

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL082522\
 Data File : VL039588.D
 Acq On : 25 Aug 2022 21:44
 Operator : SY/AP
 Sample : N4351-02DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

Quant Time: Aug 26 06:26:45 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL081722AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Aug 26 06:05:16 2022
 Response via : Initial Calibration

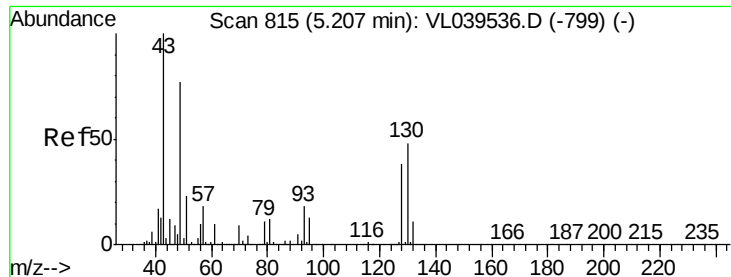
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.20	49	989894	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	6.66	114	2557681	10.00	ppbv	0.00
55) Chlorobenzene-d5	11.47	117	2266709	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	13.78	95	1674597	9.79	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.90%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	2.75	85	1517665	11.522	ppbv 99
3) Chlorodifluoromethane	2.69	51	12284161	104.157	ppbv 94
4) Chloromethane	2.83	50	34429	0.485	ppbv # 76
8) Dichlorotetrafluoroethane	2.75	85	1517665	10.770	ppbv # 13
9) Propene	2.72	41	55255	1.024	ppbv 97
10) Heptane	7.57	43	4284	0.034	ppbv # 1
11) Trichlorofluoromethane	3.58	101	35726	0.247	ppbv 86
12) 1,1,2-Trichlorotrifluoroet	4.08	101	3489	0.033	ppbv # 1
13) Ethanol	3.26	45	271394	69.976	ppbv 69
15) Acetone	3.48	43	2335689	21.064	ppbv 98
16) 1,3-Butadiene	2.98	39	11521	0.199	ppbv # 36
17) tert-Butyl alcohol	3.91	59	7996	0.084	ppbv # 71
19) Isopropyl Alcohol	3.60	45	141799	2.629	ppbv # 1
20) Methylene Chloride	3.95	84	1475604	32.756	ppbv 96
23) Vinyl Acetate	4.63	43	147764	2.803	ppbv # 94
25) Ethyl Acetate	5.22	43	761077	3.208	ppbv # 76
26) Hexane	5.22	57	1079435	11.147	ppbv # 39
27) Carbon Disulfide	4.14	76	6152	0.059	ppbv # 1
29) Chloroform	5.29	83	55799	0.368	ppbv 85
30) Cyclohexane	6.61	84	3187	0.040	ppbv # 1
34) 2-Butanone	4.80	43	119688	0.941	ppbv 98
36) Benzene	6.38	78	10416	0.053	ppbv # 92
39) 1,2-Dichloropropane	6.66	63	605587	8.262	ppbv # 25
41) Tetrahydrofuran	5.58	42	22085	0.291	ppbv 96
42) Bromodichloromethane	7.25	83	6855	0.047	ppbv # 97
44) 2,2,4-Trimethylpentane	7.33	57	10560	0.032	ppbv # 1
51) 2-Hexanone	9.56	43	6847	0.047	ppbv # 29
53) Toluene	9.23	91	69730	0.320	ppbv # 25
59) m/p-Xylene	12.35	91	21601	0.092	ppbv # 32
71) 2-Chlorotoluene	14.67	91	439756	1.790	ppbv # 42

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.20 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Aug 2022 21:44

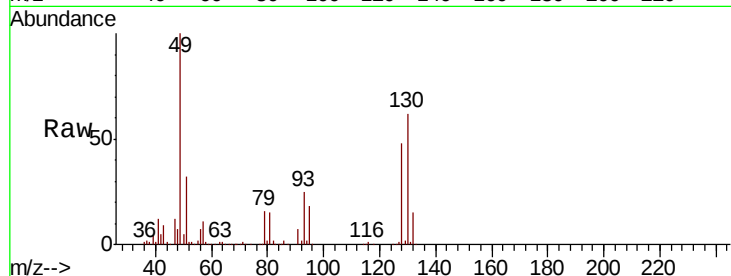
Tot Ion: 49 Resp: 989894

Ion Ratio Lower Upper

49 100

128 51.0 26.7 80.0

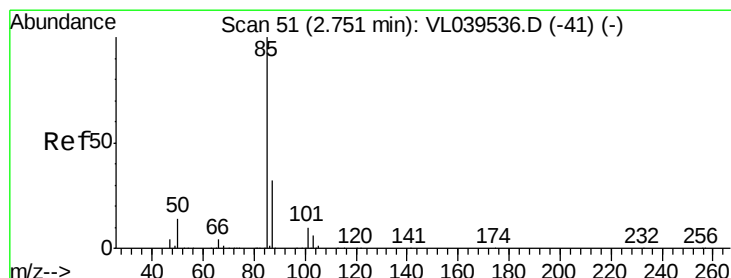
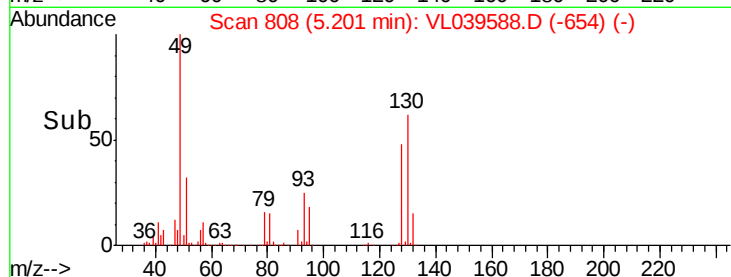
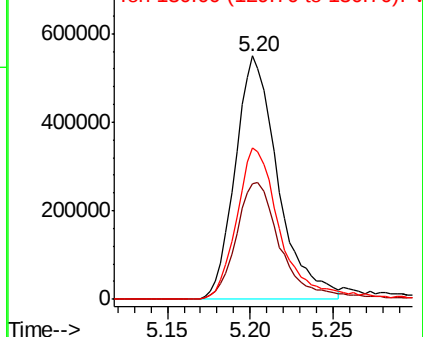
130 64.8 34.3 102.8



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: 11.522 ppbv

RT: 2.75 min Scan# 45

Delta R.T. -0.00 min

Lab File: VL039588.D

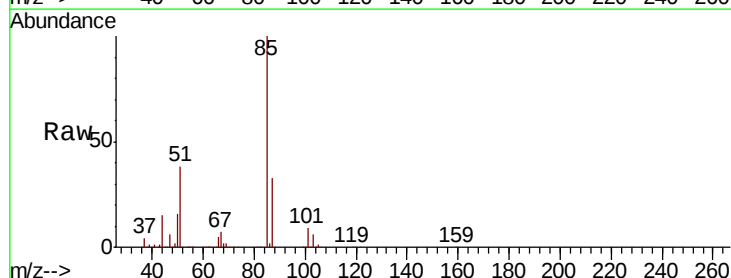
Acq: 25 Aug 2022 21:44

Tgt Ion: 85 Resp: 1517665

Ion Ratio Lower Upper

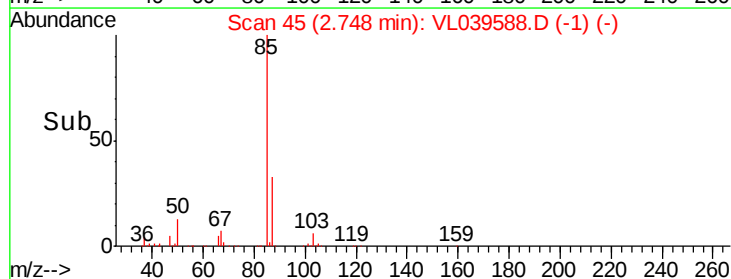
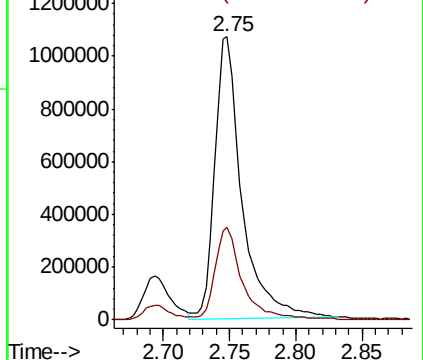
85 100

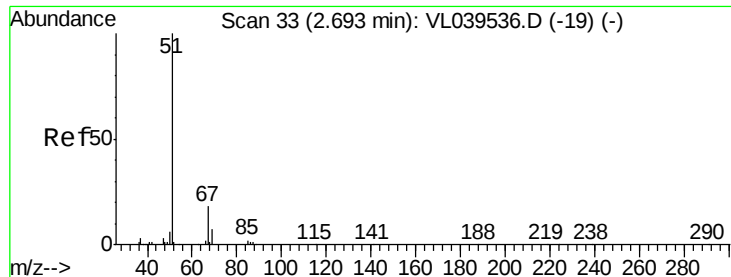
87 32.9 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 104.157 ppbv

RT: 2.69 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

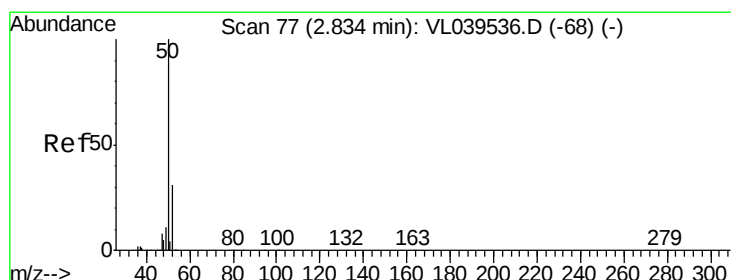
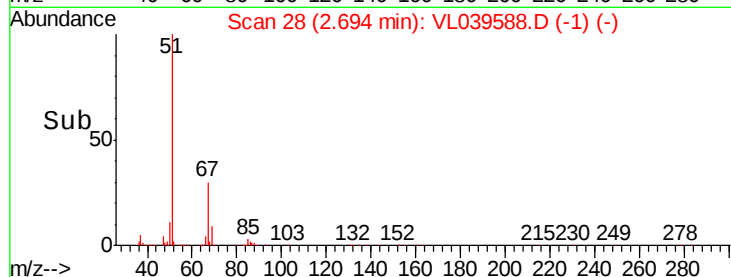
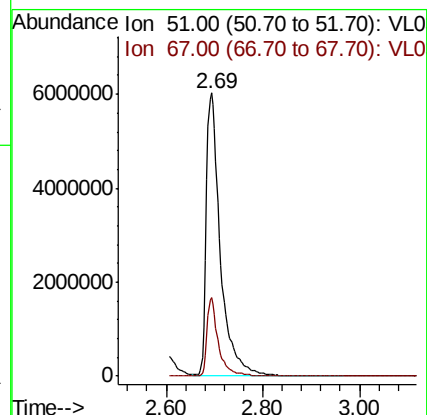
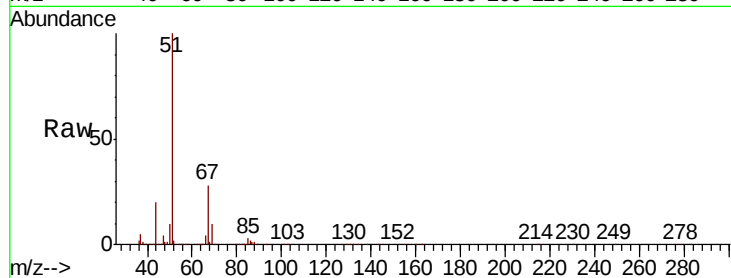
Acq: 25 Aug 2022 21:44

