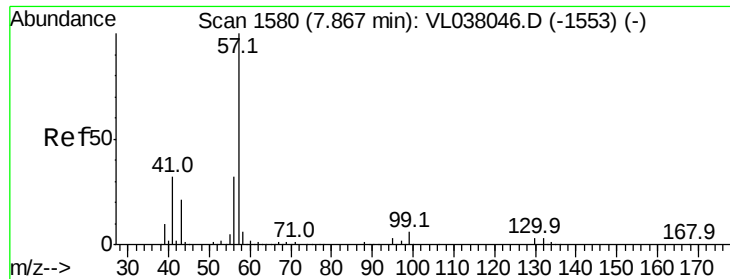


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

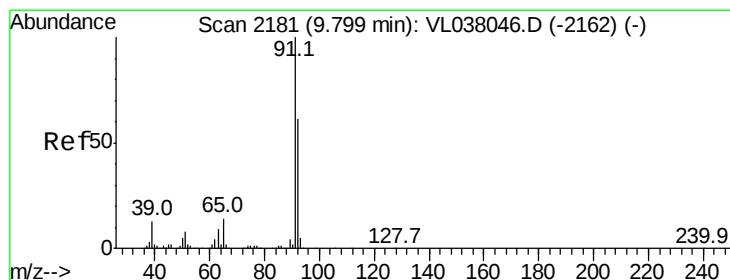
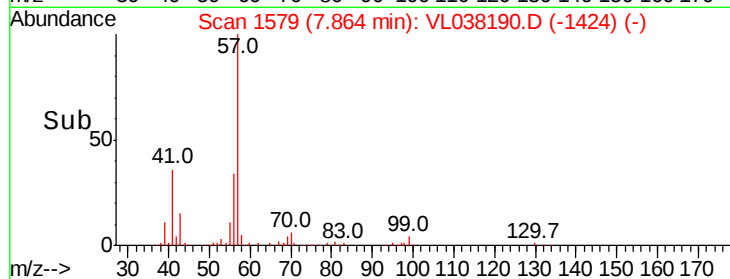
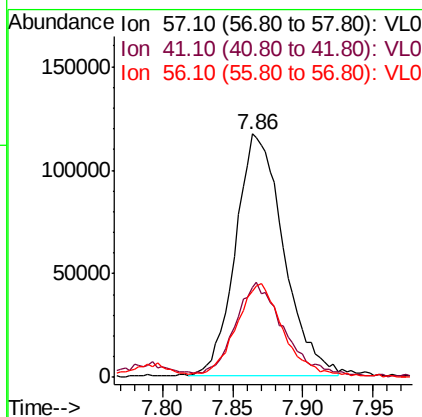
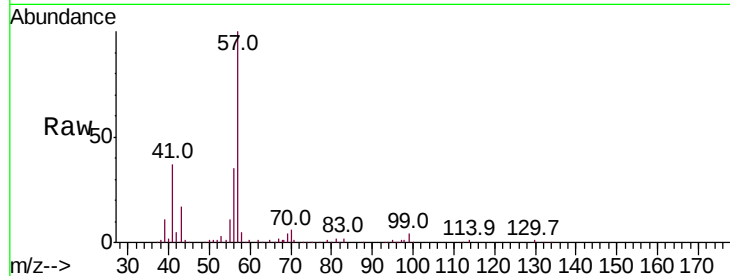
Ion 71.10 (70.80 to 71.80): VL0





