

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL071922\
 Data File : VL039489.D
 Acq On : 19 Jul 2022 19:45
 Operator : SY/AP
 Sample : N3750-03 4X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV-3

Quant Time: Jul 20 05:39:38 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL062922AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jul 06 02:15:38 2022
 QLast Update : Wed Jul 06 02:15:38 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	1287321	10.00	ppbv	0.03
33) 1,4-Difluorobenzene	7.19	114	3512187	10.00	ppbv	0.03
55) Chlorobenzene-d5	12.10	117	3143660	10.00	ppbv	0.04

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.43	95	2346958	10.06	ppbv	0.04
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.60%

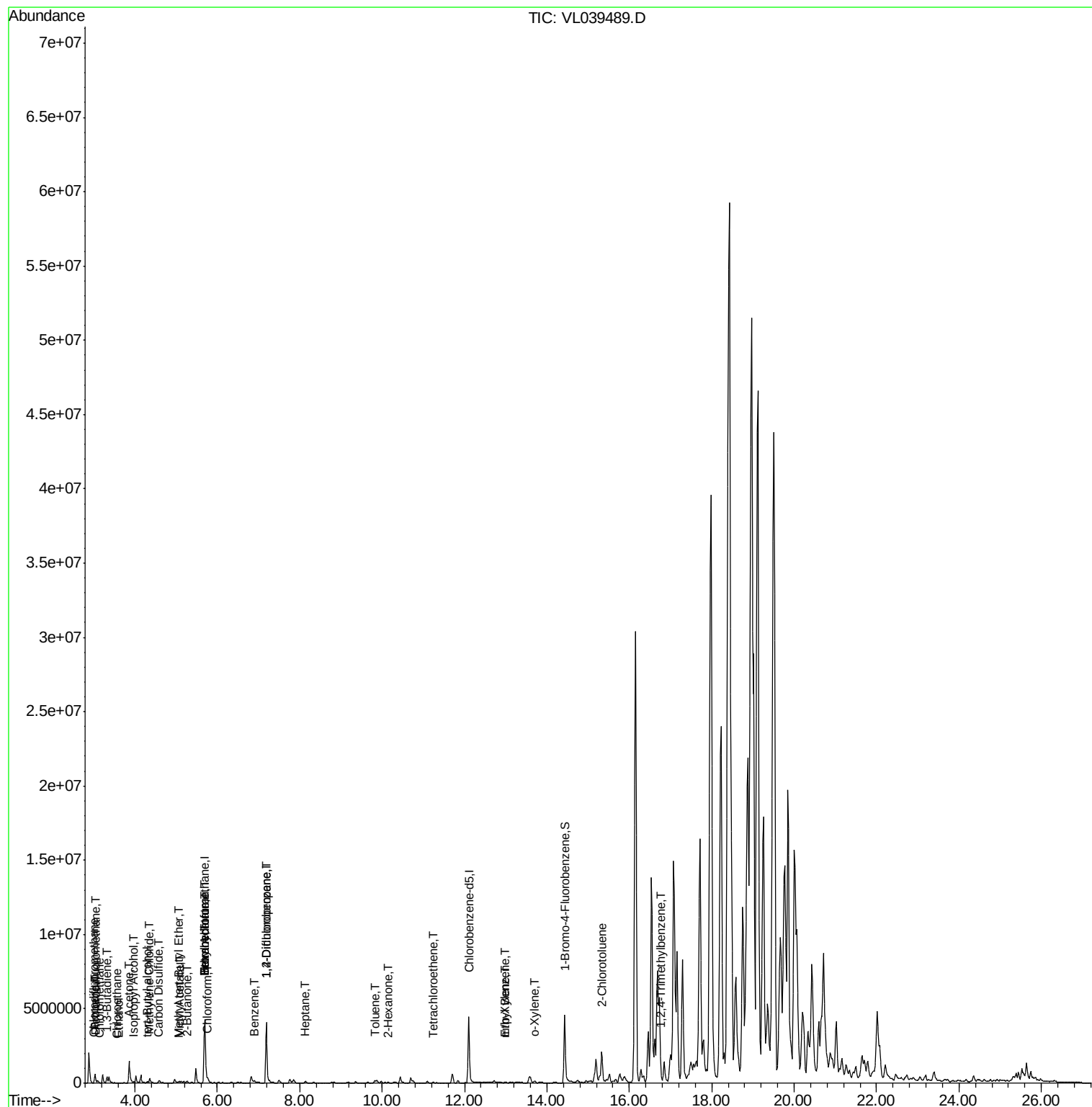
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.06	85	7455	0.040	ppbv #	69
3) Chlorodifluoromethane	3.00	51	5330	0.033	ppbv	96
4) Chloromethane	3.15	50	4230	0.047	ppbv #	85
7) Chloroethane	3.56	64	2805	0.090	ppbv #	69
9) Propene	3.03	41	275742	3.738	ppbv	87
10) Heptane	8.14	43	23695	0.137	ppbv #	1
13) Ethanol	3.61	45	12883	3.011	ppbv	59
15) Acetone	3.86	43	1950969	12.810	ppbv	93
16) 1,3-Butadiene	3.32	39	85783	1.086	ppbv #	49
17) tert-Butyl alcohol	4.29	59	21322	0.165	ppbv #	19
19) Isopropyl Alcohol	3.98	45	47877	0.589	ppbv #	88
20) Methylene Chloride	4.36	84	118552	1.953	ppbv	89
23) Vinyl Acetate	5.08	43	96221	0.945	ppbv #	91
25) Ethyl Acetate	5.70	43	1001307	3.206	ppbv #	76
26) Hexane	5.70	57	1445058	11.480	ppbv #	37
27) Carbon Disulfide	4.56	76	47596	0.313	ppbv #	67
28) Methyl tert-Butyl Ether	5.05	73	8631	0.064	ppbv #	50
29) Chloroform	5.76	83	139337	0.637	ppbv	86
34) 2-Butanone	5.26	43	177653	1.005	ppbv #	89
36) Benzene	6.91	78	74414	0.274	ppbv #	92
39) 1,2-Dichloropropane	7.19	63	854177	8.412	ppbv #	24
41) Tetrahydrofuran	5.70	42	546778	5.337	ppbv #	48
51) 2-Hexanone	10.15	43	16528	0.082	ppbv #	29
52) Tetrachloroethene	11.24	164	8583	0.078	ppbv	91
53) Toluene	9.82	91	131437	0.419	ppbv	98
58) Ethyl Benzene	12.97	91	13166	0.032	ppbv	91
59) m/p-Xylene	13.00	91	19764	0.055	ppbv #	32
60) o-Xylene	13.71	91	30496	0.090	ppbv	95
71) 2-Chlorotoluene	15.33	91	482260	1.306	ppbv #	43
74) 1,2,4-Trimethylbenzene	16.78	105	82131	0.203	ppbv #	63

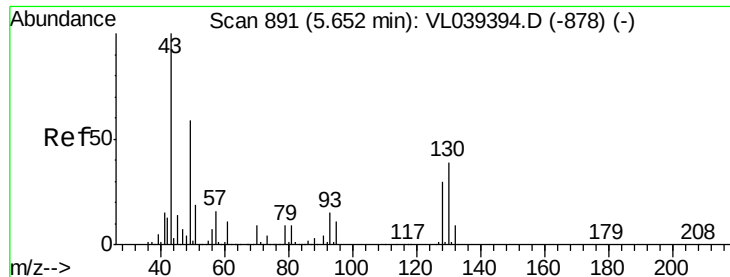
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Jul 06 02:15:38 2022
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 19 Jul 2022 19:45 SV-3

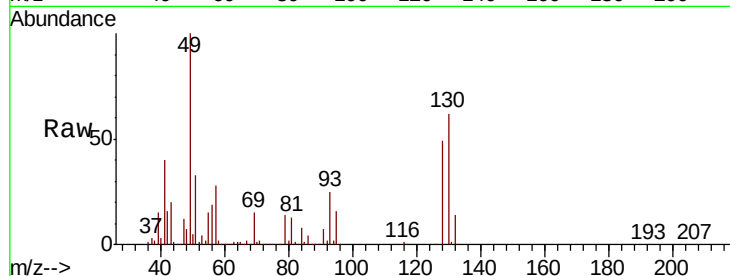
Tot Ion: 49 Resp: 1287321

Ion Ratio Lower Upper

49 100

128 51.0 26.7 80.0

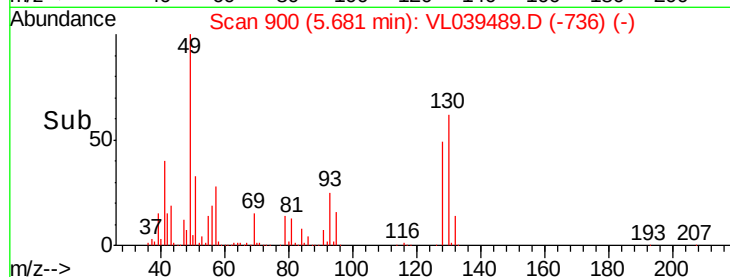
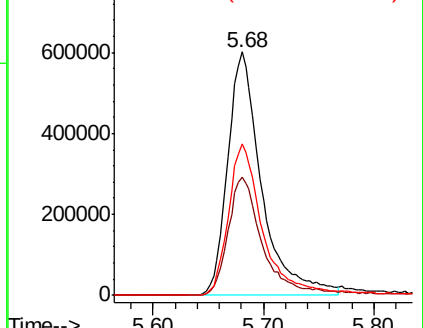
130 64.5 34.3 102.8



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: 0.040 ppbv

RT: 3.06 min Scan# 84

Delta R.T. 0.02 min

Lab File: VL039489.D

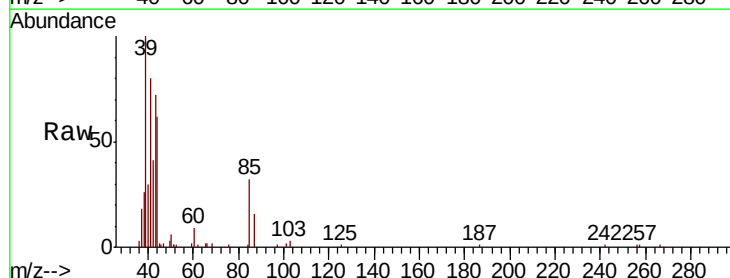
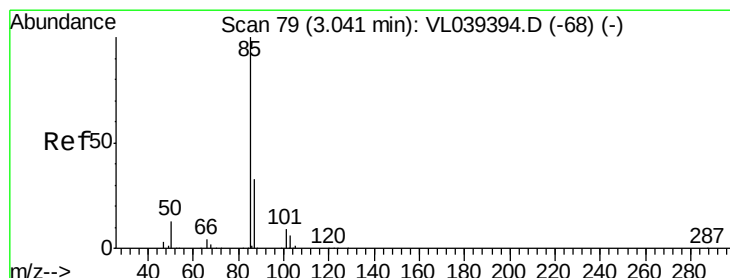
Acq: 19 Jul 2022 19:45

Tgt Ion: 85 Resp: 7455

Ion Ratio Lower Upper

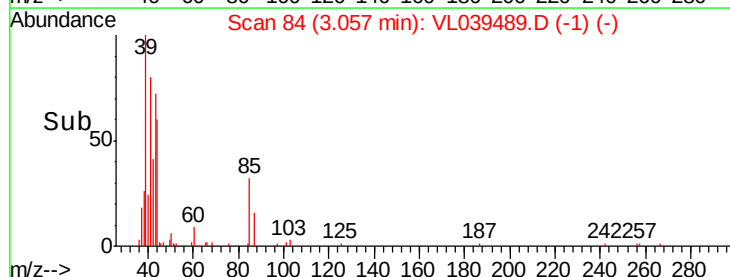
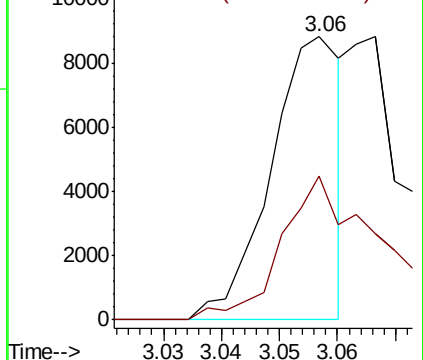
85 100

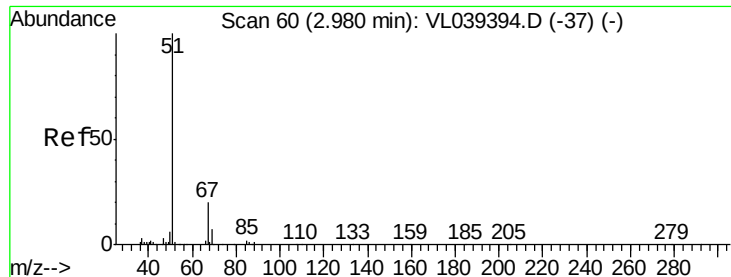
87 50.9 26.7 40.1#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.033 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