Tot Ion: 51 Resp: 12284161

Ion Ratio Lower Upper

51 100

67 22.3 15.7 23.5



#4

Chloromethane

Concen: 0.485 ppbv

RT: 2.83 min Scan# 70

Delta R.T. -0.01 min

Lab File: VL039588.D

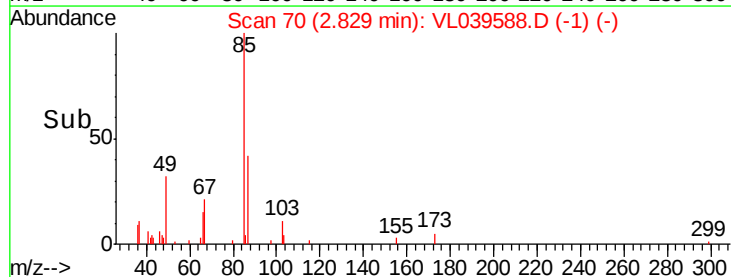
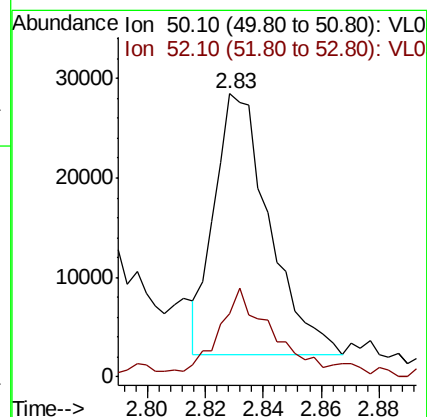
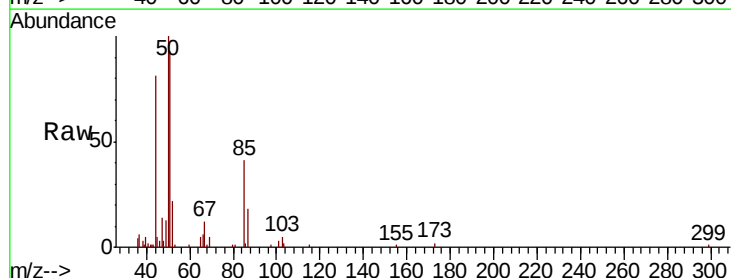
Acq: 25 Aug 2022 21:44

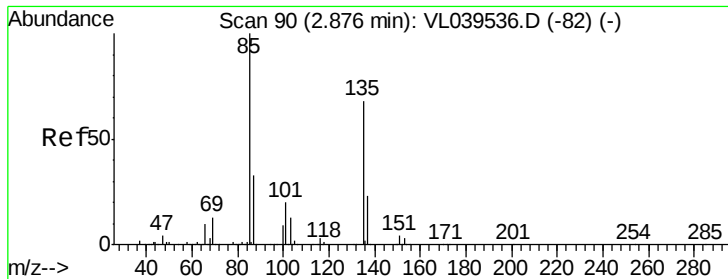
Tgt Ion: 50 Resp: 34429

Ion Ratio Lower Upper

50 100

52 19.6 26.5 39.7#





#8

Dichlorotetrafluoroethane

Concen: 10.770 ppbv

RT: 2.75 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

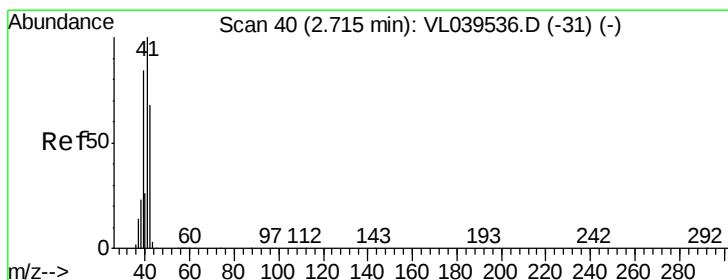
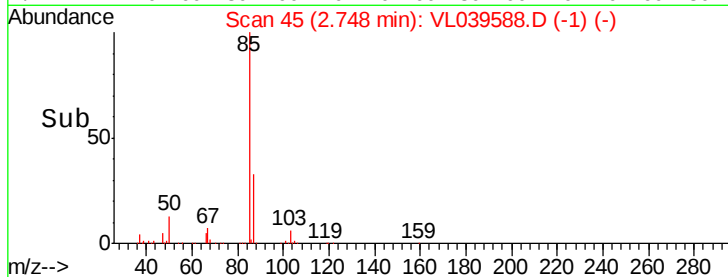
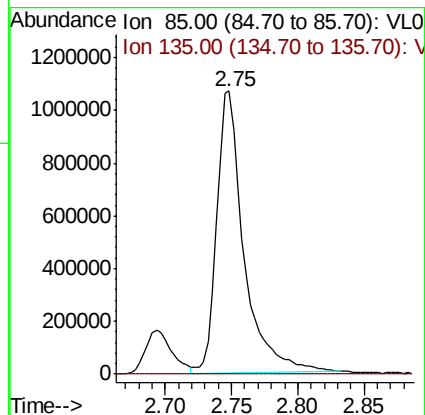
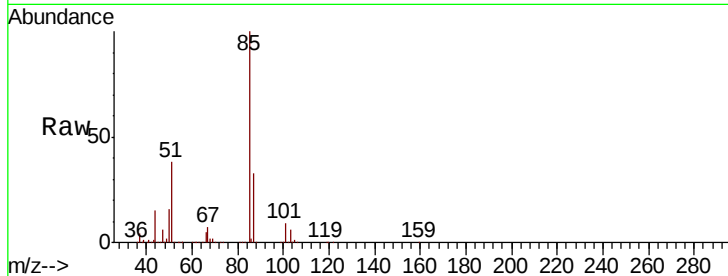
Acq: 25 Aug 2022 21:44

Tot Ion: 85 Resp: 1517665

Ion Ratio Lower Upper

85 100

135 0.2 59.0 88.4#



#9

Propene

Concen: 1.024 ppbv

RT: 2.72 min Scan# 37

Delta R.T. 0.01 min

Lab File: VL039588.D

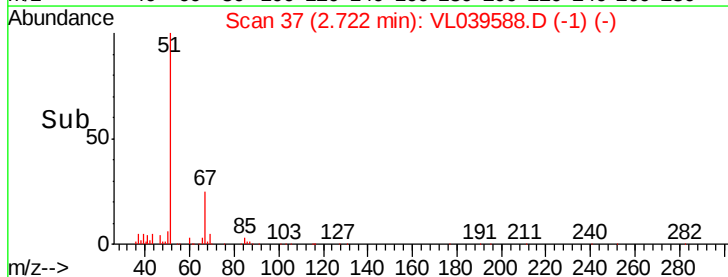
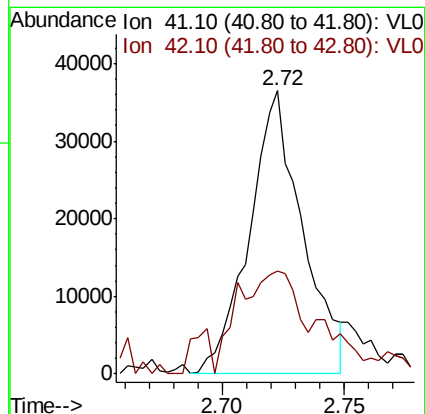
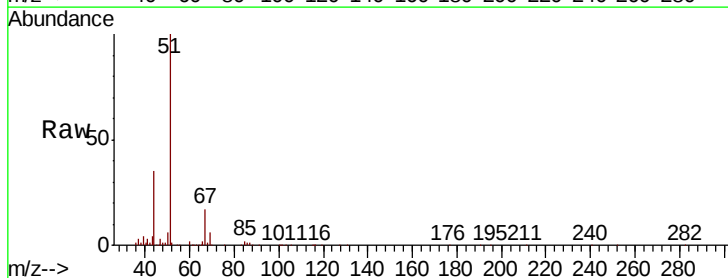
Acq: 25 Aug 2022 21:44