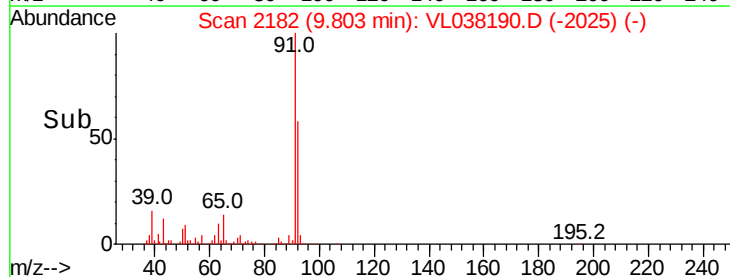
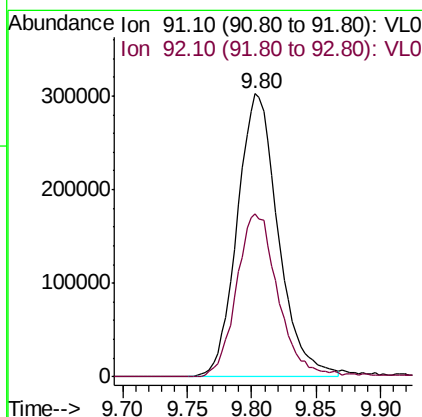
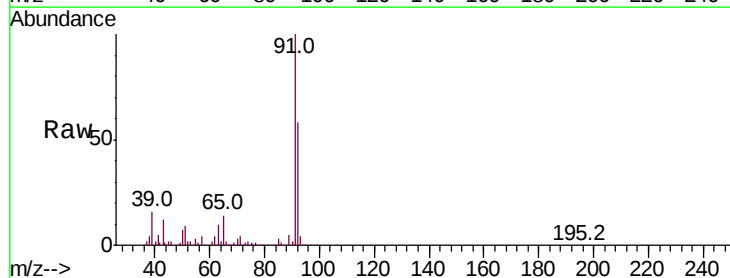
#44
 2,2,4-Trimethylpentane
 Concen: 0.659 ppbv
 RT: 7.86 Instrument :
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId :
 Acq: 16 Dec 2021 15:23

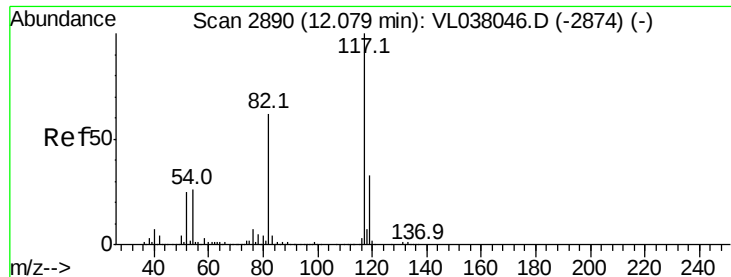
Tot Ion	57	Resp	279073
Ion	Ratio	Lower	Upper
57	100		
41	40.4	25.8	38.6#
56	38.4	25.6	38.4#



#53
 Toluene
 Concen: 2.301 ppbv
 RT: 9.80 min Scan# 2182
 Delta R.T. 0.00 min
 Lab File: VL038190.D
 Acq: 16 Dec 2021 15:23

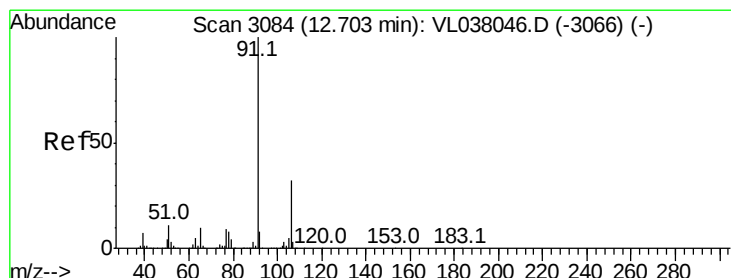
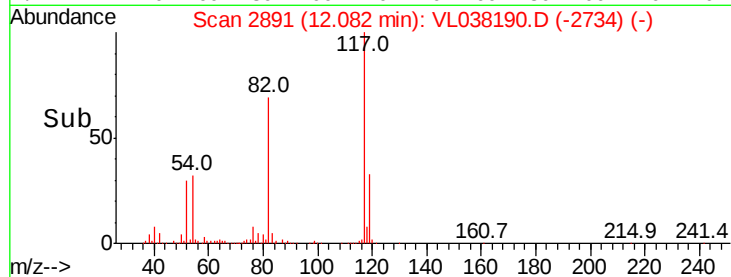
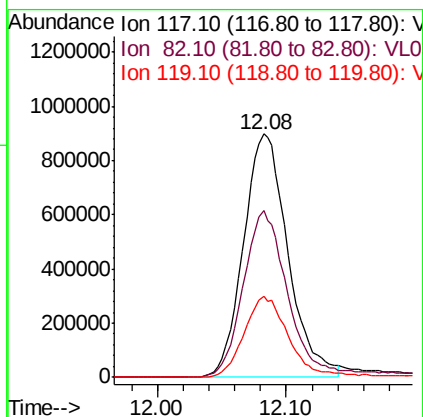
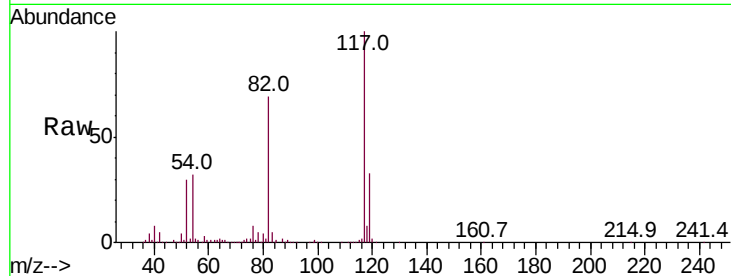
Tgt Ion	91	Resp	670307
Ion	Ratio	Lower	Upper
91	100		
92	59.6	49.7	74.5