SV-3

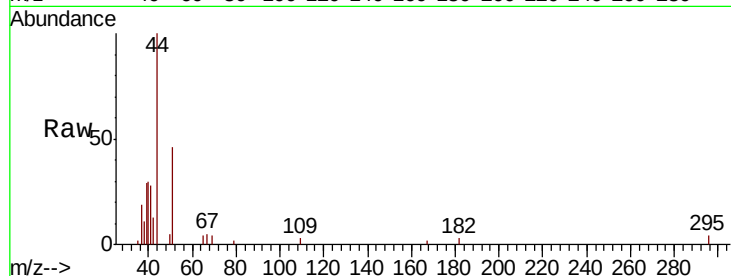
Acq: 19 Jul 2022 19:45

Tot Ion: 51 Resp: 5330

Ion Ratio Lower Upper

51 100

67 17.8 15.7 23.5



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

5000

4000

3000

2000

1000

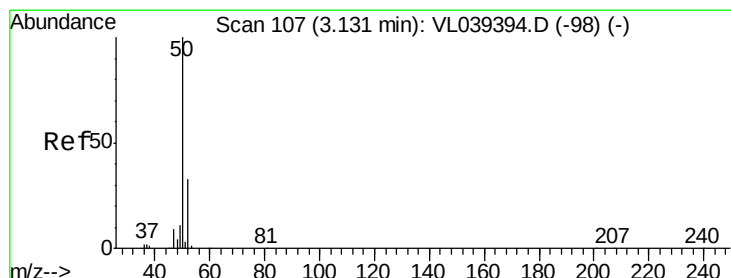
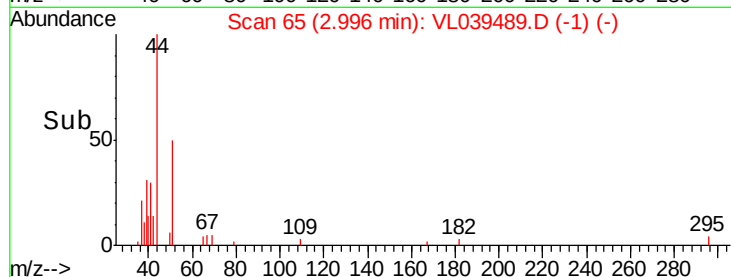
0

Time-->

2.95

3.00

3.05



#4

Chloromethane

Concen: 0.047 ppbv

RT: 3.15 min Scan# 112

Delta R.T. 0.02 min

Lab File: VL039489.D

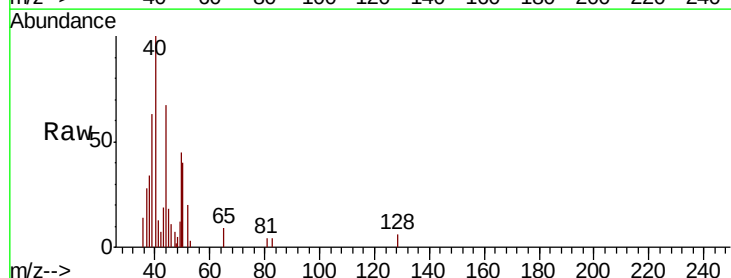
Acq: 19 Jul 2022 19:45

Tgt Ion: 50 Resp: 4230

Ion Ratio Lower Upper

50 100

52 24.9 26.5 39.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

6000

5000

4000

3000

2000

1000

0

Time-->

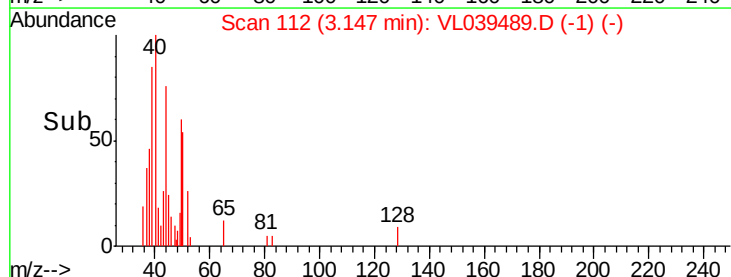
3.12

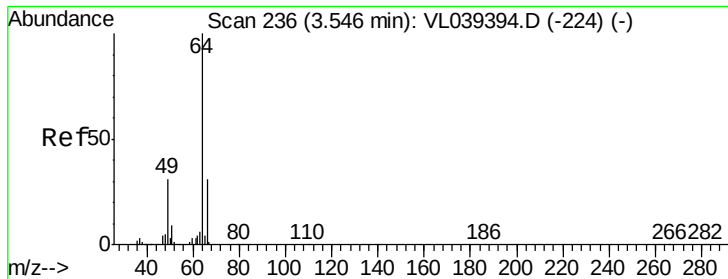
3.13

3.14

3.15

3.16





#7

Chloroethane

Concen: 0.090 ppbv

RT: 3.56 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId: SV-3

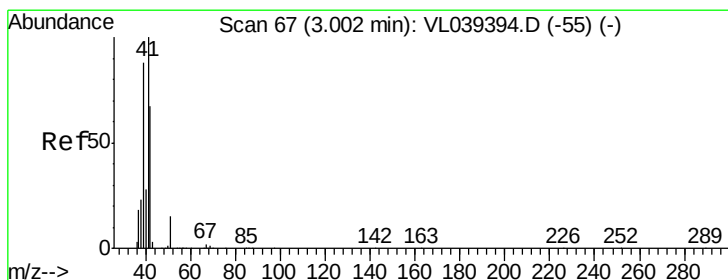
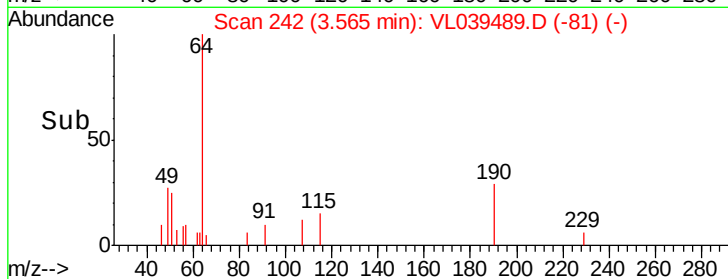
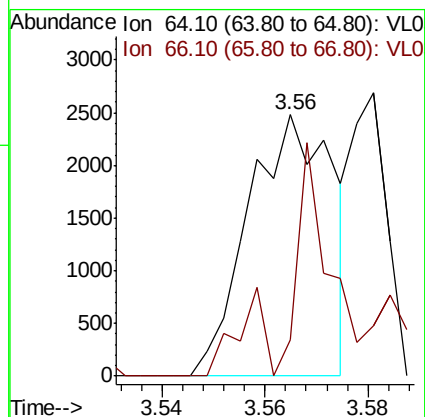
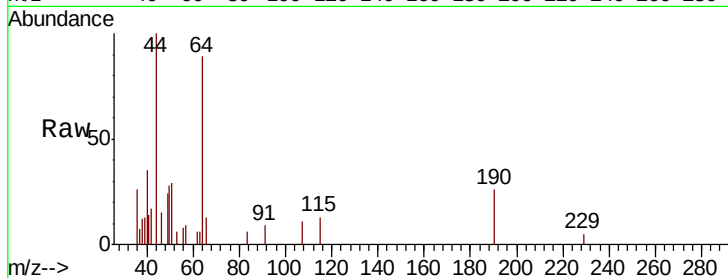
Acq: 19 Jul 2022 19:45

Tot Ion: 64 Resp: 2805

Ion Ratio Lower Upper

64 100

66 14.1 24.7 37.1#



#9

Propene

Concen: 3.738 ppbv

RT: 3.03 min Scan# 75

Delta R.T. 0.03 min

Lab File: VL039489.D

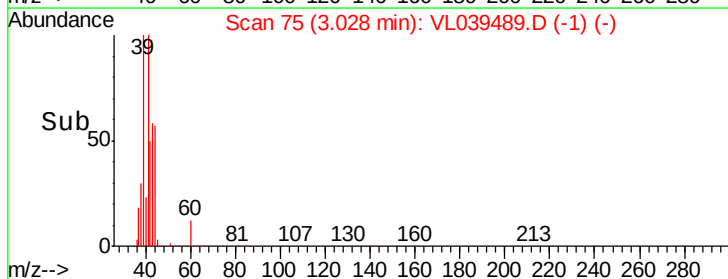
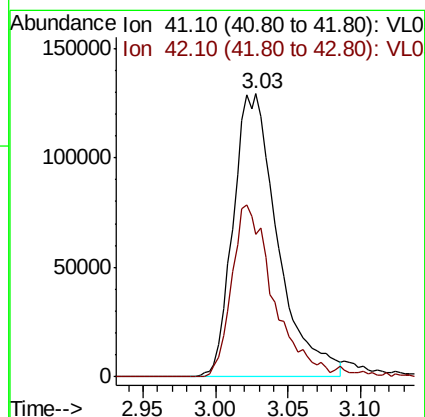
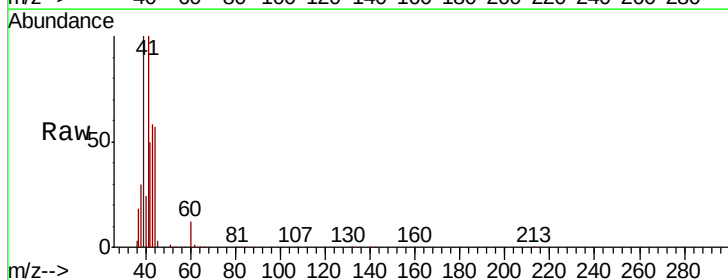
Acq: 19 Jul 2022 19:45

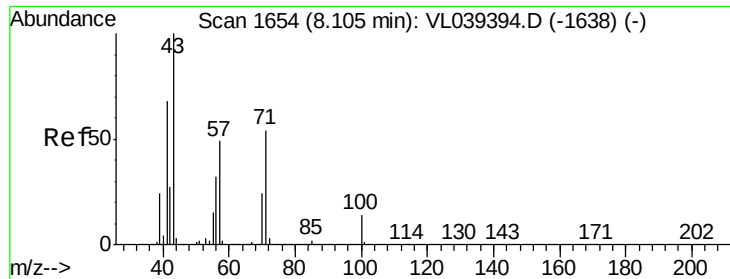
Tgt Ion: 41 Resp: 275742

Ion Ratio Lower Upper

41 100

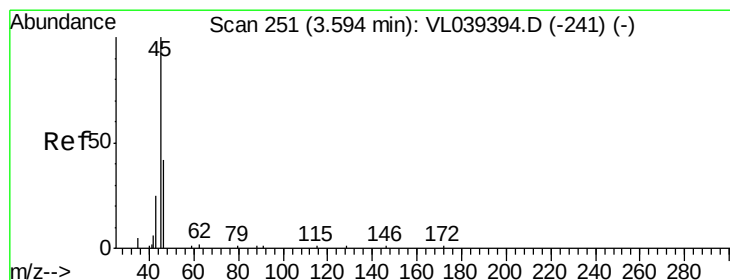
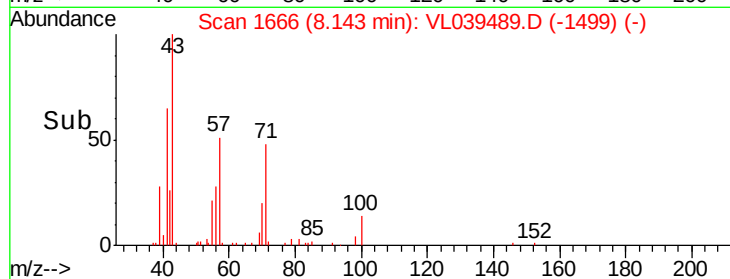
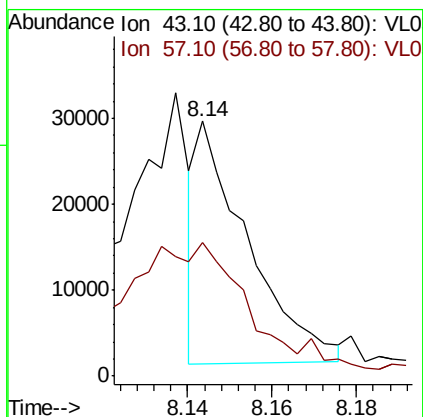
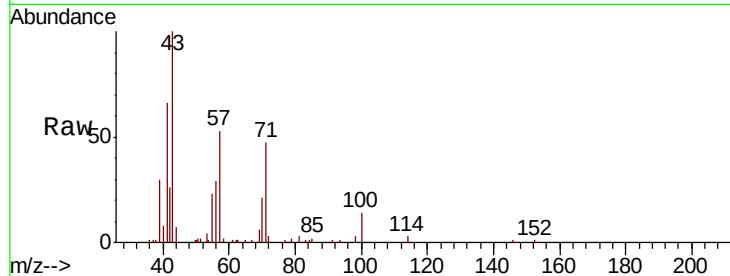
42 58.5 55.2 82.8