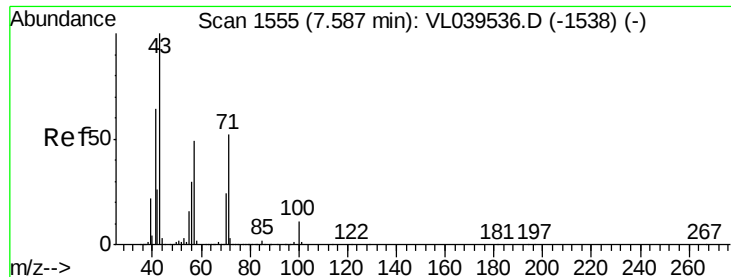
Tgt Ion: 41 Resp: 55255

Ion Ratio Lower Upper

41 100

42 66.8 55.2 82.8





#10

Heptane

Concen: 0.034 ppbv

RT: 7.57 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

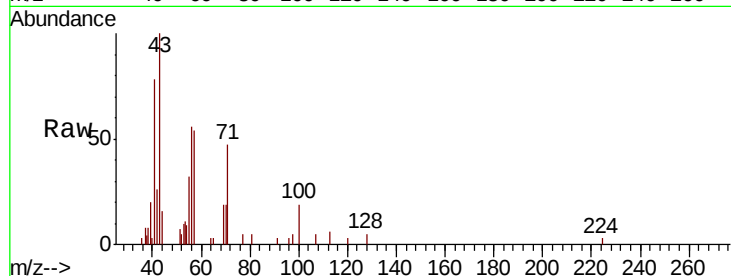
Acq: 25 Aug 2022 21:44

Tot Ion: 43 Resp: 4284

Ion Ratio Lower Upper

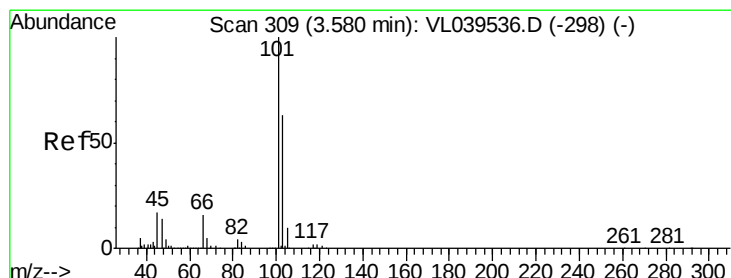
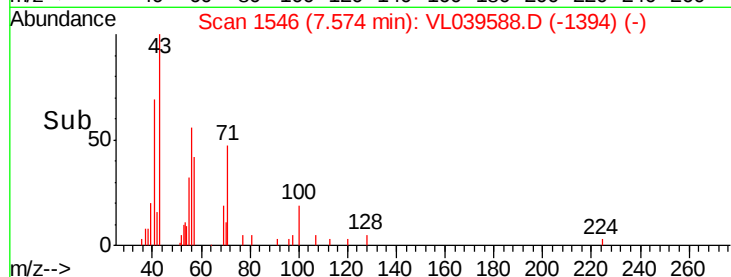
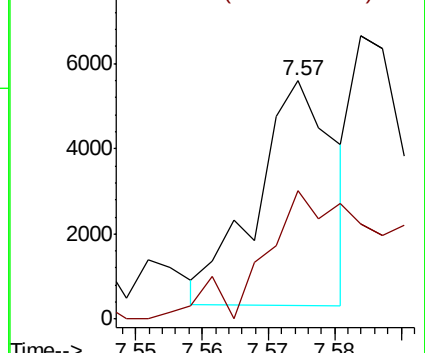
43 100

57 136.2 40.5 60.7#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#11

Trichlorofluoromethane

Concen: 0.247 ppbv

RT: 3.58 min Scan# 305

Delta R.T. 0.00 min

Lab File: VL039588.D

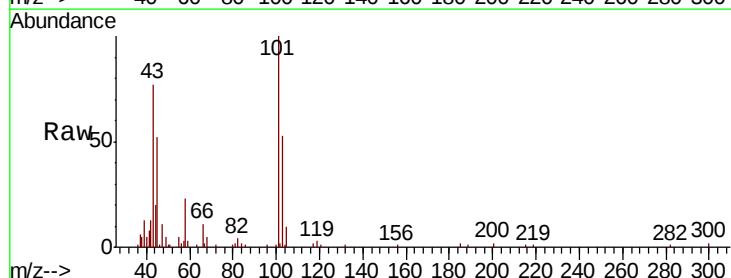
Acq: 25 Aug 2022 21:44

Tgt Ion:101 Resp: 35726

Ion Ratio Lower Upper

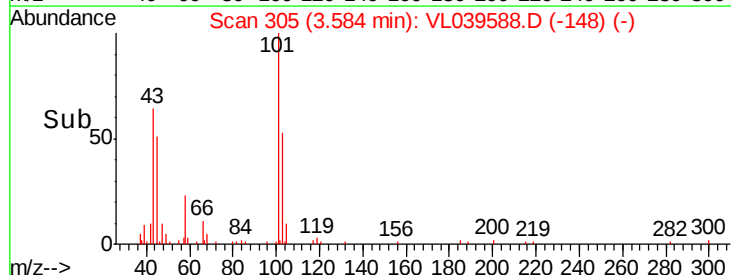
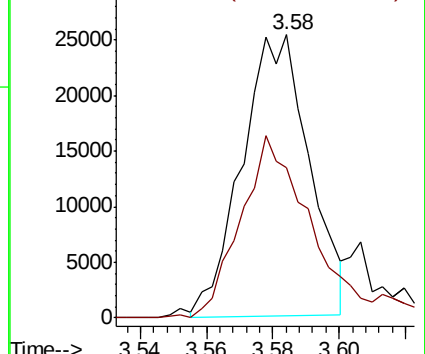
101 100

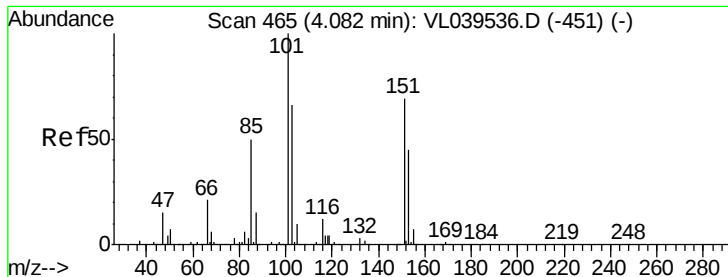
103 54.0 51.8 77.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.033 ppbv

RT: 4.08 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

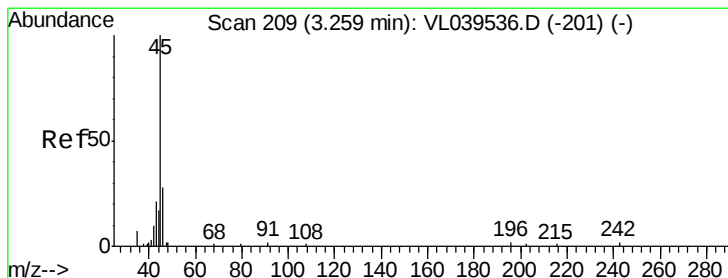
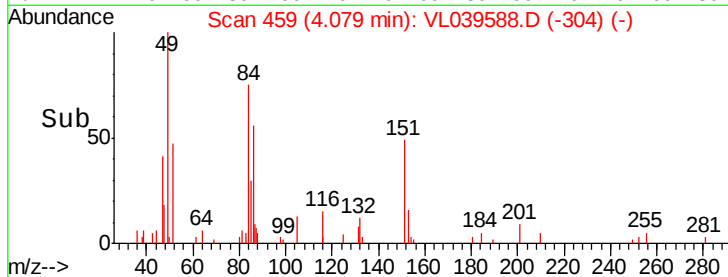
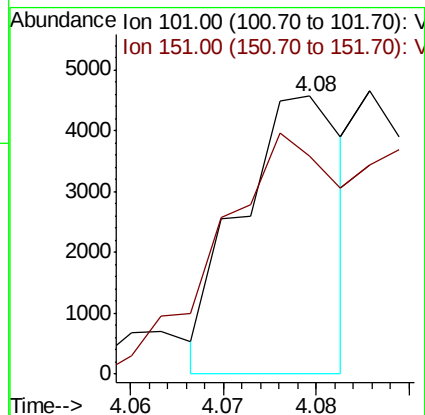
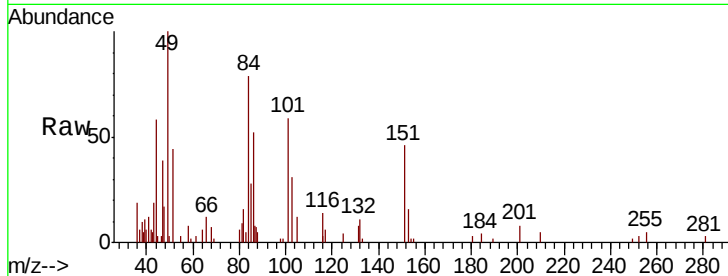
Acq: 25 Aug 2022 21:44

Tot Ion:101 Resp: 3489

Ion Ratio Lower Upper

101 100

151 190.3 58.9 88.3#



#13

Ethanol

Concen: 69.976 ppbv

RT: 3.26 min Scan# 204

Delta R.T. 0.00 min

Lab File: VL039588.D

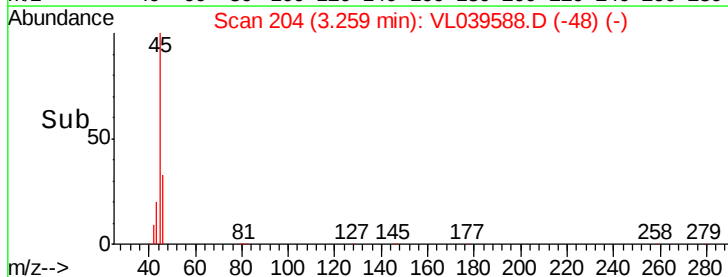
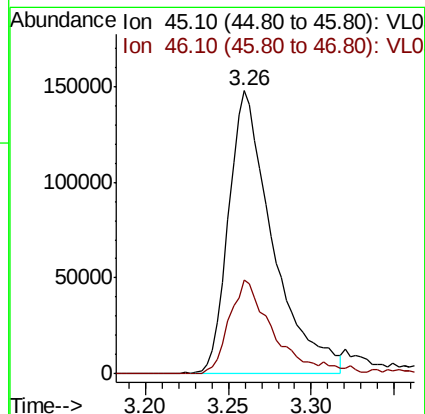
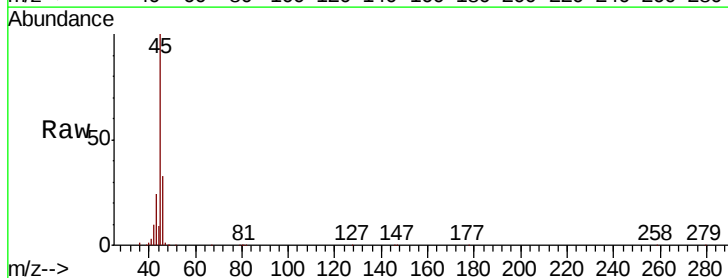
Acq: 25 Aug 2022 21:44