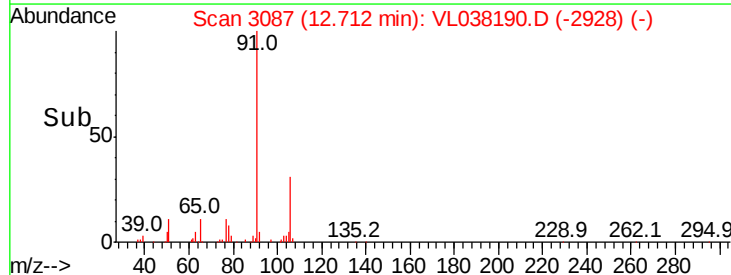
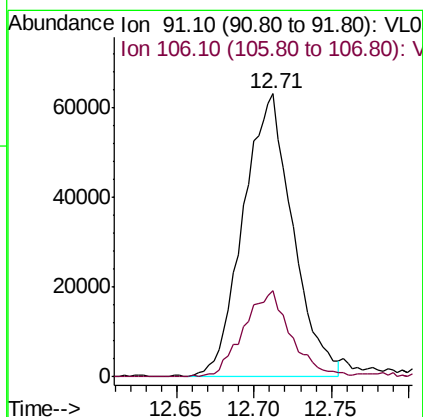
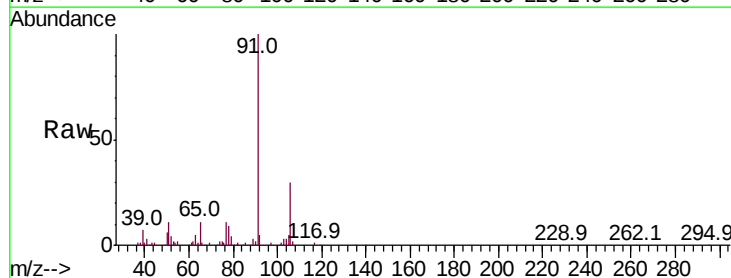
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 15:23

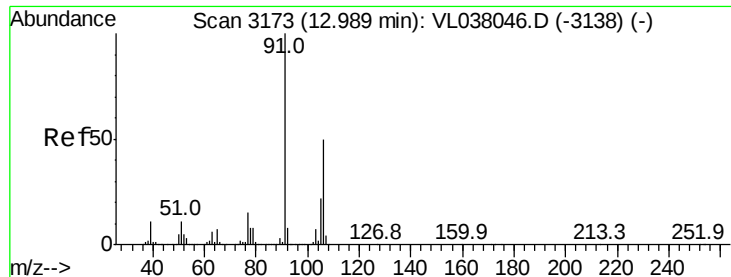
Tot Ion: 117 Resp: 2151050
Ion Ratio Lower Upper
117 100
82 72.6 52.8 79.2
119 34.3 26.8 40.2



#58
Ethyl Benzene
Concen: 0.396 ppbv
RT: 12.71 min Scan# 3087
Delta R.T.: 0.01 min
Lab File: VL038190.D
Acq: 16 Dec 2021 15:23