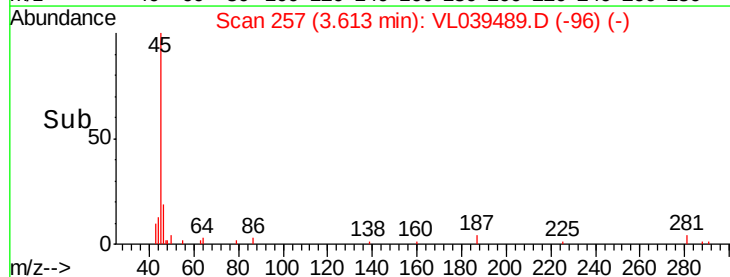
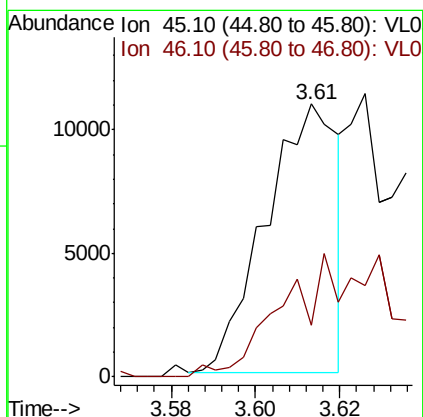
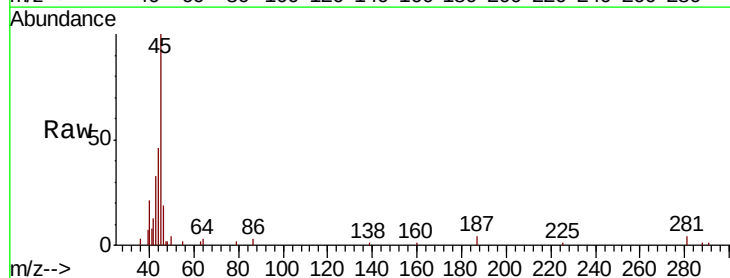
#10
Heptane
Concen: 0.137 ppbv
RT: 8.14
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 19 Jul 2022 19:45

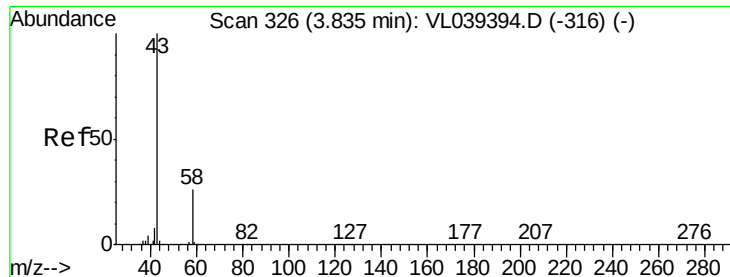
Tot Ion: 43 Resp: 23695
Ion Ratio Lower Upper
43 100
57 150.6 40.5 60.7#



#13
Ethanol
Concen: 3.011 ppbv
RT: 3.61 min Scan# 257
Delta R.T. 0.02 min
Lab File: VL039489.D
Acq: 19 Jul 2022 19:45

Tgt Ion: 45 Resp: 12883
Ion Ratio Lower Upper
45 100
46 86.8 22.8 91.2





#15

Acetone

Concen: 12.810 ppbv

RT: 3.86 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

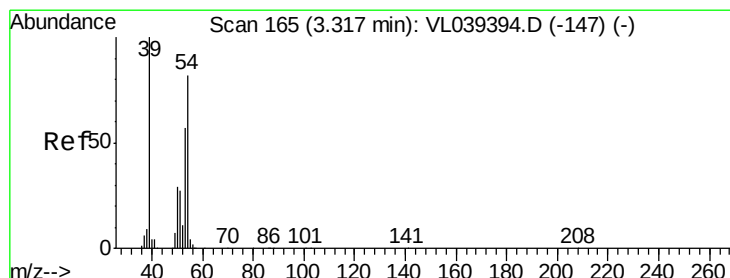
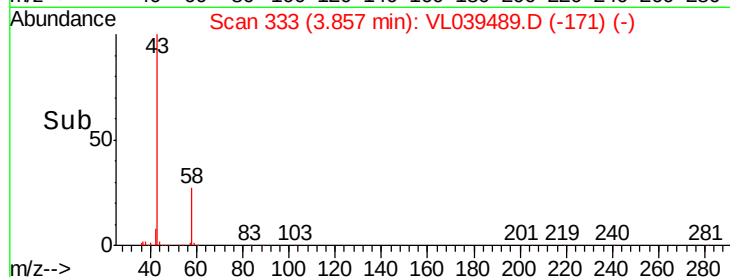
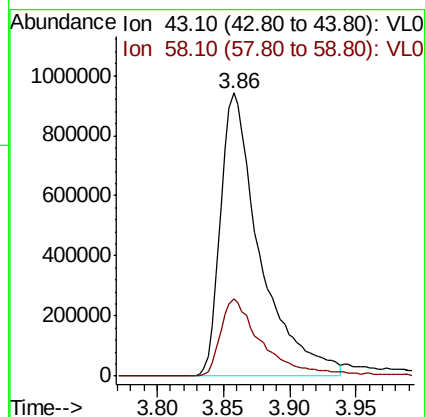
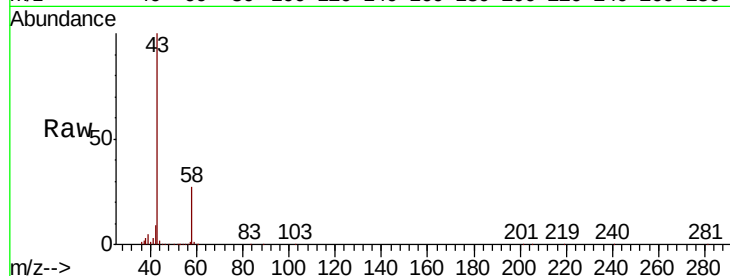
Acq: 19 Jul 2022 19:45 SV-3

Tot Ion: 43 Resp: 1950969

Ion Ratio Lower Upper

43 100

58 29.6 21.0 31.6



#16

1,3-Butadiene

Concen: 1.086 ppbv

RT: 3.32 min Scan# 166

Delta R.T. 0.00 min

Lab File: VL039489.D

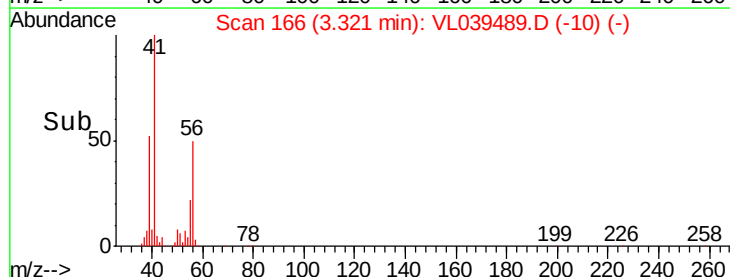
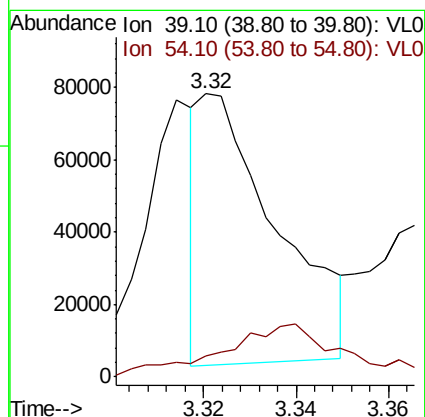
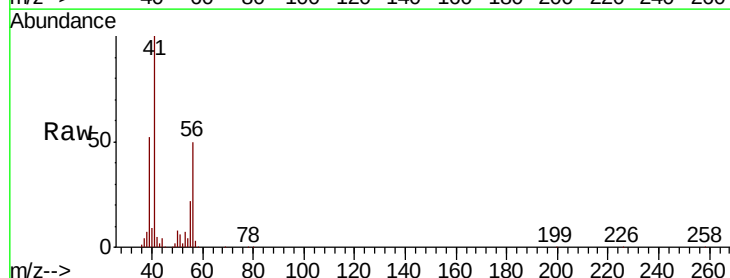
Acq: 19 Jul 2022 19:45

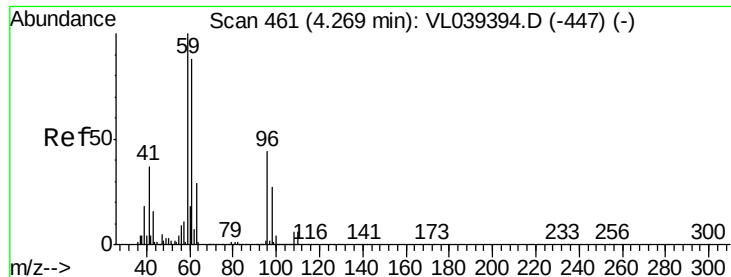
Tgt Ion: 39 Resp: 85783

Ion Ratio Lower Upper

39 100

54 34.5 63.7 95.5#





#17

tert-Butyl alcohol

Concen: 0.165 ppbv

RT: 4.29 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

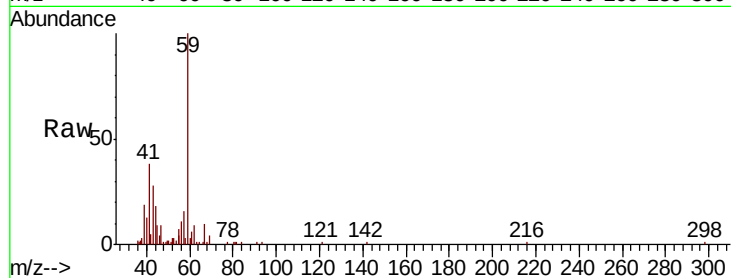
Acq: 19 Jul 2022 19:45 SV-3

Tot Ion: 59 Resp: 21322

Ion Ratio Lower Upper

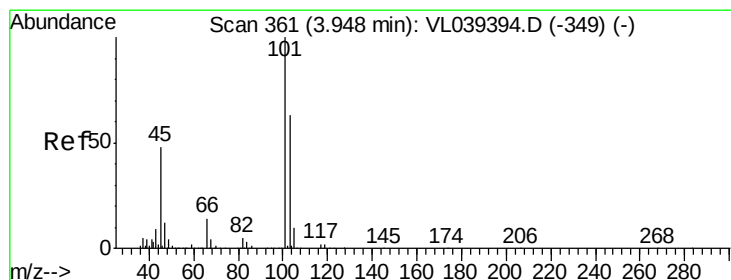
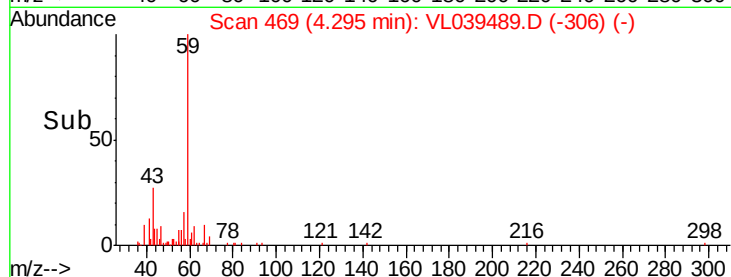
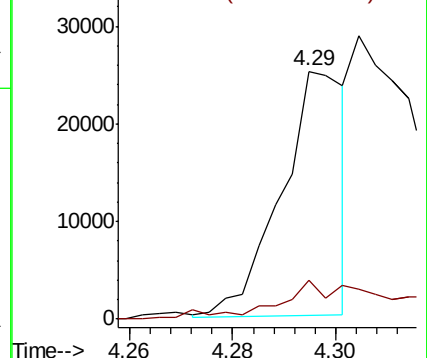
59 100