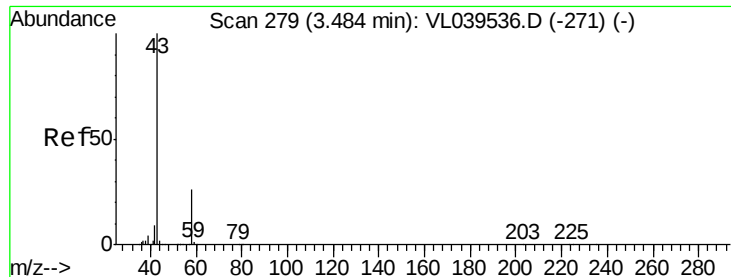
Tgt Ion: 45 Resp: 271394

Ion Ratio Lower Upper

45 100

46 34.3 22.8 91.2





#15

Acetone

Concen: 21.064 ppbv

RT: 3.48 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA1DUP

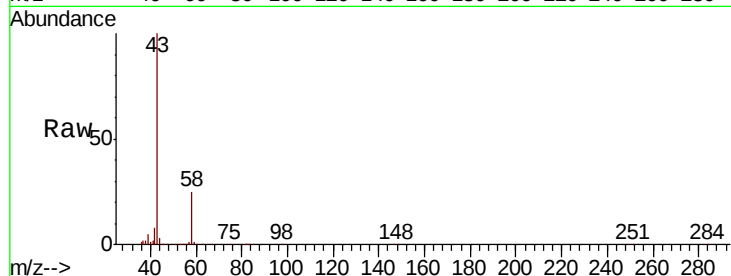
Acq: 25 Aug 2022 21:44

Tot Ion: 43 Resp: 2335689

Ion Ratio Lower Upper

43 100

58 27.5 21.0 31.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

1500000

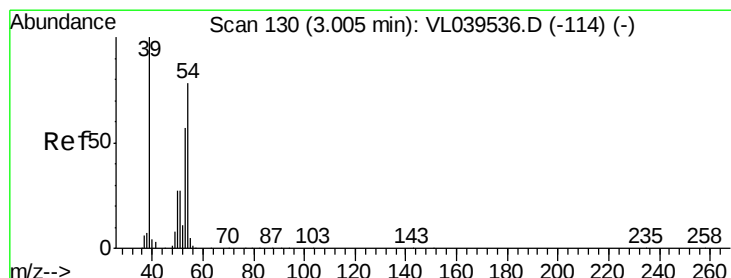
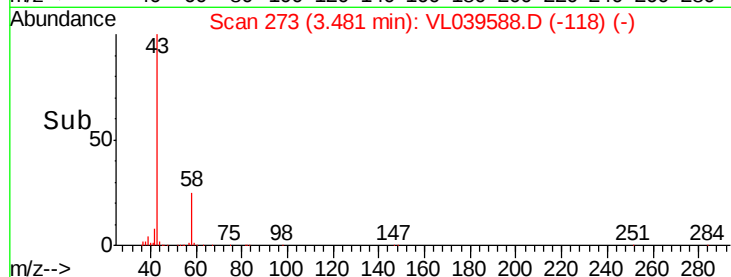
1000000

500000

0

3.45 3.50 3.55

Time-->



#16

1,3-Butadiene

Concen: 0.199 ppbv

RT: 2.98 min Scan# 118

Delta R.T. -0.02 min

Lab File: VL039588.D

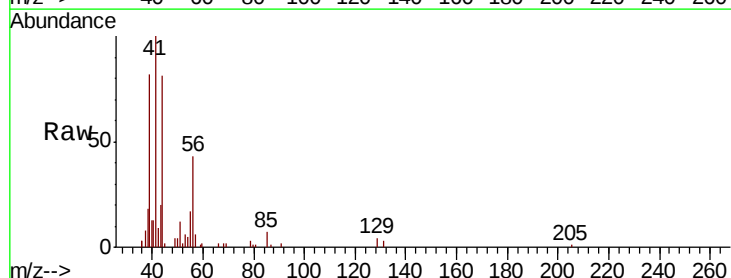
Acq: 25 Aug 2022 21:44

Tgt Ion: 39 Resp: 11521

Ion Ratio Lower Upper

39 100

54 23.7 63.7 95.5#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

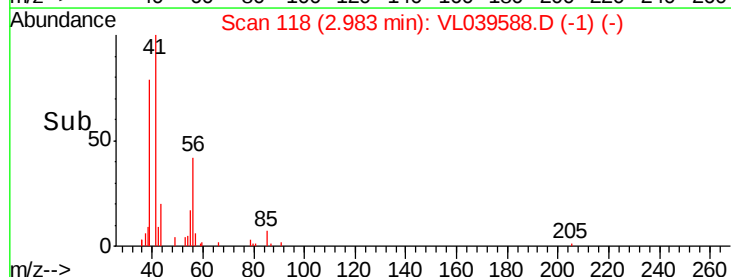
10000

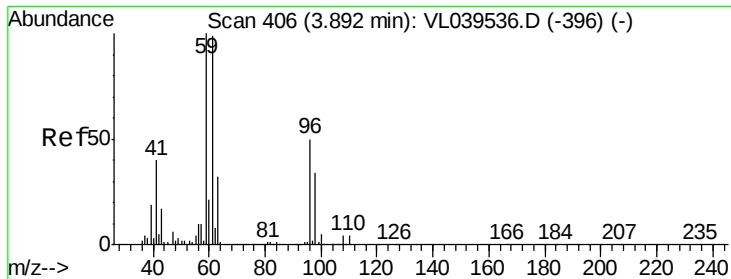
5000

0

2.96 2.98 3.00 3.02

Time-->





#17

tert-Butyl alcohol

Concen: 0.084 ppbv

RT: 3.91 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

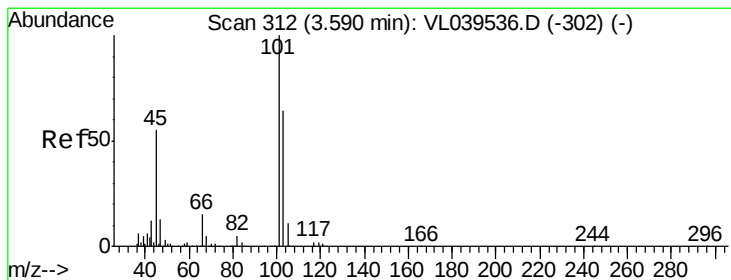
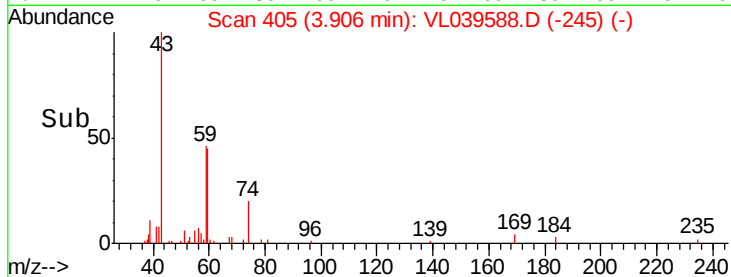
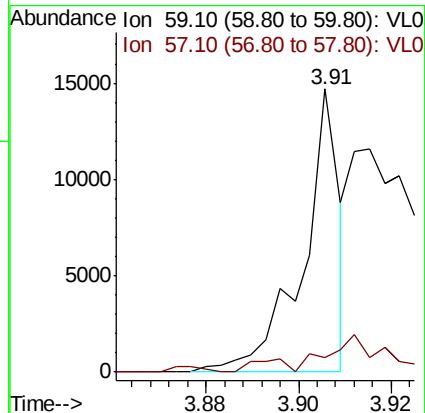
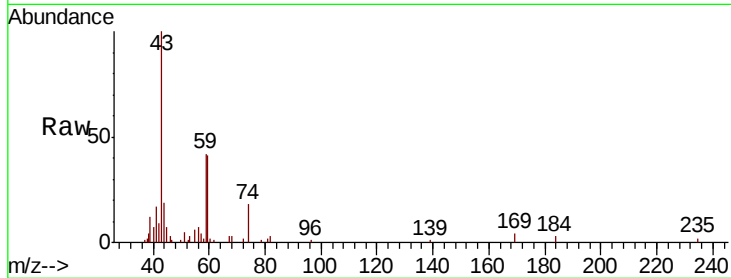
Acq: 25 Aug 2022 21:44

Tot Ion: 59 Resp: 7996

Ion Ratio Lower Upper

59 100

57 0.0 8.7 13.1#



#19

Isopropyl Alcohol

Concen: 2.629 ppbv

RT: 3.60 min Scan# 310

Delta R.T. 0.01 min

Lab File: VL039588.D

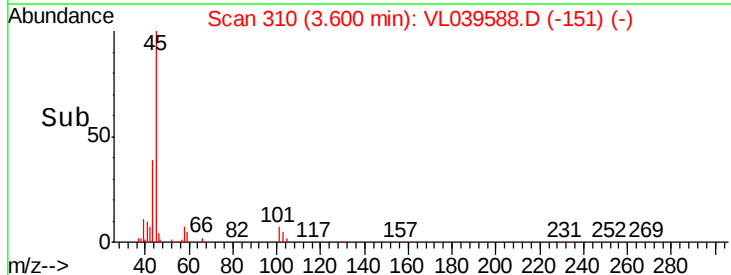
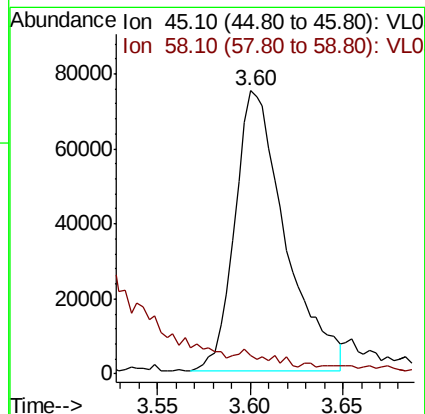
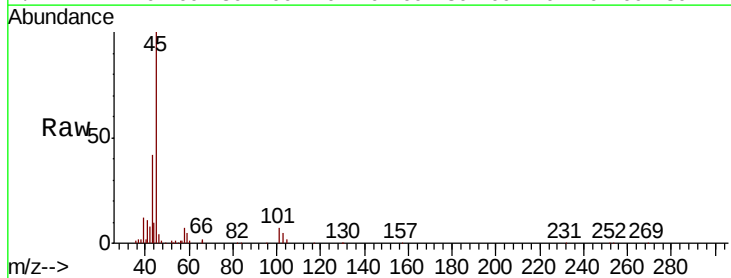
Acq: 25 Aug 2022 21:44