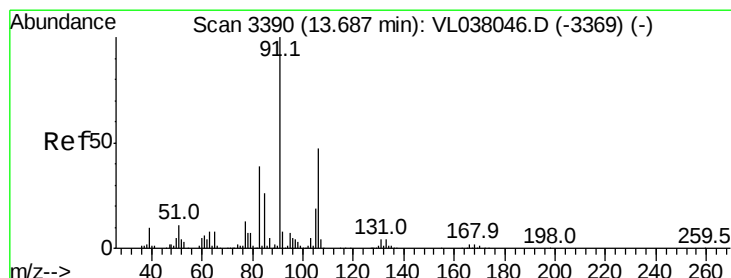
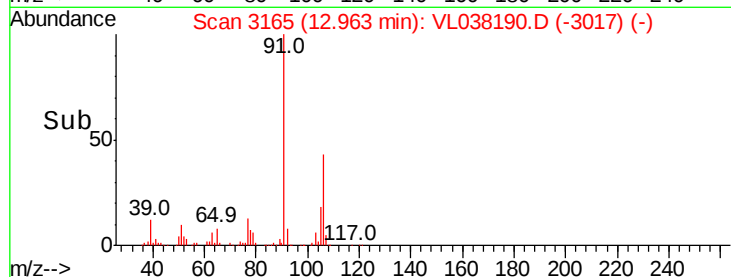
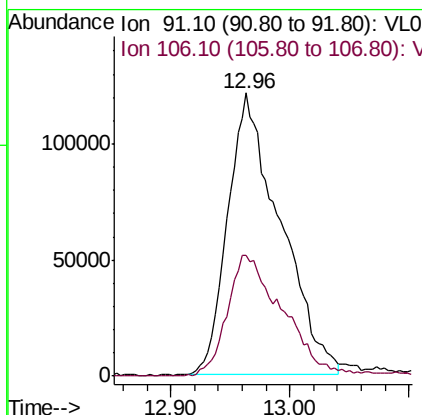
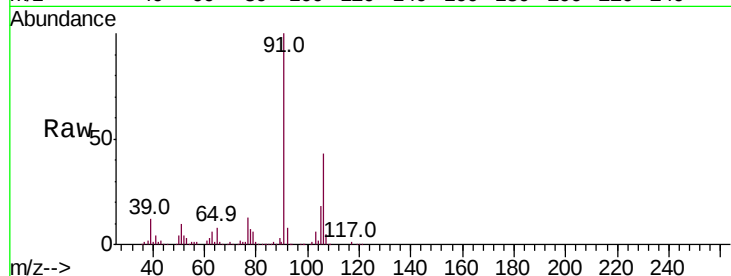
Tgt Ion: 91 Resp: 140726
Ion Ratio Lower Upper
91 100
106 30.3 25.8 38.6





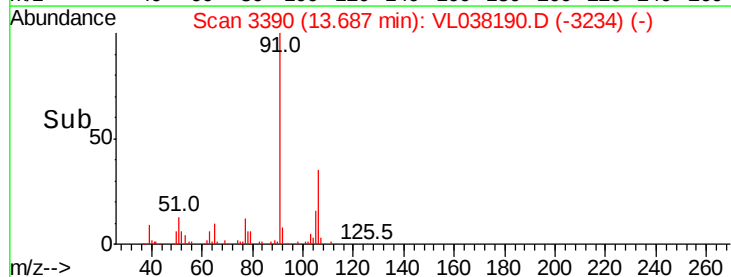
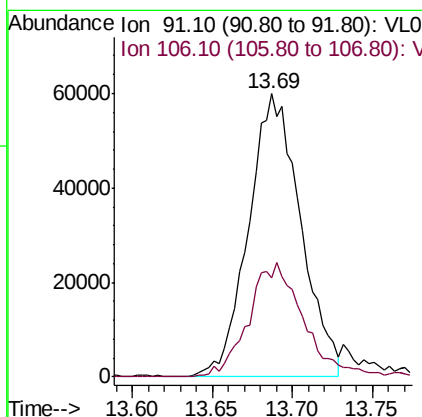
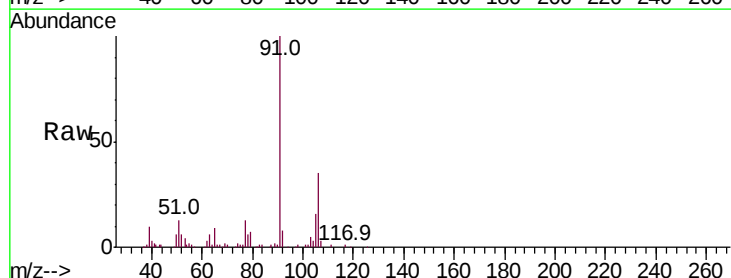
#59
m/p-Xylene
Concen: 1.233 ppbv
RT: 12.96 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 15:23