57 41.7 8.7 13.1#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#19

Isopropyl Alcohol

Concen: 0.589 ppbv

RT: 3.98 min Scan# 371

Delta R.T. 0.03 min

Lab File: VL039489.D

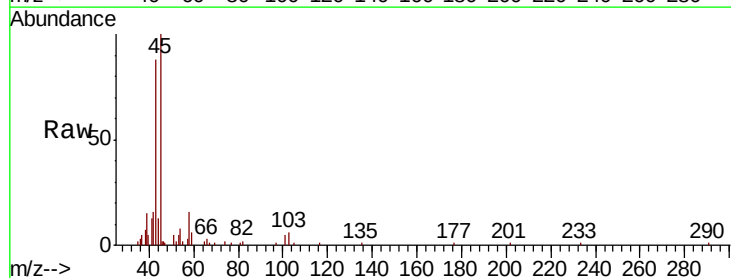
Acq: 19 Jul 2022 19:45

Tgt Ion: 45 Resp: 47877

Ion Ratio Lower Upper

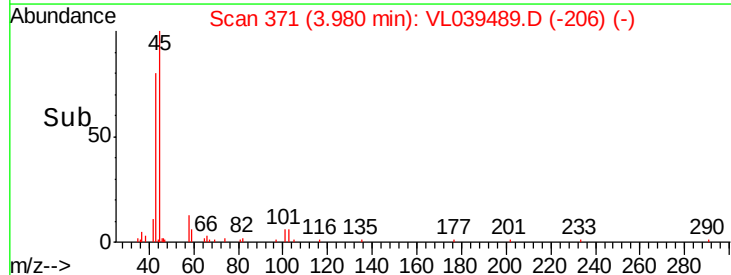
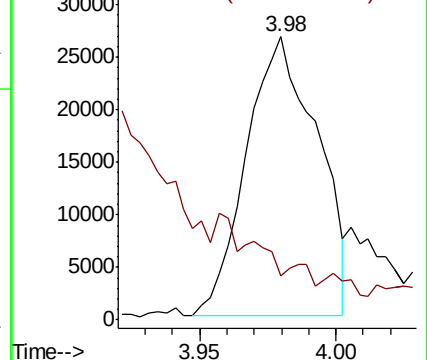
45 100

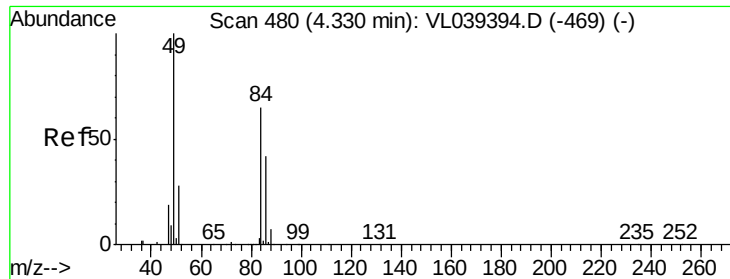
58 0.0 3.2 4.8#



Abundance Ion 45.10 (44.80 to 45.80): VL0

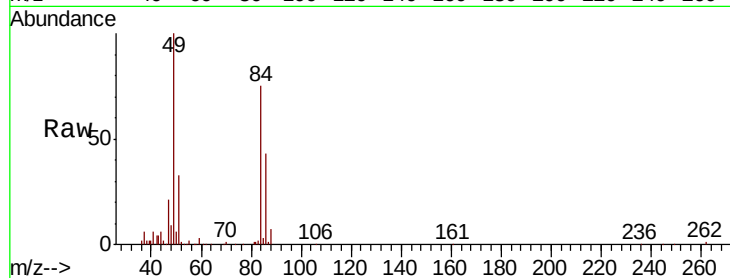
Ion 58.10 (57.80 to 58.80): VL0





#20
Methvlene Chloride
Concen: 1.953 ppbv
RT: 4.36
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
SV-3
Acq: 19 Jul 2022 19:45

Tot Ion:	84	Resp:	118552
Ion	Ratio	Lower	Upper
84	100		
49	133.3	123.1	184.7
51	43.1	34.4	51.6
86	57.4	51.1	76.7



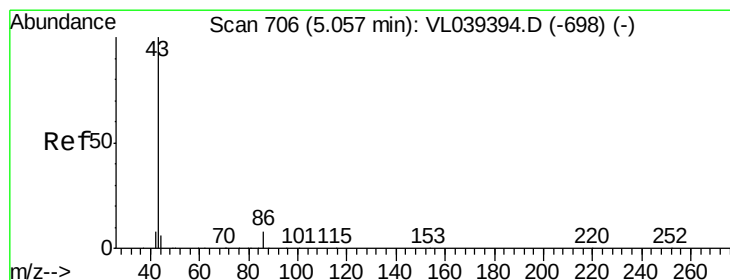
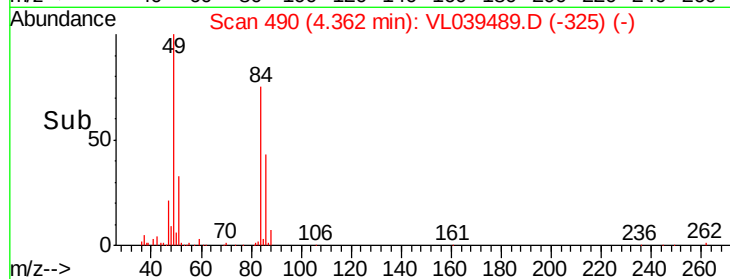
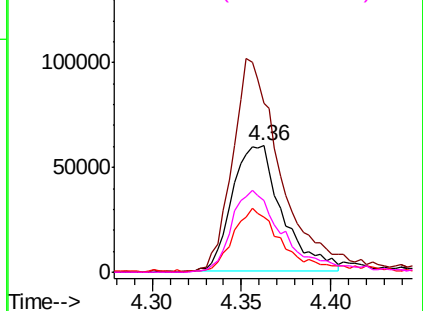
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

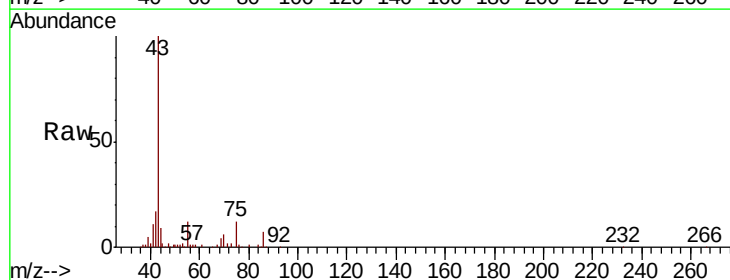
Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#23
Vinyl Acetate
Concen: 0.945 ppbv
RT: 5.08 min Scan# 714
Delta R.T. 0.03 min
Lab File: VL039489.D
Acq: 19 Jul 2022 19:45

Tgt Ion:	43	Resp:	96221
Ion	Ratio	Lower	Upper
43	100		
86	7.1	5.0	7.6
42	15.7	7.7	11.5#
44	4.0	4.6	7.0#



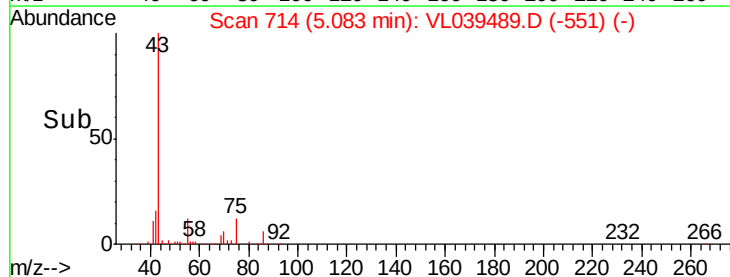
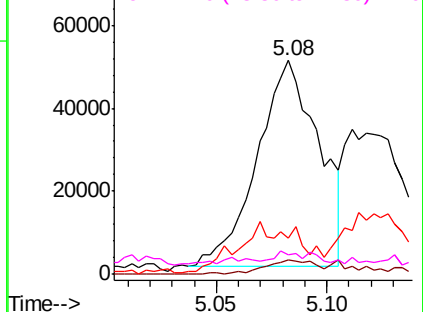
Abundance

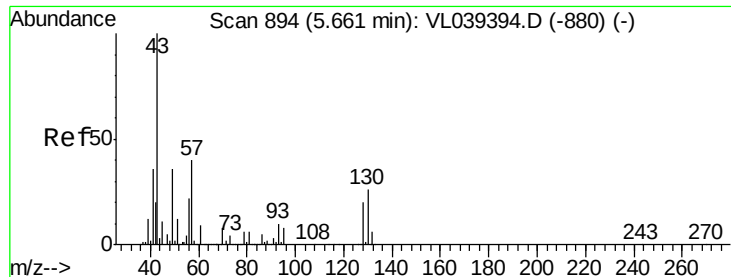
Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

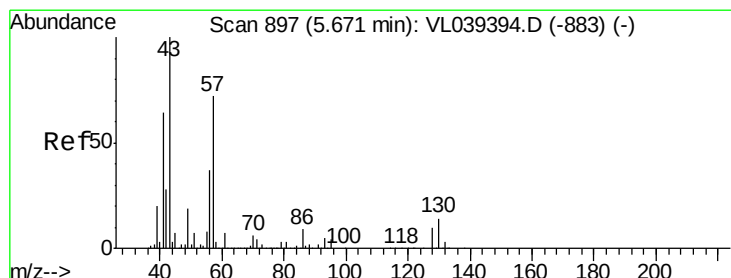
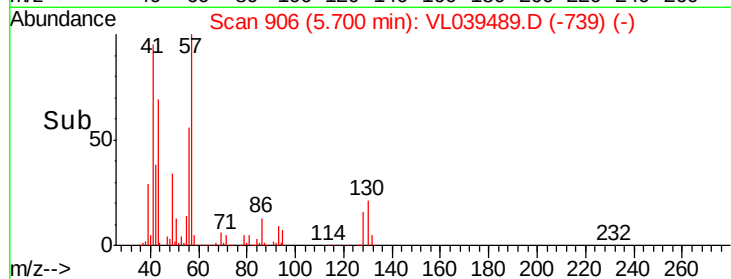
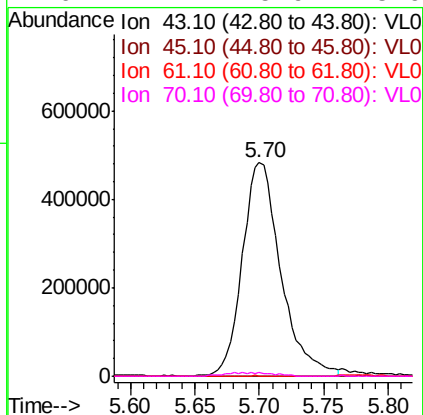
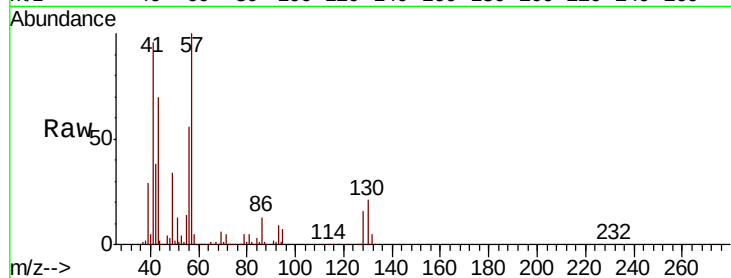
Ion 44.10 (43.80 to 44.80): VL0





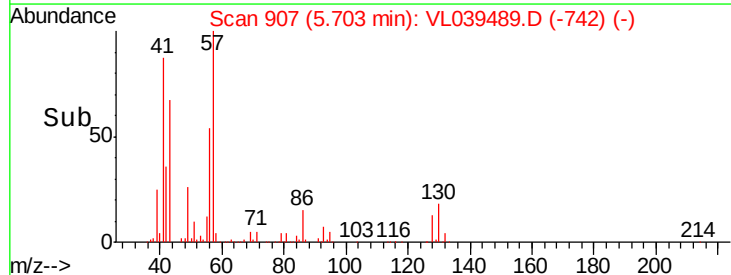
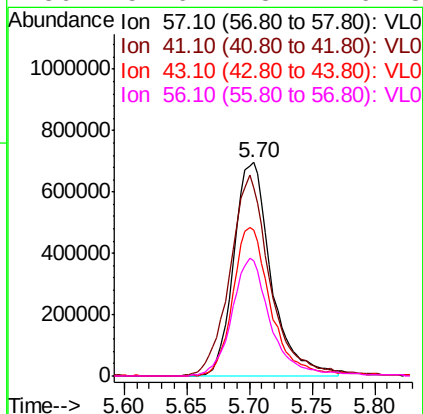
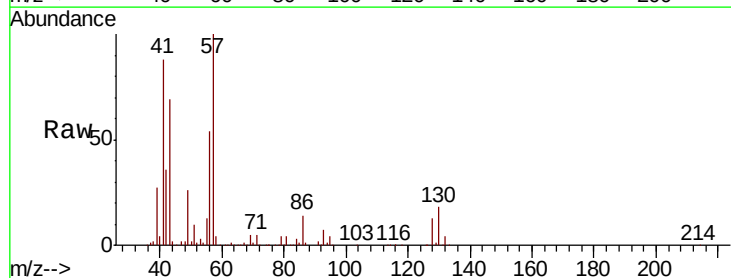
#25
Ethyl Acetate
Concen: 3.206 ppbv
RT: 5.70 min
Delta R.T.: 0.03 min
Lab File: VL039489.D
Acq: 19 Jul 2022 19:45