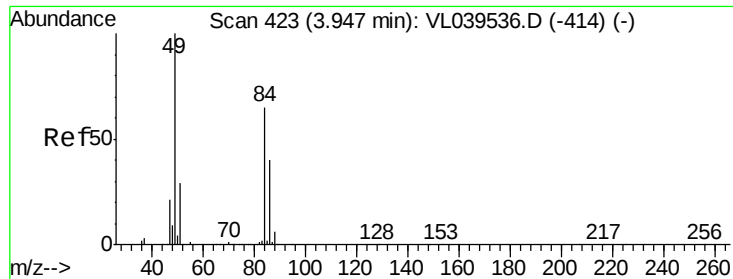
Tgt Ion: 45 Resp: 141799

Ion Ratio Lower Upper

45 100

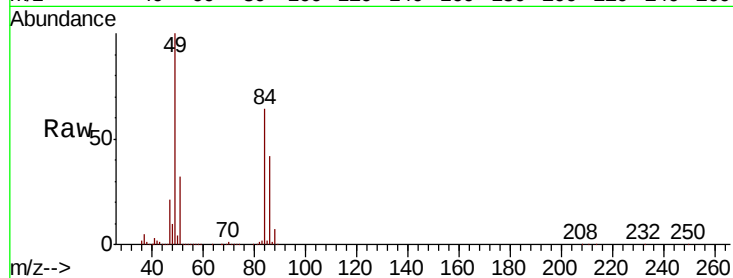
58 453.3 3.2 4.8#





#20
Methvlene Chloride
Concen: 32.756 ppbv
RT: 3.95
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 25 Aug 2022 21:44

Tot Ion:	84	Resp:	1475604
Ion	Ratio	Lower	Upper
84	100		
49	157.2	123.1	184.7
51	49.6	34.4	51.6
86	65.3	51.1	76.7



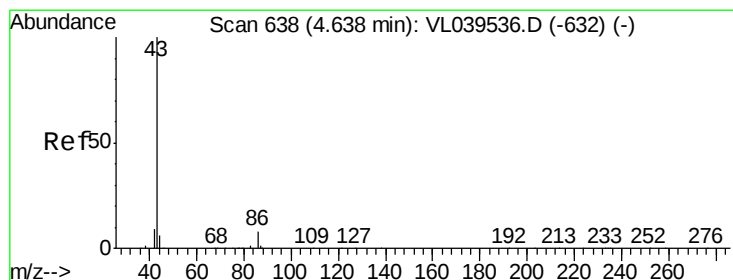
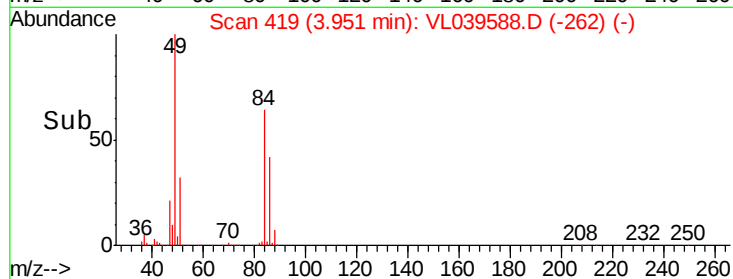
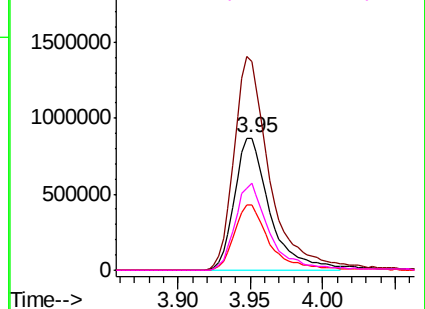
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

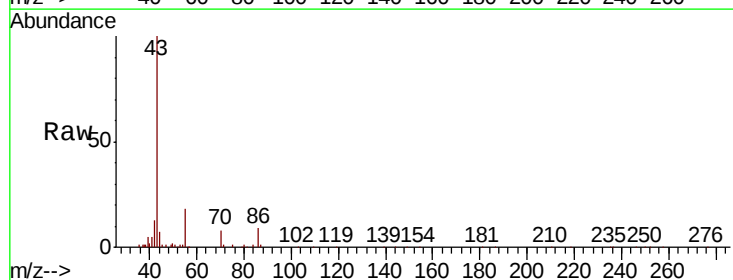
Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#23
Vinyl Acetate
Concen: 2.803 ppbv
RT: 4.63 min Scan# 631
Delta R.T. -0.01 min
Lab File: VL039588.D
Acq: 25 Aug 2022 21:44

Tgt Ion:	43	Resp:	147764
Ion	Ratio	Lower	Upper
43	100		
86	8.8	5.0	7.6#
42	11.3	7.7	11.5
44	3.4	4.6	7.0#



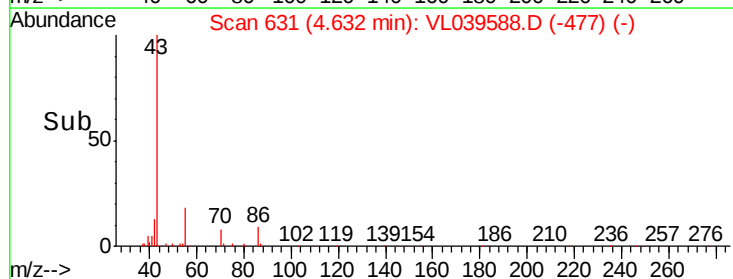
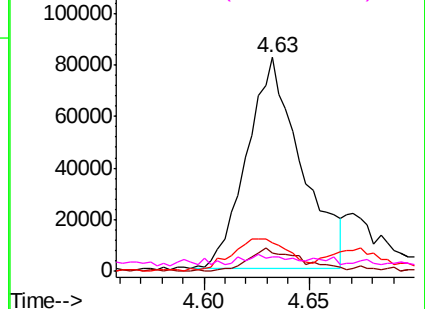
Abundance

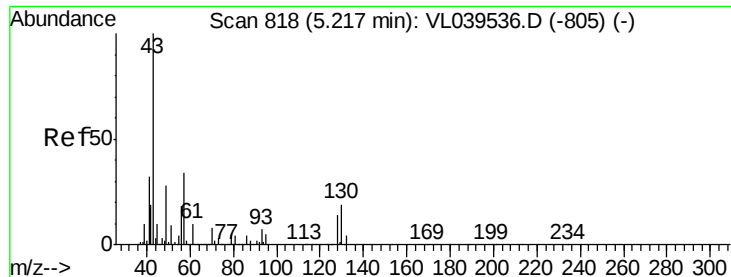
Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

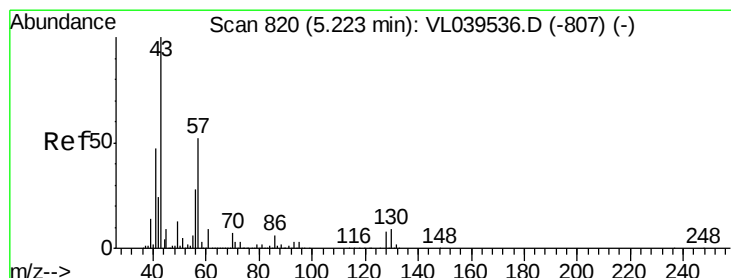
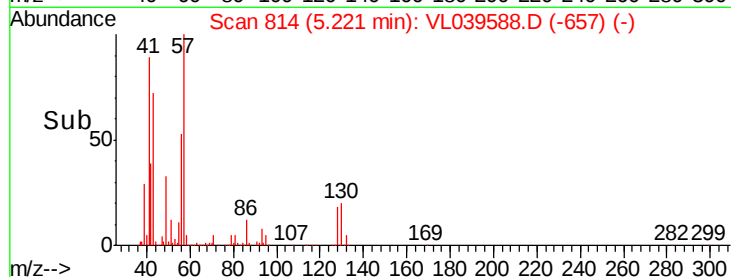
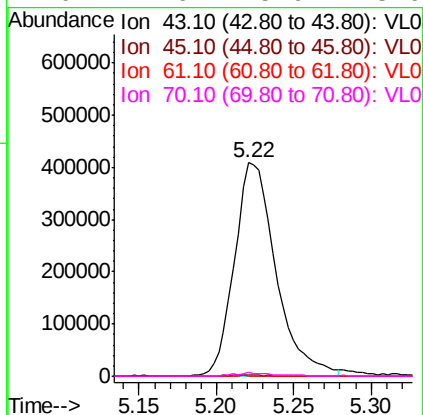
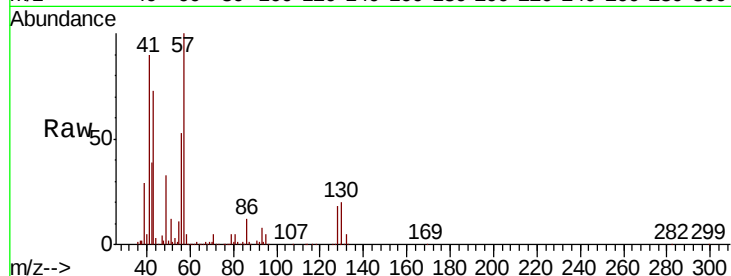
Ion 44.10 (43.80 to 44.80): VL0





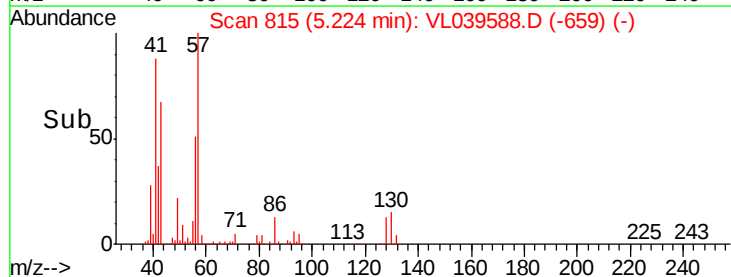
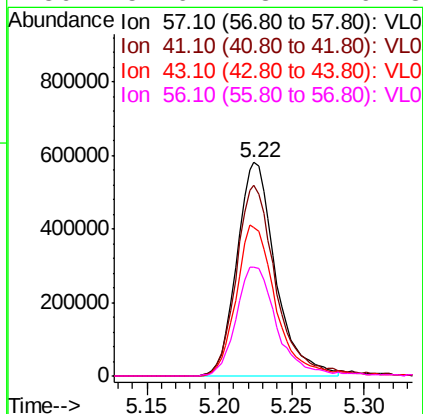
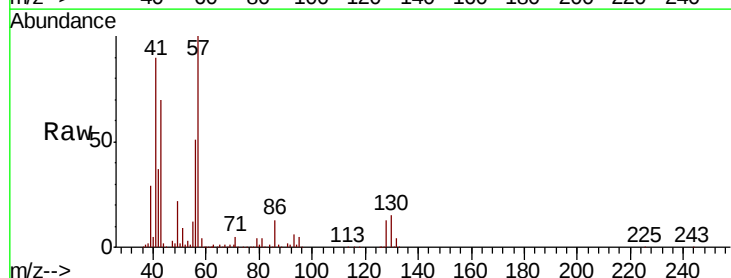
#25
Ethyl Acetate
Concen: 3.208 ppbv
RT: 5.22 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 25 Aug 2022 21:44