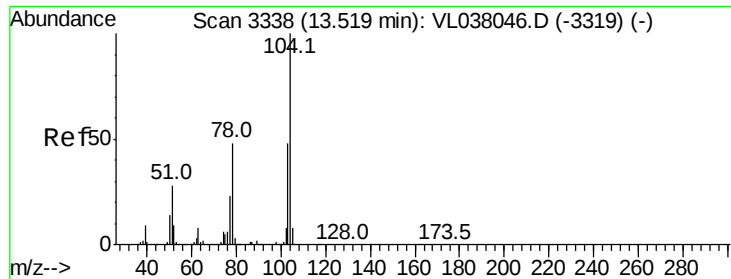
Tot Ion: 91 Resp: 369141
Ion Ratio Lower Upper
91 100
106 46.4 38.1 57.1



#60
o-Xylene
Concen: 0.485 ppbv
RT: 13.69 min Scan# 3390
Delta R.T. 0.00 min
Lab File: VL038190.D
Acq: 16 Dec 2021 15:23

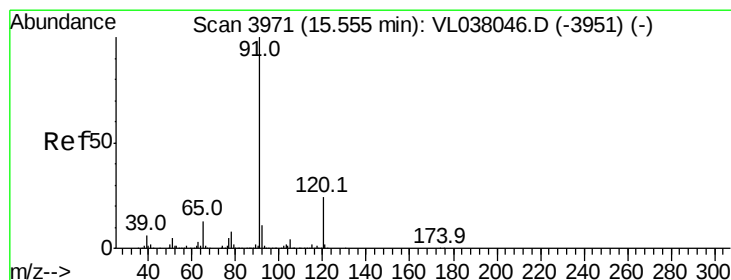
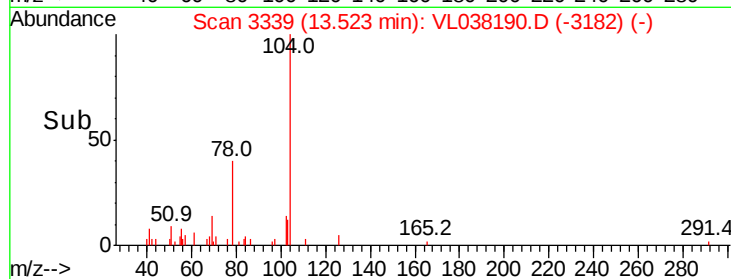
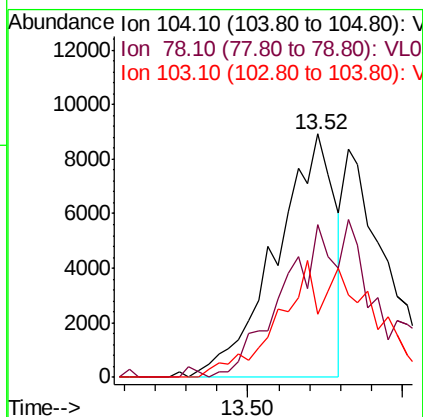
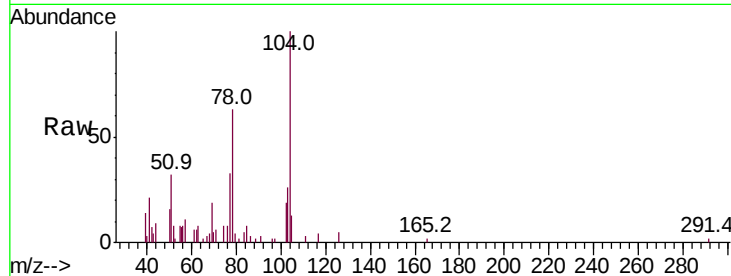
Tgt Ion: 91 Resp: 134588
Ion Ratio Lower Upper
91 100
106 42.7 24.2 72.6