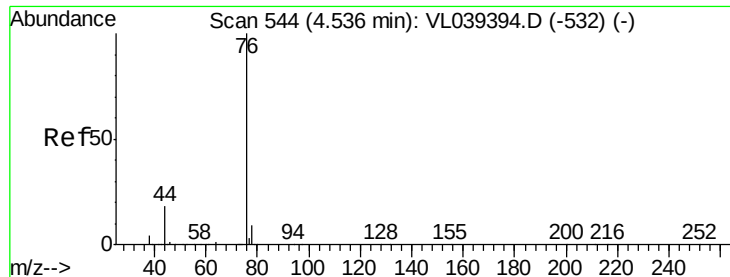
Tot Ion:	43	Resp:	1001307
Ion	Ratio	Lower	Upper
43	100		
45	0.2	8.2	12.4#
61	0.3	8.3	12.5#
70	2.4	5.9	8.9#



#26
Hexane
Concen: 11.480 ppbv
RT: 5.70 min Scan# 907
Delta R.T.: 0.03 min
Lab File: VL039489.D
Acq: 19 Jul 2022 19:45

Tgt Ion:	57	Resp:	1445058
Ion	Ratio	Lower	Upper
57	100		
41	102.9	76.9	115.3
43	71.1	191.0	286.6#
56	57.6	43.2	64.8





#27

Carbon Disulfide

Concen: 0.313 ppbv

RT: 4.56 Instrument: MSVOA_1

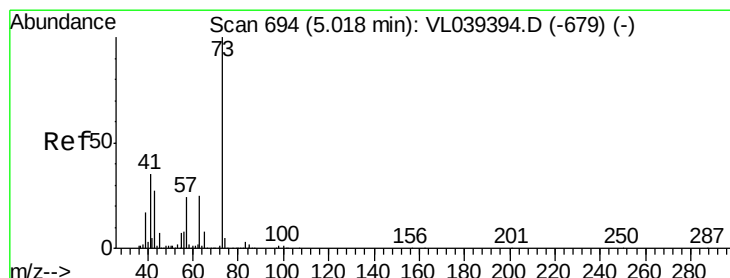
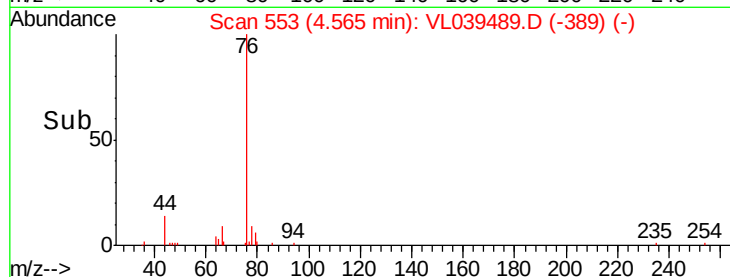
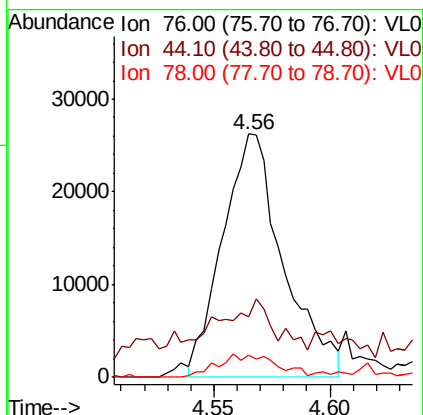
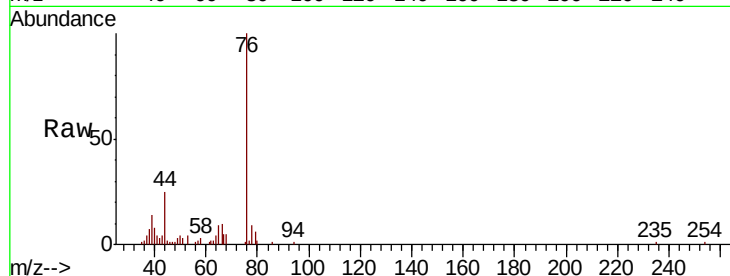
Delta R.T. ClientSampleId:

Lab File: SV-3

Acq: 19 Jul 2022 19:45

Tot Ion: 76 Resp: 47596

Ion	Ratio	Lower	Upper
76	100		
44	40.1	14.6	21.8#
78	10.0	7.8	11.6



#28

Methyl tert-Butyl Ether

Concen: 0.064 ppbv

RT: 5.05 min Scan# 703

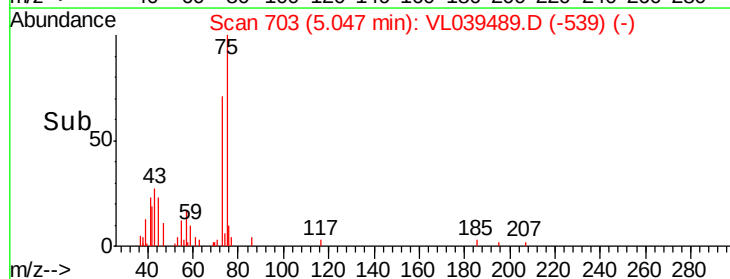
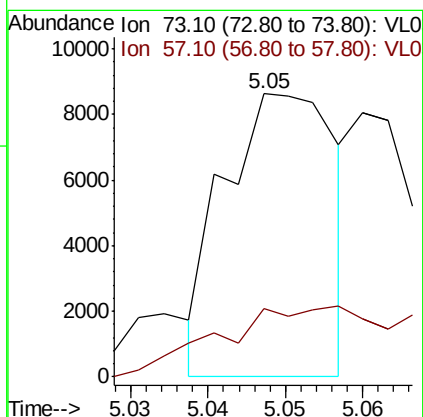
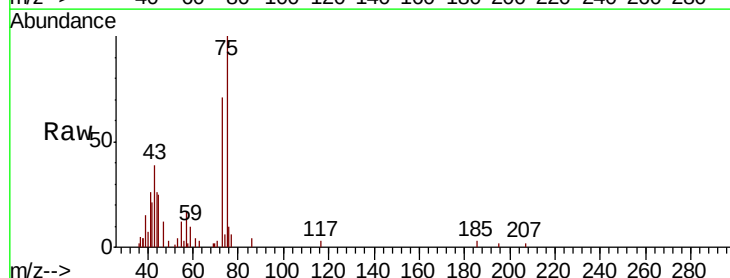
Delta R.T. 0.03 min

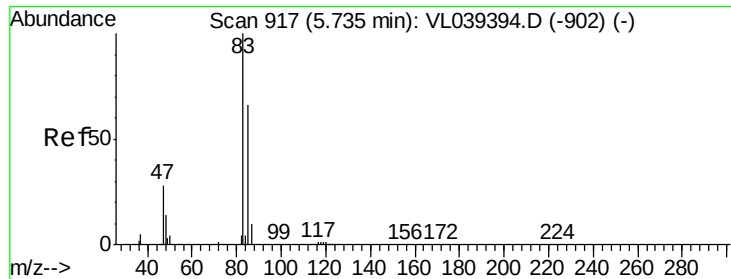
Lab File: VL039489.D

Acq: 19 Jul 2022 19:45

Tgt Ion: 73 Resp: 8631

Ion	Ratio	Lower	Upper
73	100		
57	0.0	19.8	29.8#





#29

Chloroform

Concen: 0.637 ppbv

RT: 5.76 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

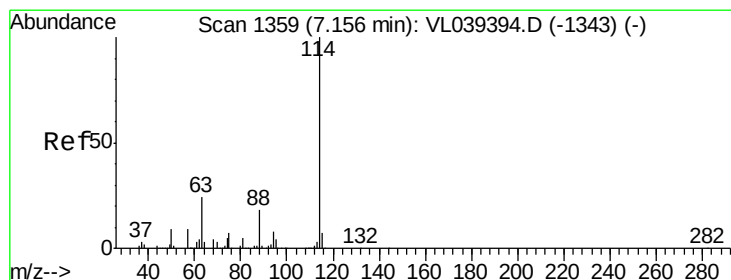
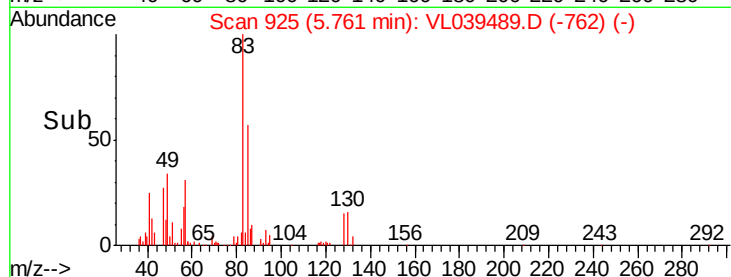
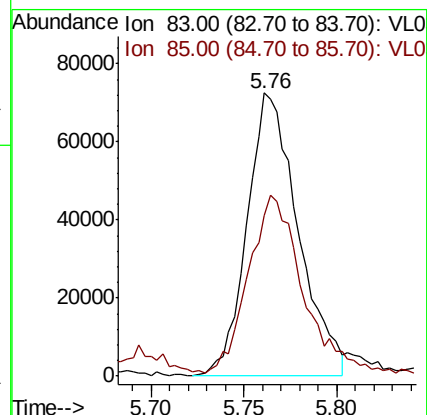
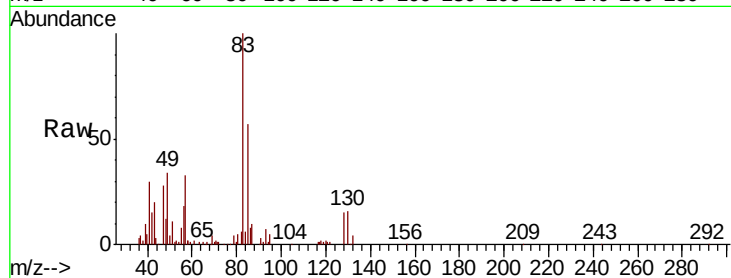
Acq: 19 Jul 2022 19:45 SV-3

Tot Ion: 83 Resp: 139337

Ion Ratio Lower Upper

83 100

85 54.9 52.8 79.2



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. 0.03 min

Lab File: VL039489.D

Acq: 19 Jul 2022 19:45

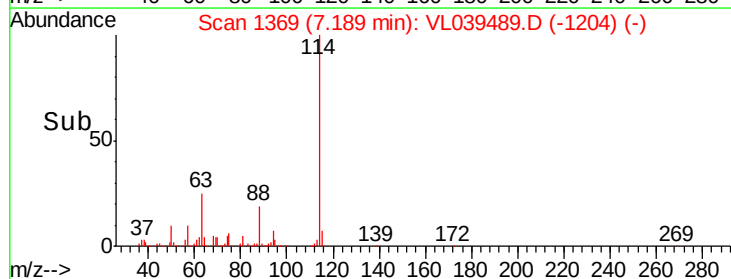
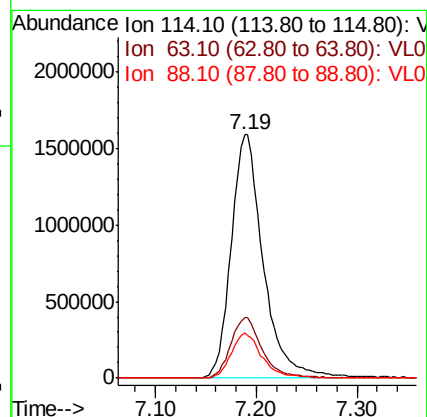
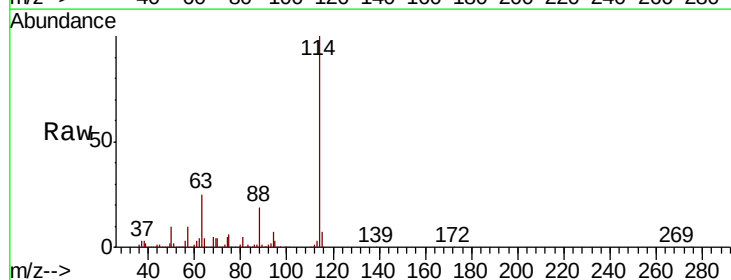
Tgt Ion: 114 Resp: 3512187