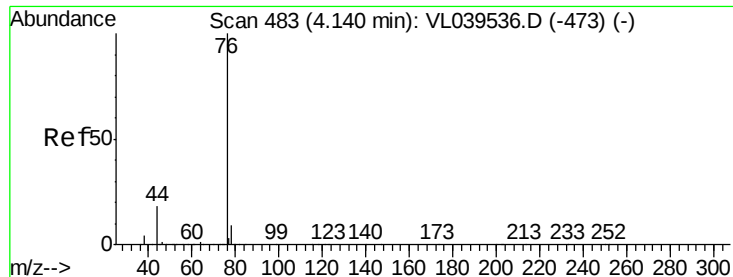
Tot Ion:	43	Resp:	761077
Ion	Ratio	Lower	Upper
43	100		
45	0.7	8.2	12.4#
61	0.3	8.3	12.5#
70	1.6	5.9	8.9#



#26
Hexane
Concen: 11.147 ppbv
RT: 5.22 min Scan# 815
Delta R.T.: 0.00 min
Lab File: VL039588.D
Acq: 25 Aug 2022 21:44

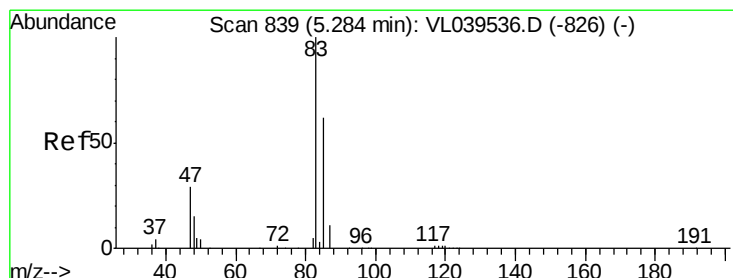
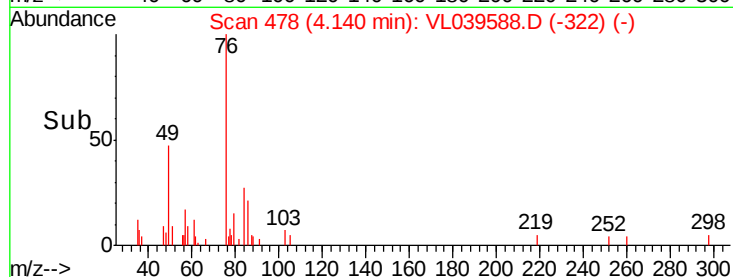
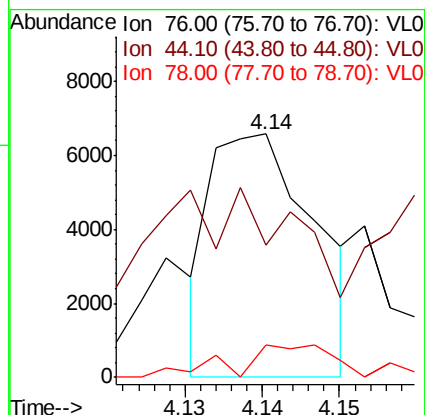
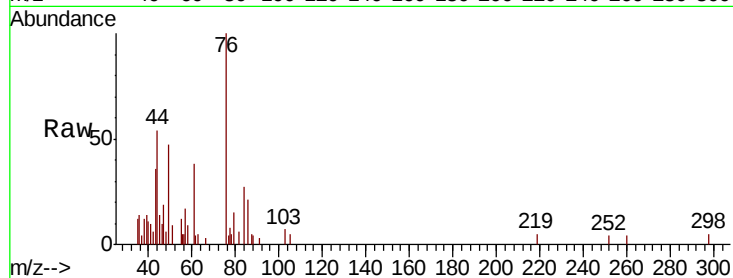
Tgt Ion:	57	Resp:	1079435
Ion	Ratio	Lower	Upper
57	100		
41	93.3	76.9	115.3
43	72.5	191.0	286.6#
56	54.6	43.2	64.8





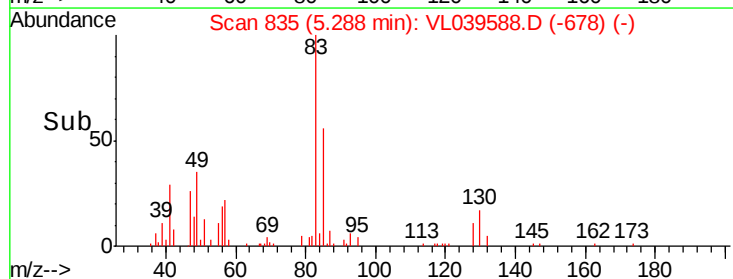
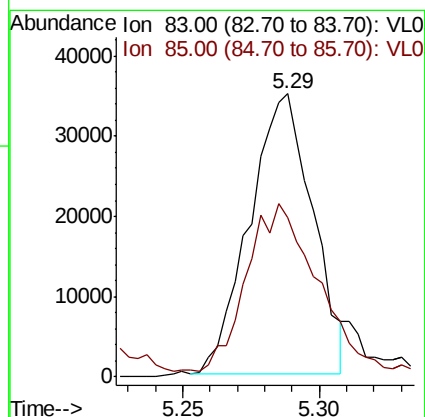
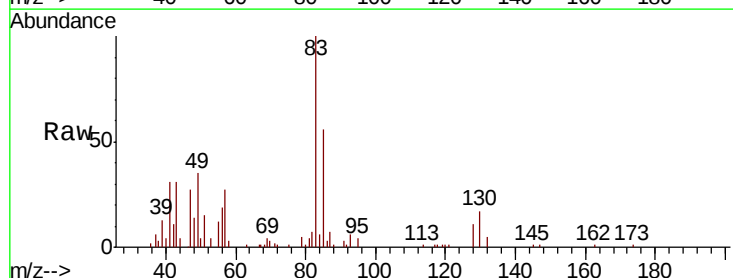
#27
Carbon Disulfide
Concen: 0.059 ppbv
RT: 4.14
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 25 Aug 2022 21:44

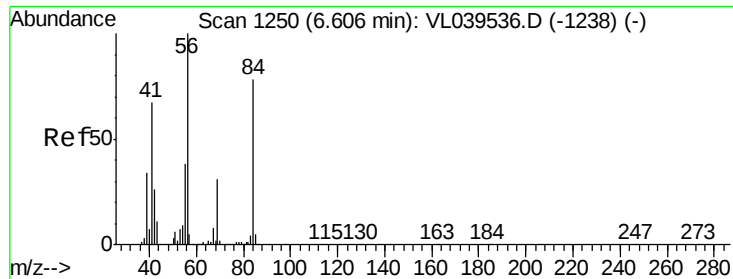
Tot Ion: 76 Resp: 6152
Ion Ratio Lower Upper
76 100
44 141.7 14.6 21.8#
78 0.0 7.8 11.6#



#29
Chloroform
Concen: 0.368 ppbv
RT: 5.29 min Scan# 835
Delta R.T. 0.00 min
Lab File: VL039588.D
Acq: 25 Aug 2022 21:44

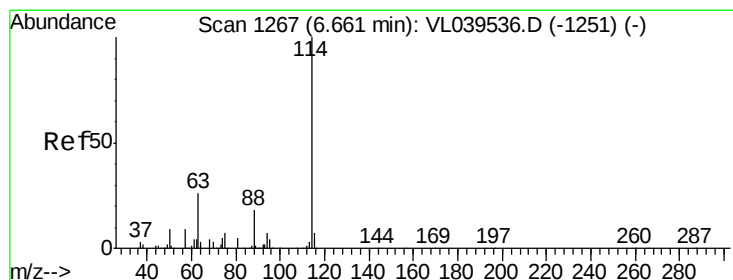
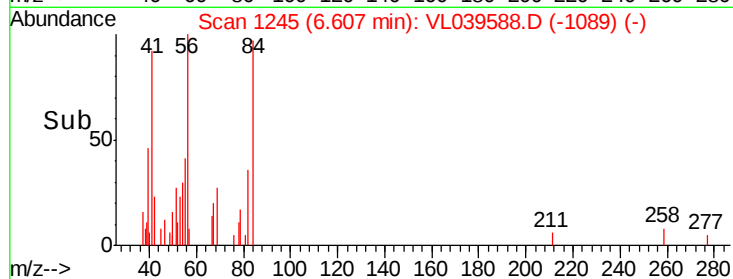
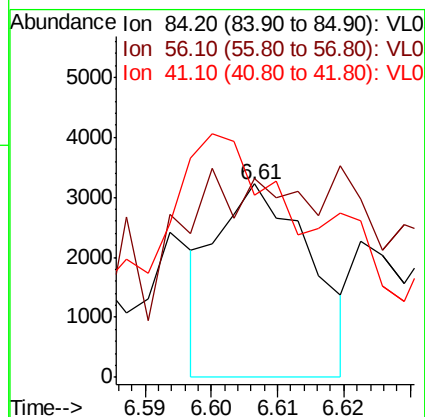
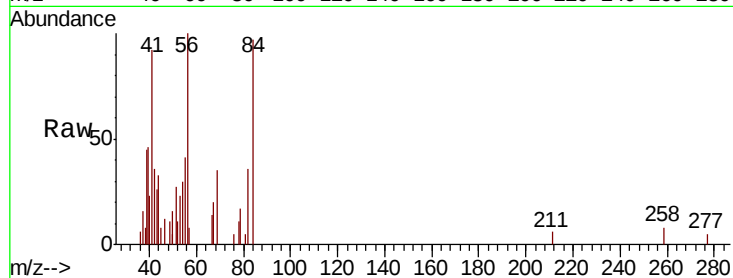
Tgt Ion: 83 Resp: 55799
Ion Ratio Lower Upper
83 100
85 54.2 52.8 79.2