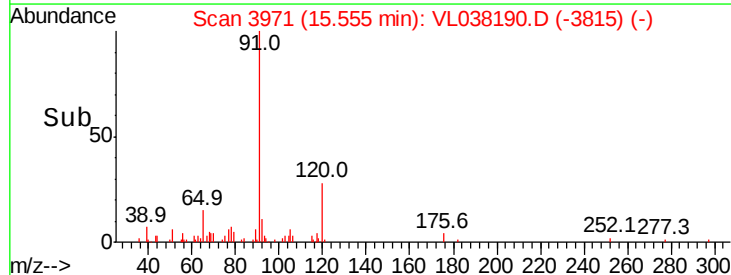
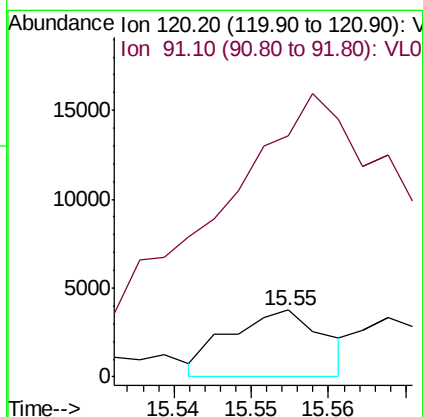
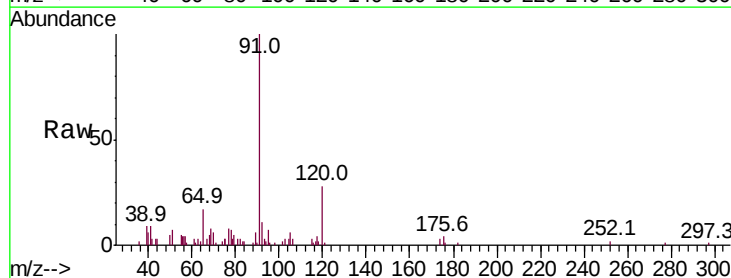
#61
Stvrene
Concen: 0.079 ppbv
RT: 13.52
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 15:23

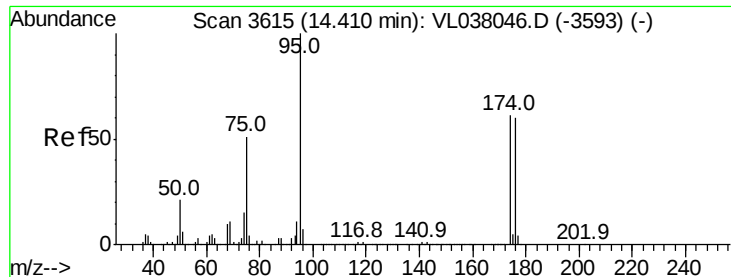
Tot Ion	Ratio	Lower	Upper
104	100		
78	0.0	39.8	59.6#
103	79.0	38.2	57.2#



#64
n-propylbenzene
Concen: 0.032 ppbv
RT: 15.55 min Scan# 3971
Delta R.T. 0.00 min
Lab File: VL038190.D
Acq: 16 Dec 2021 15:23