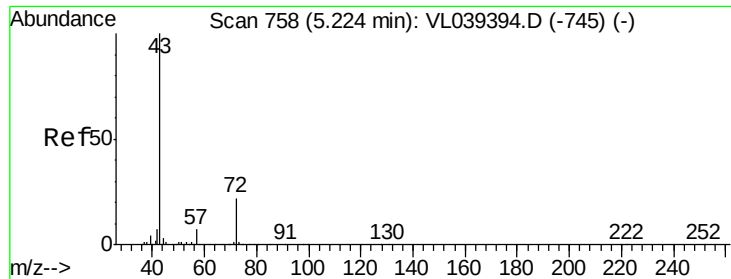
Ion Ratio Lower Upper

114 100

63 24.8 20.2 30.4

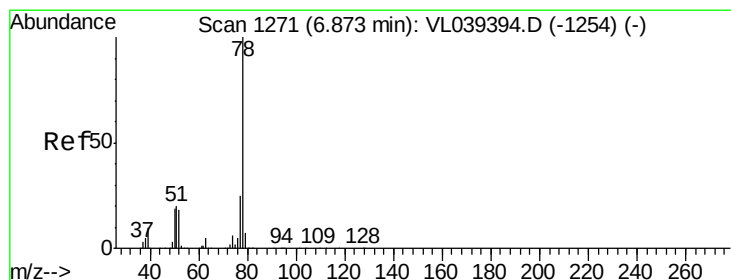
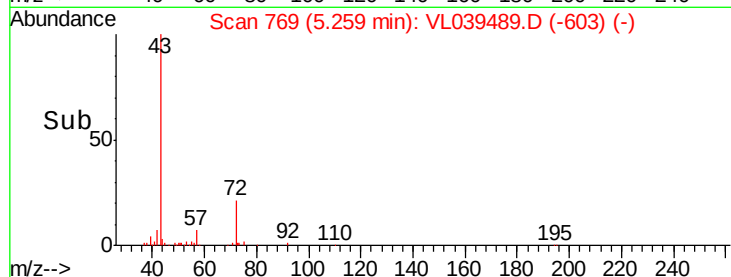
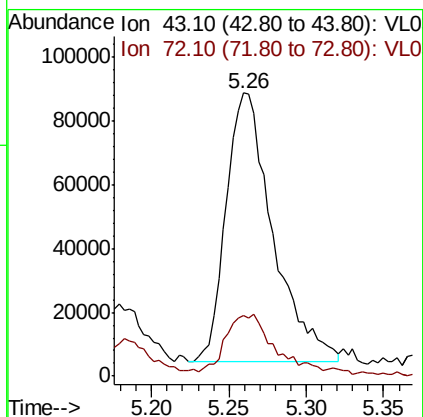
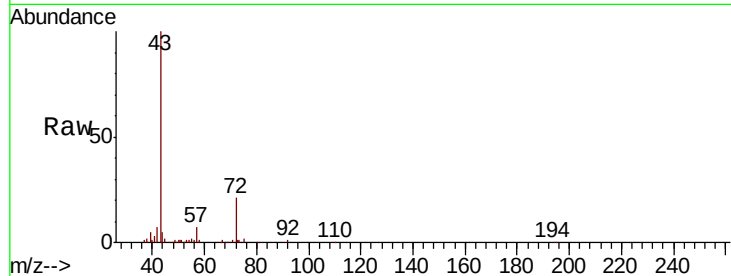
88 18.0 14.5 21.7





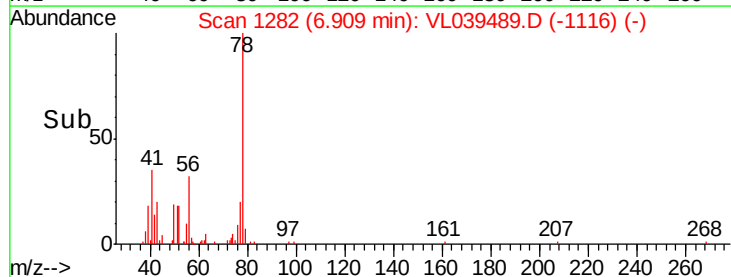
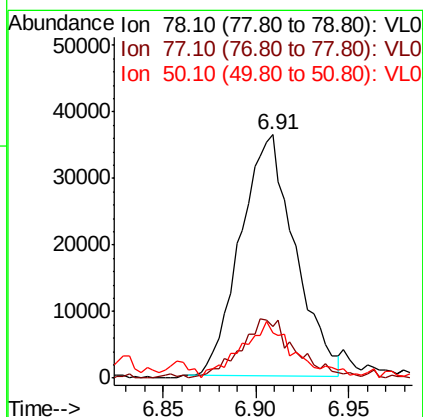
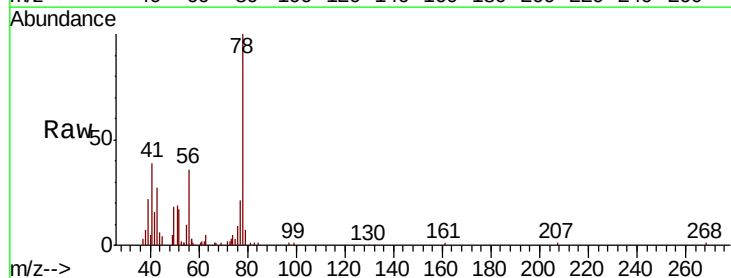
#34
 2-Butanone
 Concen: 1.005 ppbv
 RT: 5.26
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SV-3
 Acq: 19 Jul 2022 19:45

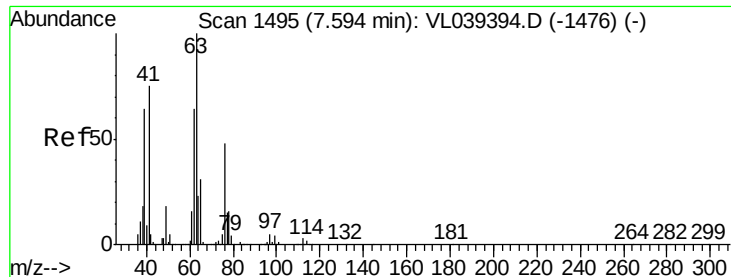
Tot Ion: 43 Resp: 177653
 Ion Ratio Lower Upper
 43 100
 72 27.6 17.9 26.9#



#36
 Benzene
 Concen: 0.274 ppbv
 RT: 6.91 min Scan# 1282
 Delta R.T. 0.04 min
 Lab File: VL039489.D
 Acq: 19 Jul 2022 19:45

Tgt Ion: 78 Resp: 74414
 Ion Ratio Lower Upper
 78 100
 77 21.4 20.3 30.5
 50 15.4 15.5 23.3#





#39

1,2-Dichloropropane

Concen: 8.412 ppbv

RT: 7.19 Instrument:

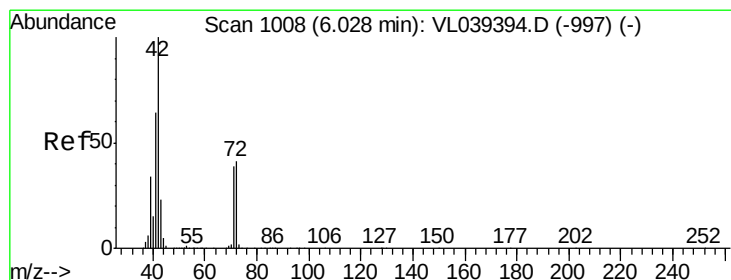
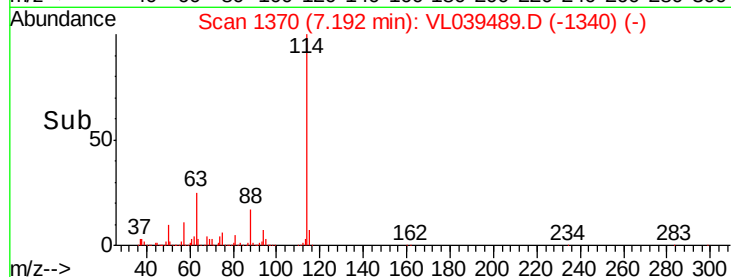
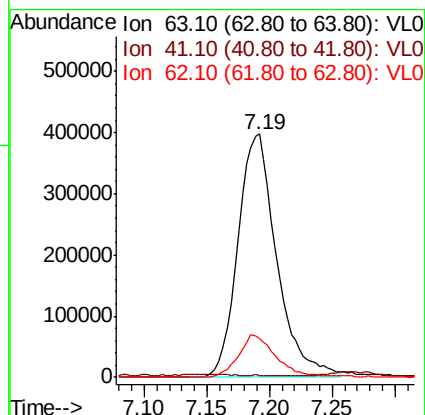
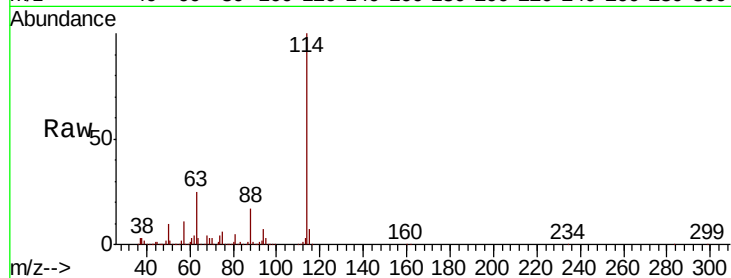
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 19 Jul 2022 19:45 SV-3

Tot Ion: 63 Resp: 854177

Ion	Ratio	Lower	Upper
63	100		
41	0.0	59.6	89.4#
62	16.0	51.4	77.0#



#41

Tetrahydrofuran

Concen: 5.337 ppbv

RT: 5.70 min Scan# 906

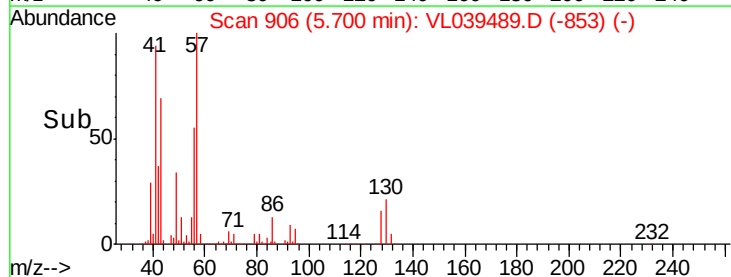
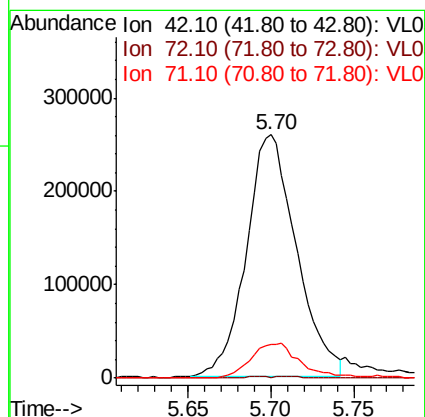
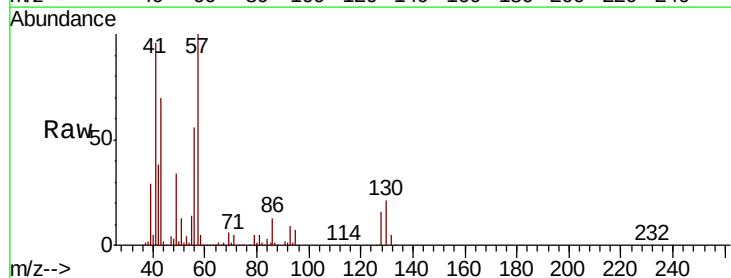
Delta R.T. -0.33 min