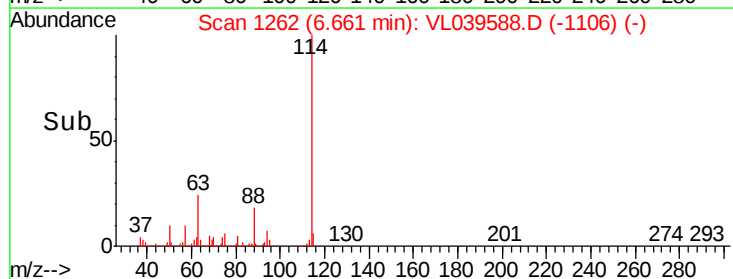
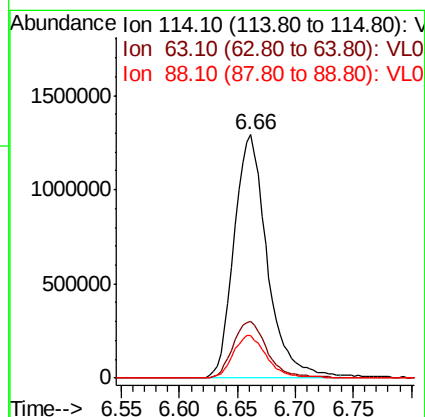
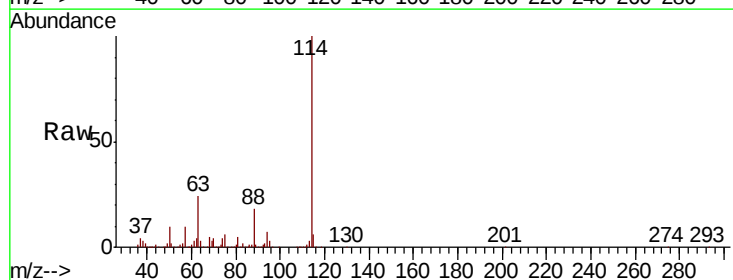
#30
Cvclohexane
Concen: 0.040 ppbv
RT: 6.61
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 25 Aug 2022 21:44

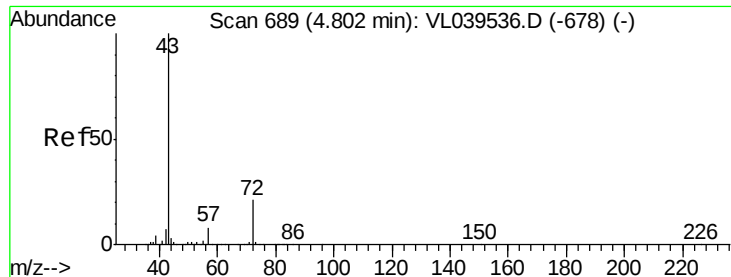
Tot Ion	Ratio	Lower	Upper
84	100		
56	0.0	107.7	161.5#
41	436.0	67.7	101.5#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 6.66 min Scan# 1262
Delta R.T. 0.00 min
Lab File: VL039588.D
Acq: 25 Aug 2022 21:44

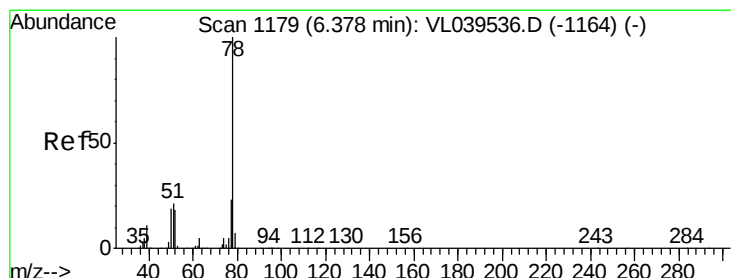
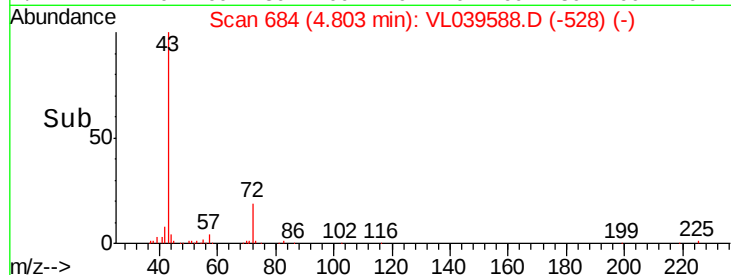
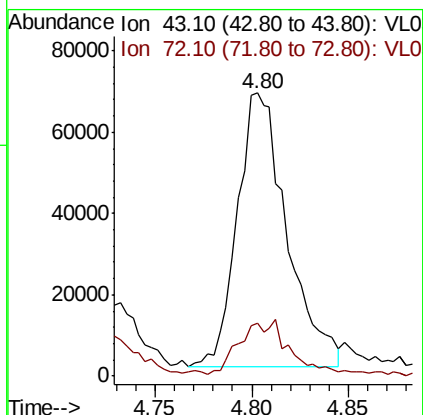
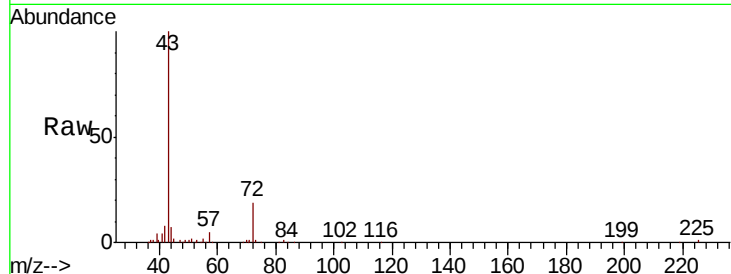
Tgt Ion	Ratio	Lower	Upper
114	100		
63	24.5	20.2	30.4
88	18.1	14.5	21.7





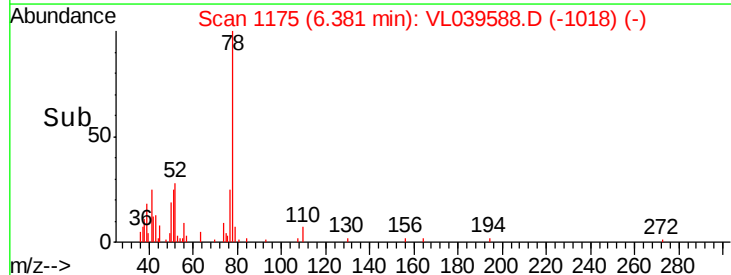
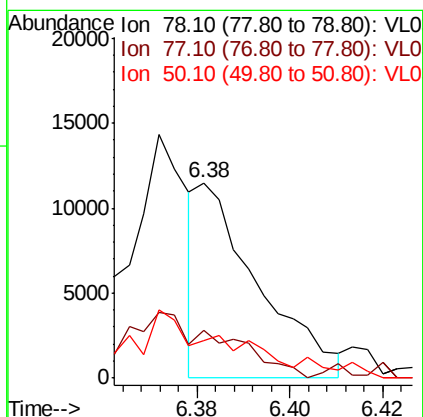
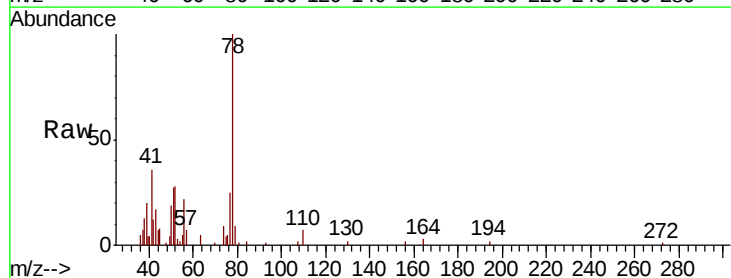
#34
 2-Butanone
 Concen: 0.941 ppbv
 RT: 4.80
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 25 Aug 2022 21:44

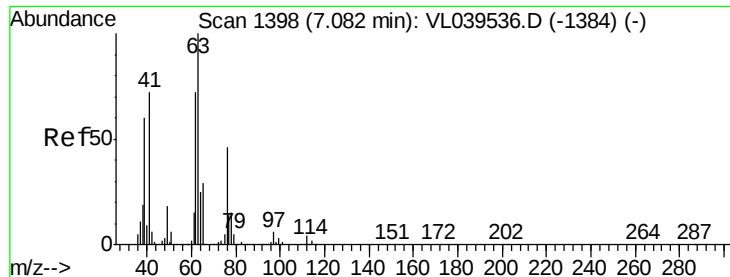
Tot Ion: 43 Resp: 119688
 Ion Ratio Lower Upper
 43 100
 72 23.2 17.9 26.9



#36
 Benzene
 Concen: 0.053 ppbv
 RT: 6.38 min Scan# 1175
 Delta R.T. 0.00 min
 Lab File: VL039588.D
 Acq: 25 Aug 2022 21:44

Tgt Ion: 78 Resp: 10416
 Ion Ratio Lower Upper
 78 100
 77 19.6 20.3 30.5#
 50 17.7 15.5 23.3





#39

1,2-Dichloropropane

Concen: 8.262 ppbv

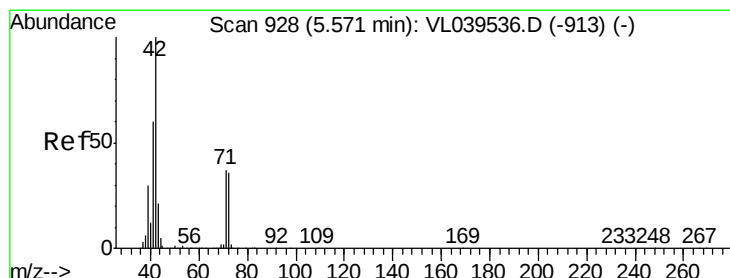
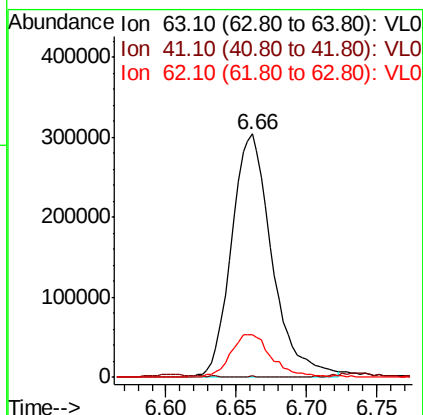
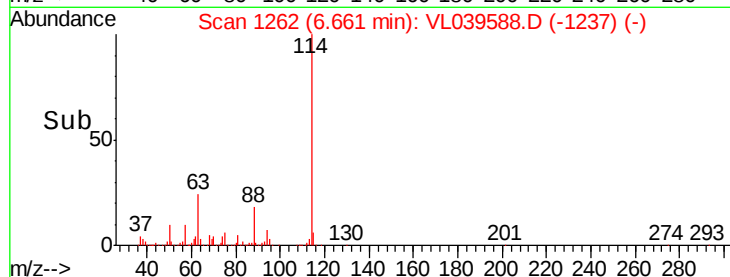
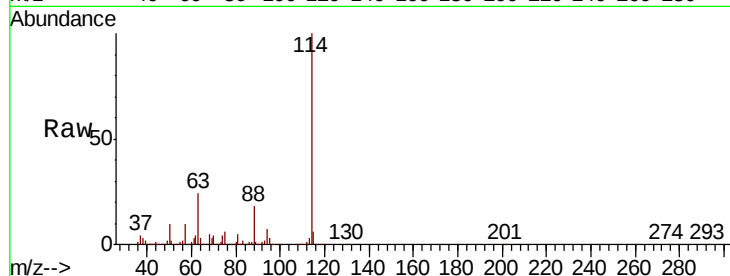
RT: 6.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Aug 2022 21:44