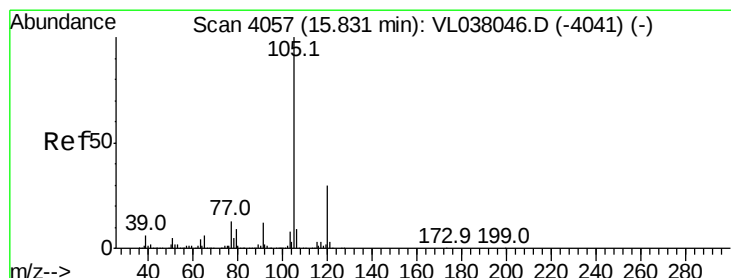
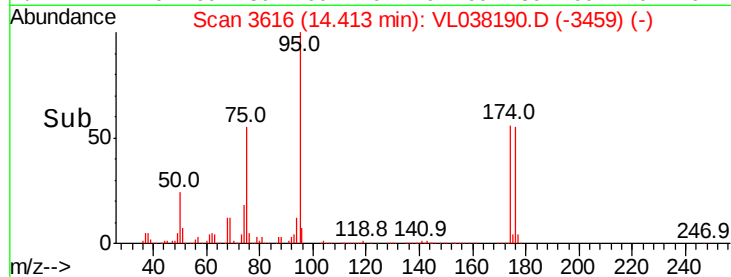
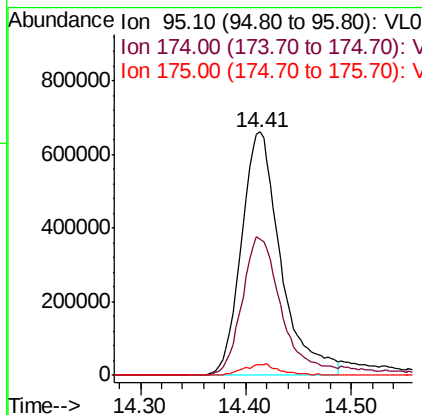
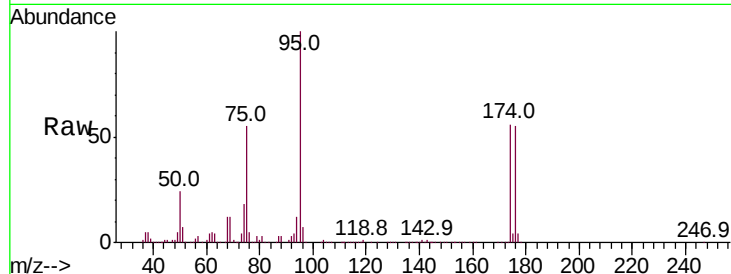
Tgt Ion	Ratio	Lower	Upper
120	100		
91	1201.3	371.7	557.5#





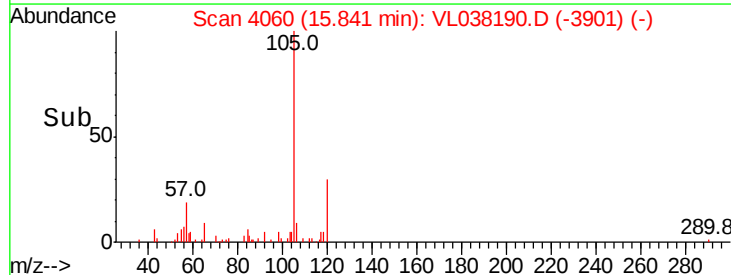
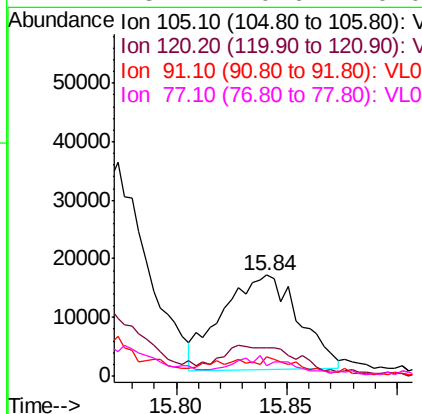
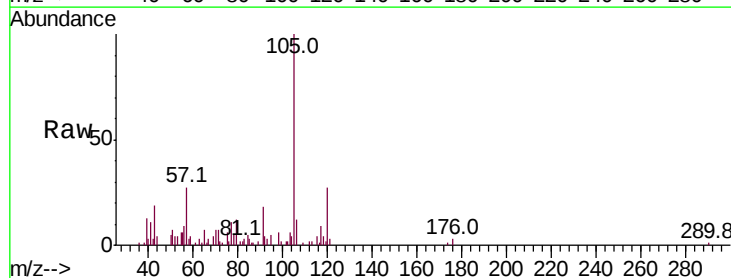
#68
 1-Bromo-4-Fluorobenzene
 Concen: 11.051 ppbv
 RT: 14.41 min
 Delta R.T.: 0.01 min
 Lab File: VL038190.D
 Acq: 16 Dec 2021 15:23

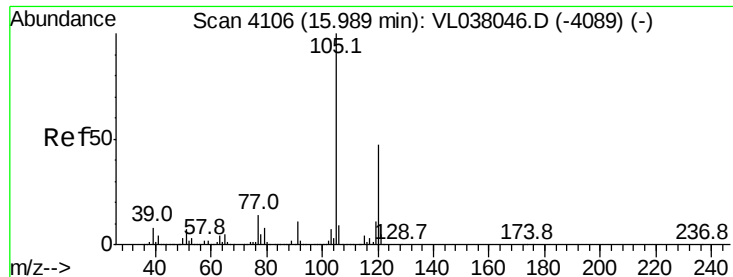
Tot Ion: 95 Resp: 1714728
 Ion Ratio Lower Upper
 95 100
 174 62.0 53.1 79.7
 175 4.3 4.0 6.0