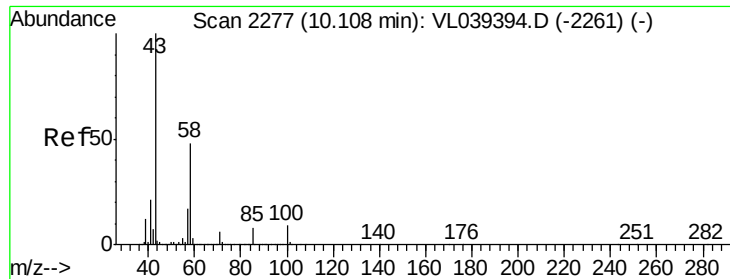
Lab File: VL039489.D

Acq: 19 Jul 2022 19:45

Tgt Ion: 42 Resp: 546778

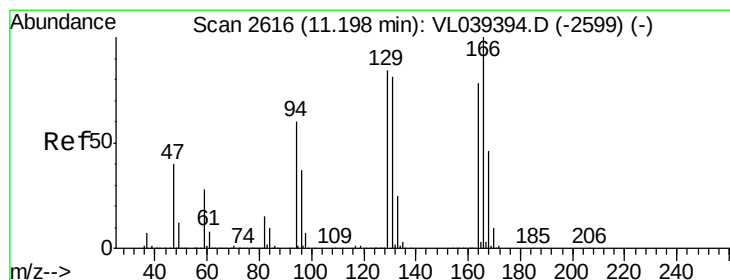
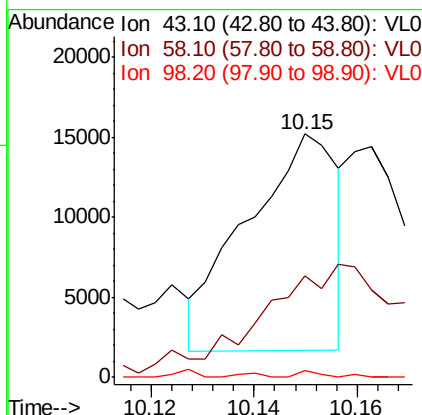
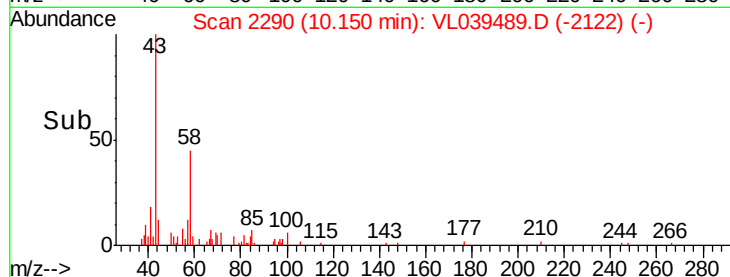
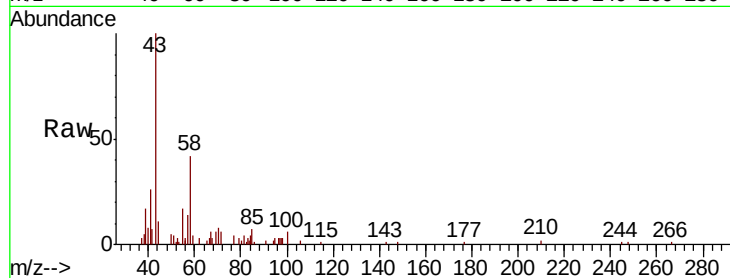
Ion	Ratio	Lower	Upper
42	100		
72	1.0	31.8	47.8#
71	14.8	31.8	47.8#





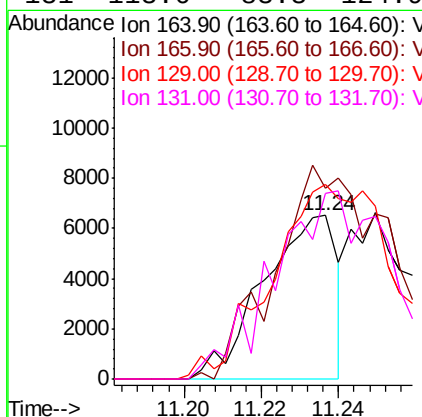
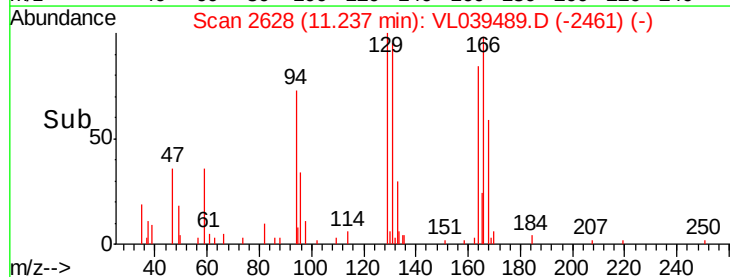
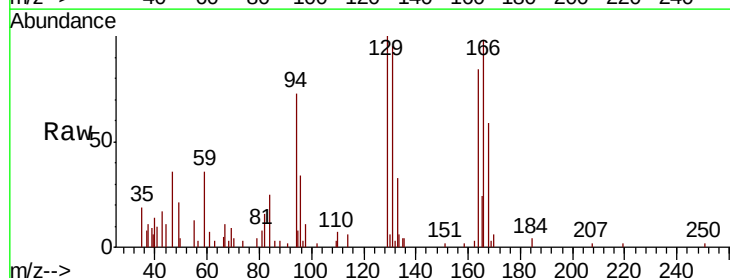
#51
2-Hexanone
Concen: 0.082 ppbv
RT: 10.15 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId : SV-3
Acq: 19 Jul 2022 19:45

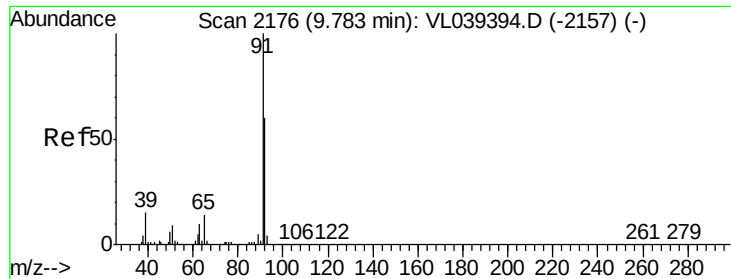
Tot Ion	Ratio	Lower	Upper
43	100		
58	0.0	38.4	57.6#
98	1.0	0.3	0.5#



#52
Tetrachloroethene
Concen: 0.078 ppbv
RT: 11.24 min Scan# 2628
Delta R.T. 0.04 min
Lab File: VL039489.D
Acq: 19 Jul 2022 19:45

Tgt Ion	Ratio	Lower	Upper
164	100		
166	116.5	102.2	153.2
129	116.7	85.8	128.8
131	113.6	83.3	124.9





#53

Toluene

Concen: 0.419 ppbv

RT: 9.82 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId: SV-3

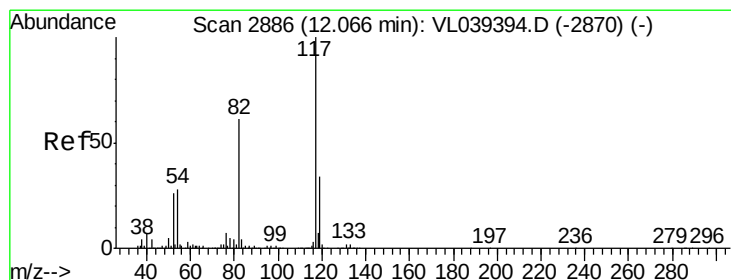
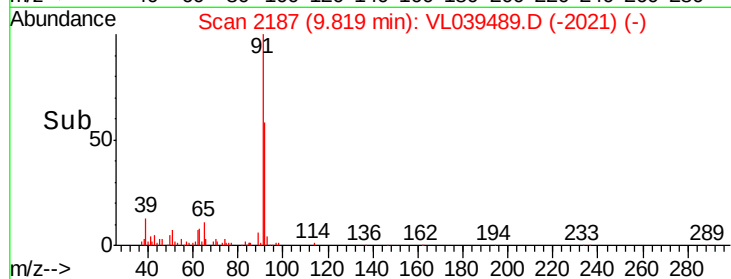
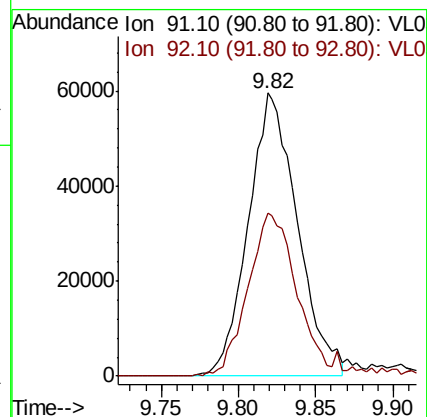
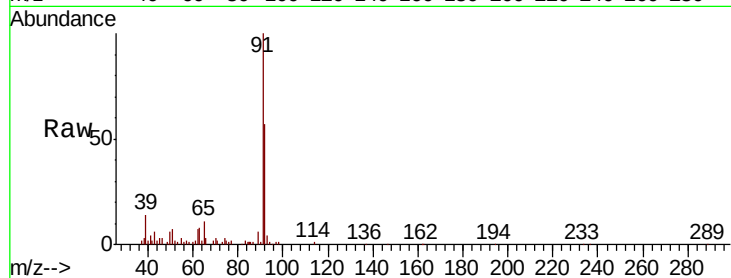
Acq: 19 Jul 2022 19:45

Tot Ion: 91 Resp: 131437

Ion Ratio Lower Upper

91 100

92 58.6 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2897

Delta R.T. 0.04 min

Lab File: VL039489.D

Acq: 19 Jul 2022 19:45

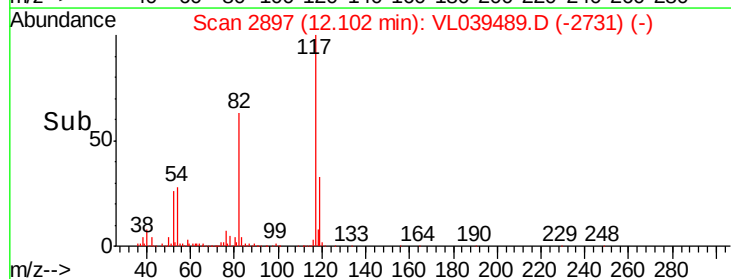
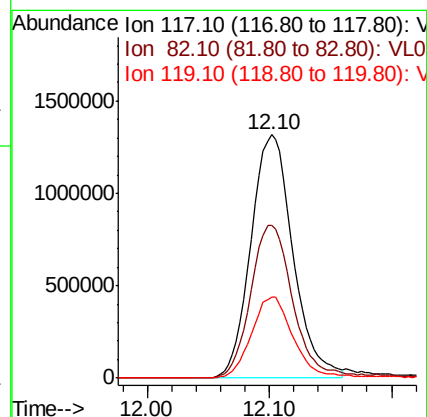
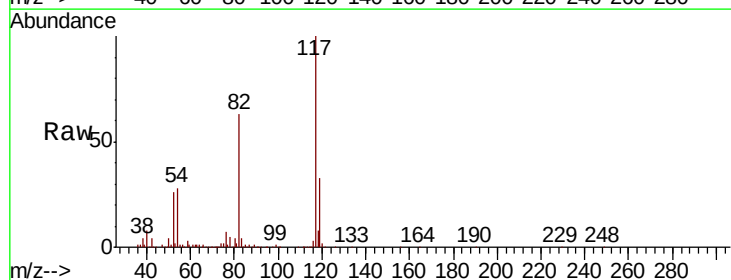
Tgt Ion: 117 Resp: 3143660

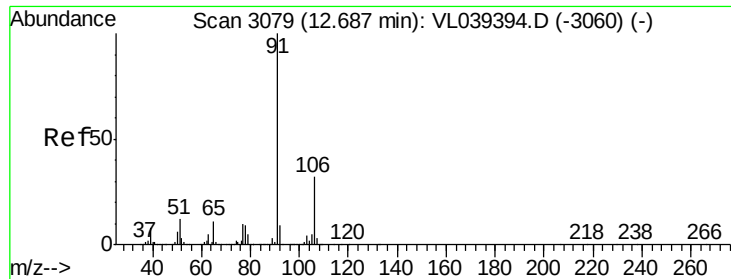
Ion Ratio Lower Upper

117 100

82 65.2 50.8 76.2

119 34.0 24.1 36.1





#58

Ethyl Benzene

Concen: 0.032 ppbv

RT: 12.97

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

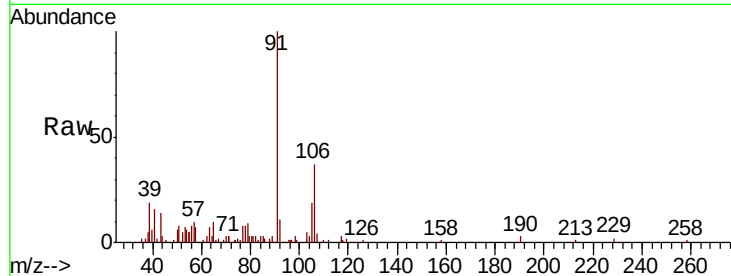
Acq: 19 Jul 2022 19:45

Tot Ion: 91 Resp: 13166

Ion Ratio Lower Upper

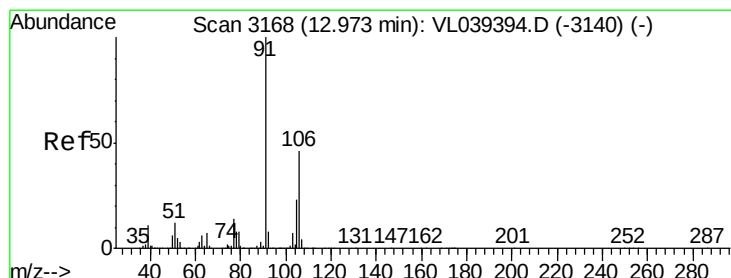
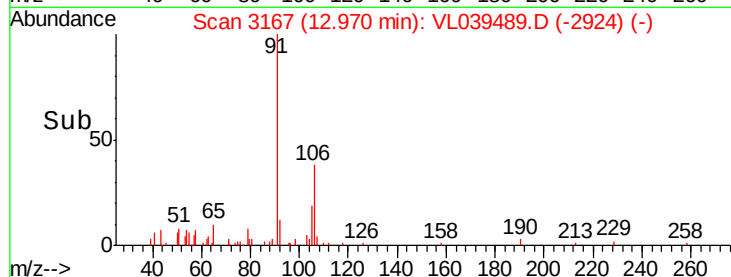
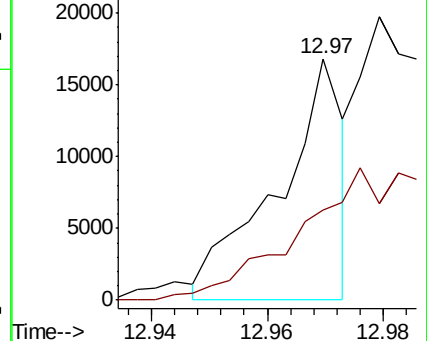
91 100

106 36.9 25.4 38.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.055 ppbv

RT: 13.00 min Scan# 3177

Delta R.T. 0.03 min

Lab File: VL039489.D

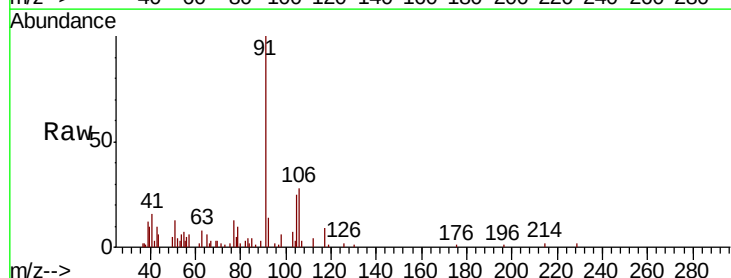
Acq: 19 Jul 2022 19:45

Tgt Ion: 91 Resp: 19764

Ion Ratio Lower Upper

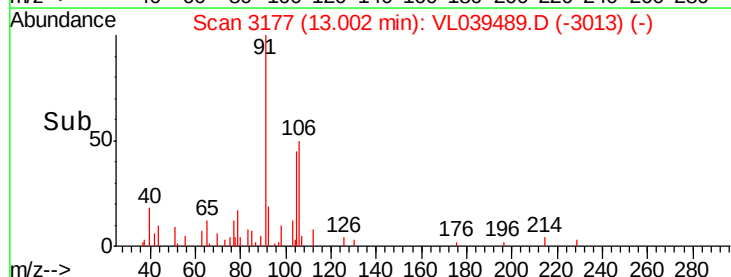
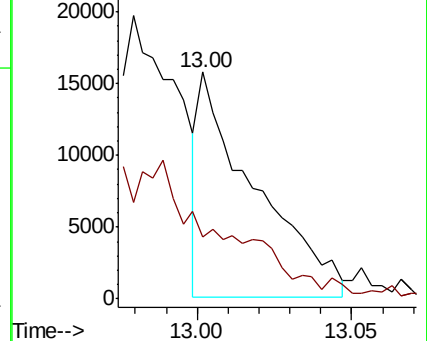
91 100

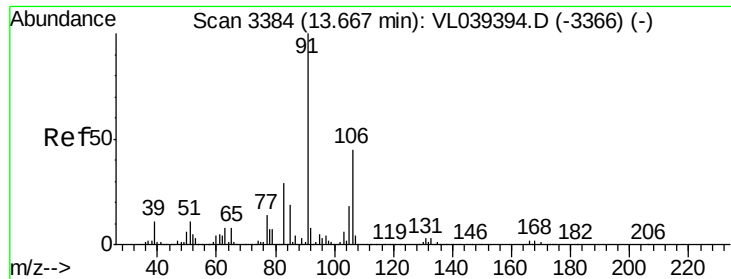
106 0.0 35.4 53.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0

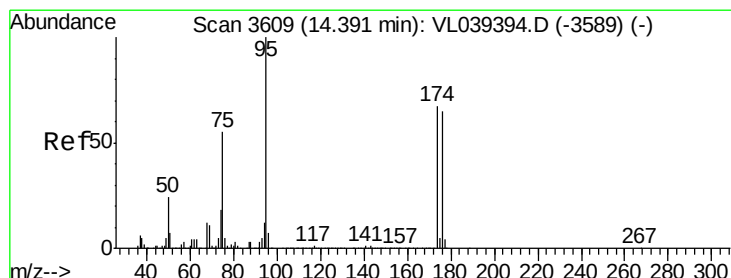
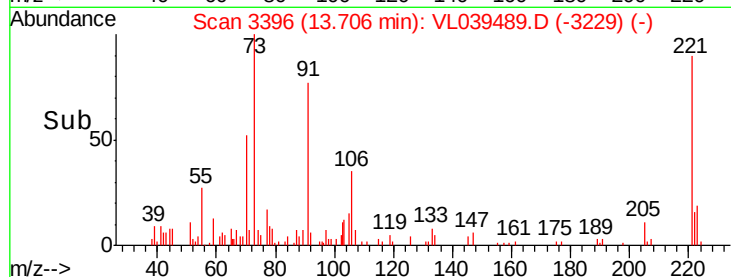
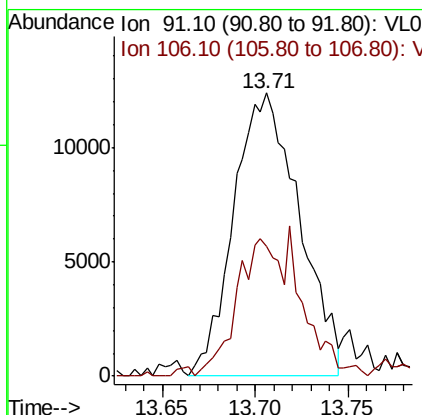
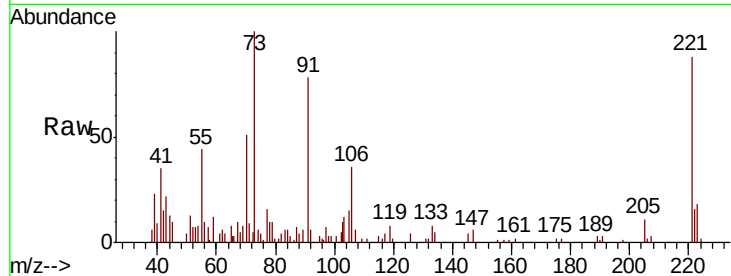
Ion 106.10 (105.80 to 106.80): V





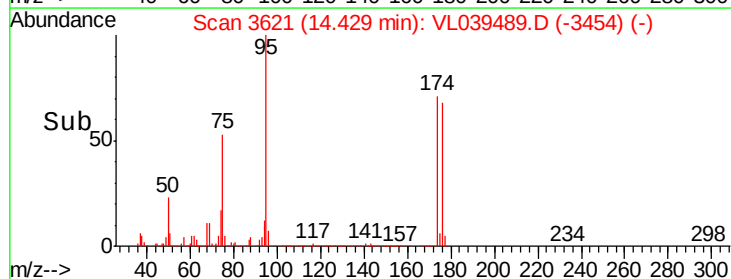
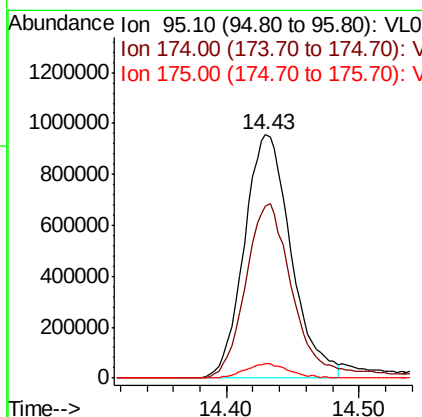
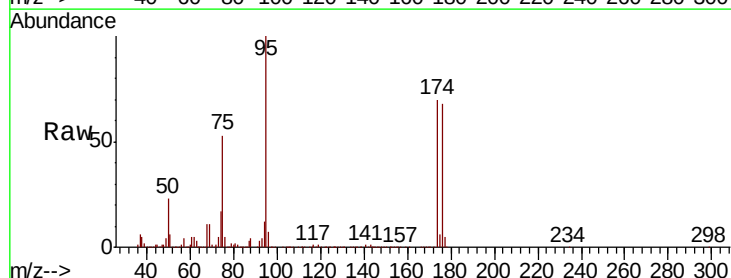
#60
o-Xylene
Concen: 0.090 ppbv
RT: 13.71 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId : SV-3
Acq: 19 Jul 2022 19:45

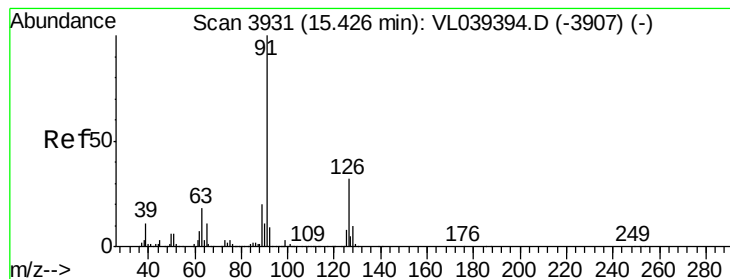
Tot Ion: 91 Resp: 30496
Ion Ratio Lower Upper
91 100
106 48.0 22.4 67.3



#68
1-Bromo-4-Fluorobenzene
Concen: 10.064 ppbv
RT: 14.43 min Scan# 3621
Delta R.T. 0.04 min
Lab File: VL039489.D
Acq: 19 Jul 2022 19:45

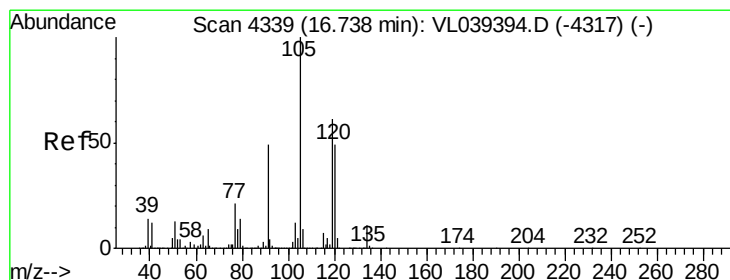
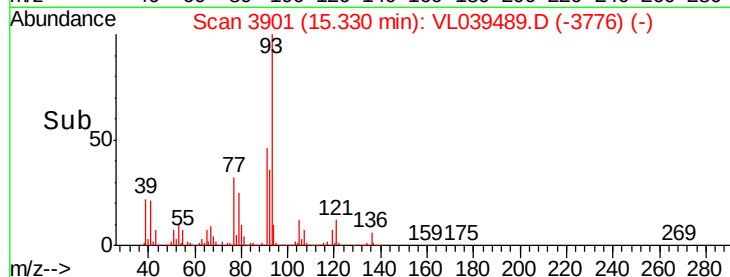
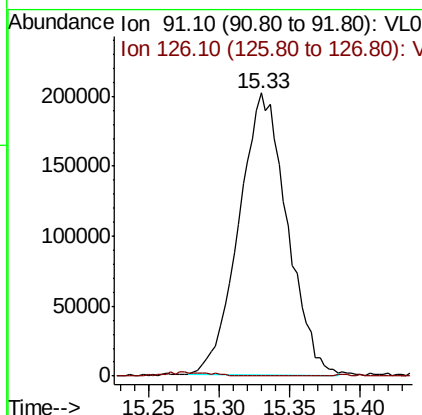
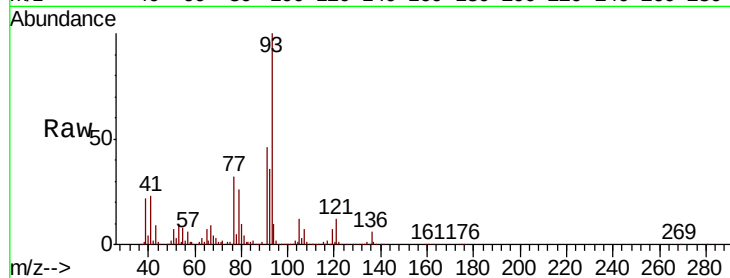
Tgt Ion: 95 Resp: 2346958
Ion Ratio Lower Upper
95 100
174 75.8 55.9 83.9
175 6.0 4.2 6.4





#71
 2-Chlorotoluene
 Concen: 1.306 ppbv
 RT: 15.33 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId : SV-3
 Acq: 19 Jul 2022 19:45

Tot Ion: 91 Resp: 482260
 Ion Ratio Lower Upper
 91 100
 126 0.5 13.0 51.8#



#74
 1,2,4-Trimethylbenzene
 Concen: 0.203 ppbv
 RT: 16.78 min Scan# 4352
 Delta R.T.: 0.04 min
 Lab File: VL039489.D
 Acq: 19 Jul 2022 19:45

Tgt Ion: 105 Resp: 82131
 Ion Ratio Lower Upper
 105 100
 120 38.4 39.5 59.3#
 91 7.3 39.2 58.8#
 77 7.1 17.2 25.8#