#72
 4-Ethyltoluene
 Concen: 0.121 ppbv
 RT: 15.84 min Scan# 4060
 Delta R.T.: 0.01 min
 Lab File: VL038190.D
 Acq: 16 Dec 2021 15:23

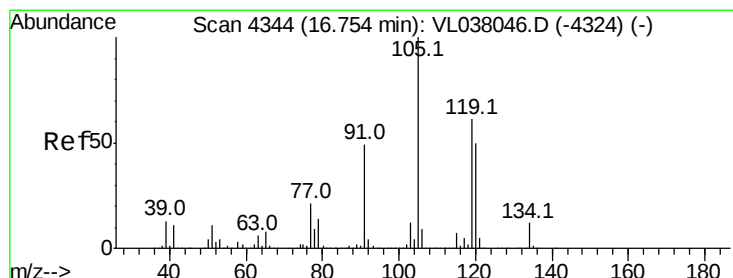
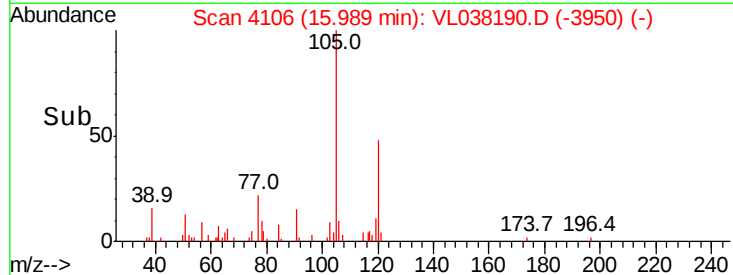
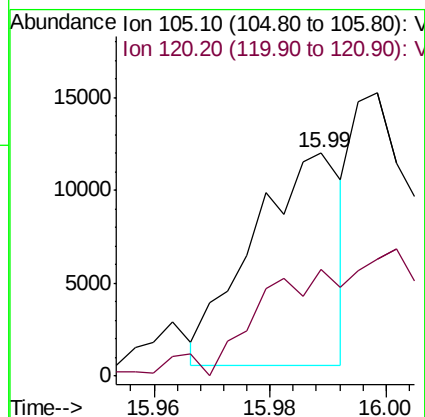
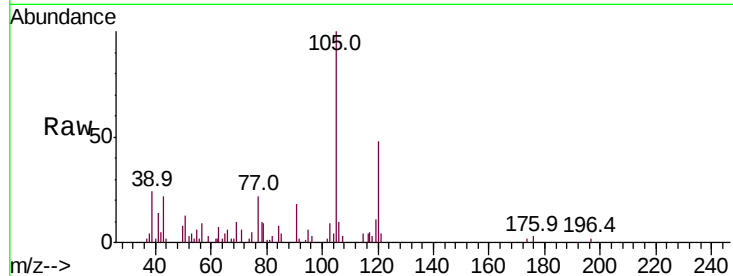
Tgt Ion: 105 Resp: 38985
 Ion Ratio Lower Upper
 105 100
 120 36.8 25.1 37.7
 91 19.8 9.7 14.5#
 77 18.2 10.6 16.0#





#73
 1,3,5-Trimethylbenzene
 Concen: 0.041 ppbv
 RT: 15.99 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Dec 2021 15:23

Tot Ion:105 Resp: 12198
 Ion Ratio Lower Upper
 105 100
 120 44.6 37.8 56.6



#74
 1,2,4-Trimethylbenzene
 Concen: 0.216 ppbv
 RT: 16.76 min Scan# 4346
 Delta R.T.: 0.01 min
 Lab File: VL038190.D
 Acq: 16 Dec 2021 15:23

Tgt Ion:105 Resp: 65312
 Ion Ratio Lower Upper
 105 100
 120 40.9 40.1 60.1
 91 13.9 39.8 59.8#
 77 14.7 16.6 25.0#