Tot Ion:	63	Resp:	605587
Ion	Ratio	Lower	Upper
63	100		
41	0.0	59.6	89.4#
62	17.5	51.4	77.0#



#41

Tetrahydrofuran

Concen: 0.291 ppbv

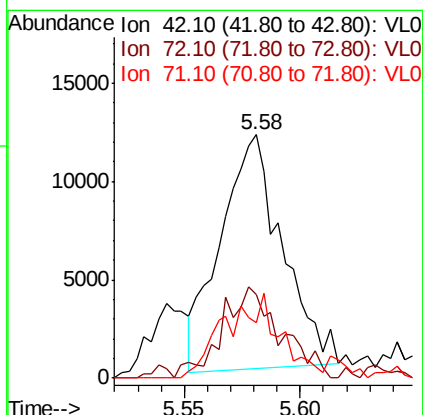
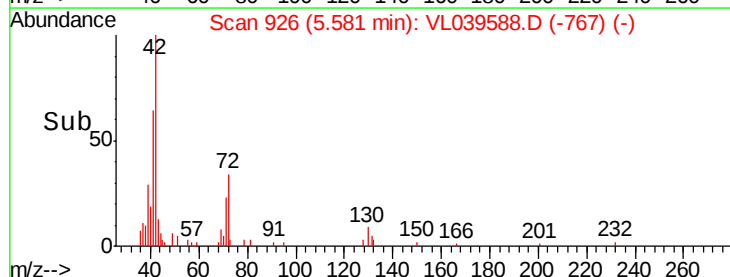
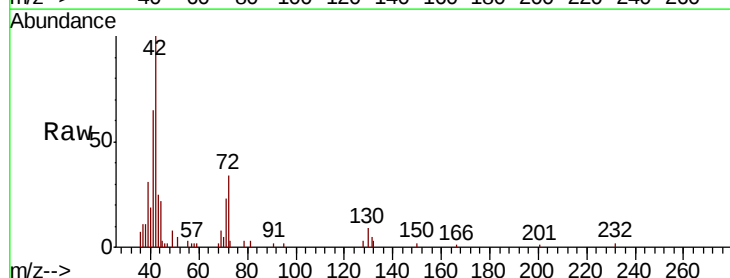
RT: 5.58 min Scan# 926

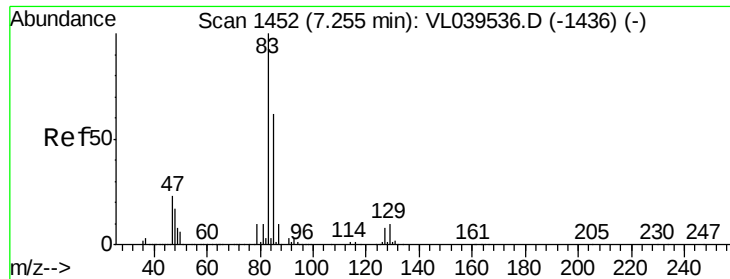
Delta R.T. 0.01 min

Lab File: VL039588.D

Acq: 25 Aug 2022 21:44

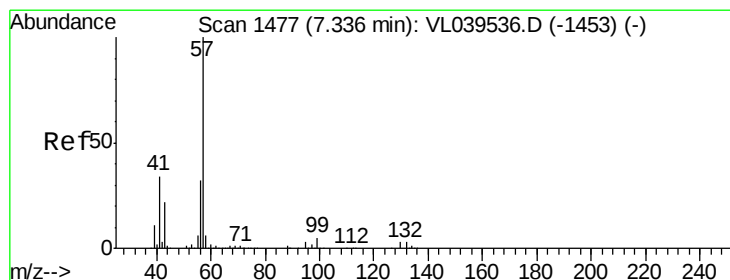
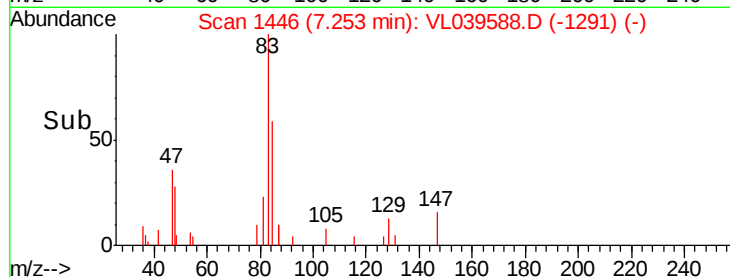
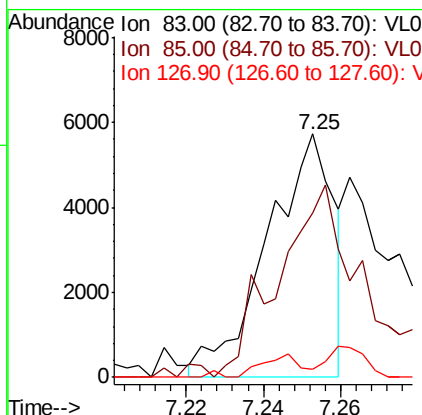
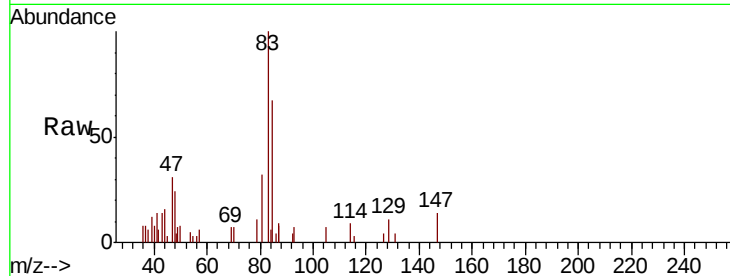
Tgt Ion:	42	Resp:	22085
Ion	Ratio	Lower	Upper
42	100		
72	41.6	31.8	47.8
71	37.1	31.8	47.8





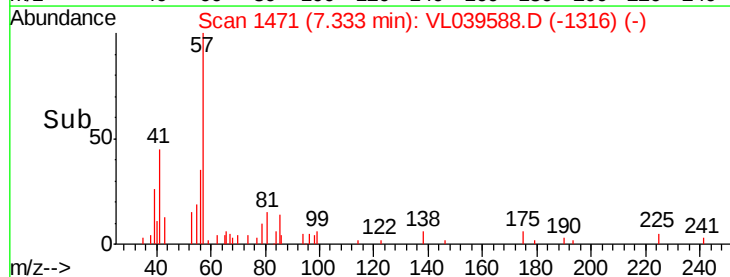
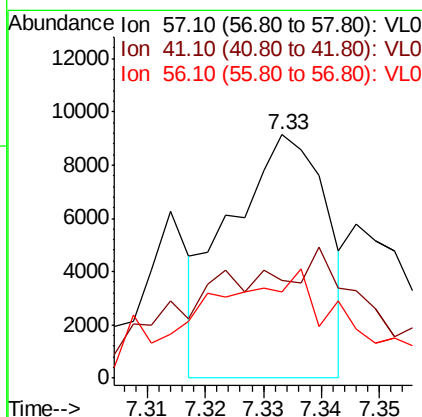
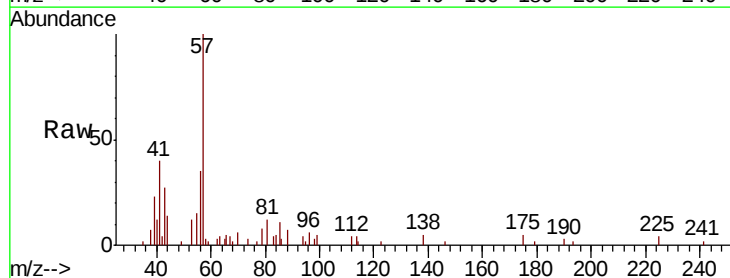
#42
 Bromodichloromethane
 Concen: 0.047 ppbv
 RT: 7.25
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 25 Aug 2022 21:44

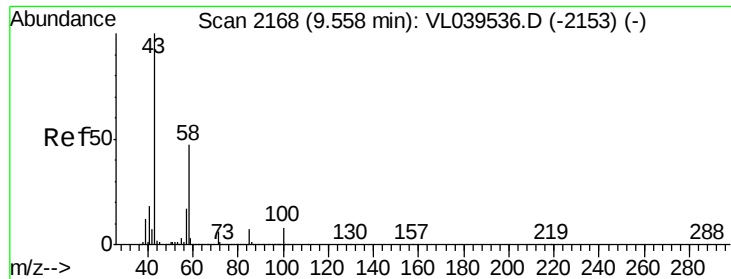
Tot Ion	83	Resp	6855
Ion Ratio	Lower	Upper	
83	100		
85	65.0	50.7	76.1
127	3.7	6.6	9.8#



#44
 2,2,4-Trimethylpentane
 Concen: 0.032 ppbv
 RT: 7.33 min Scan# 1471
 Delta R.T. -0.00 min
 Lab File: VL039588.D
 Acq: 25 Aug 2022 21:44

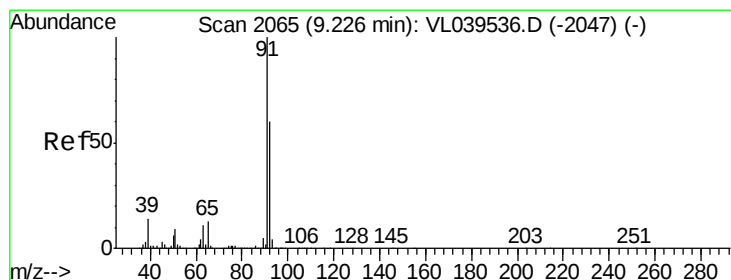
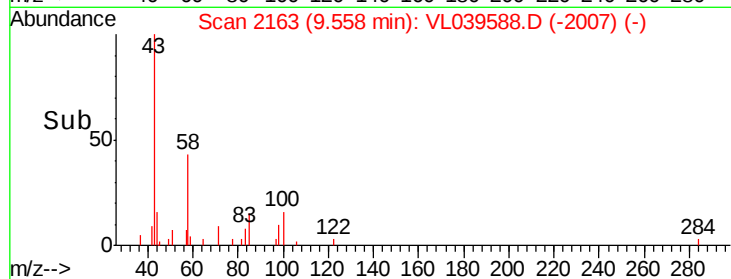
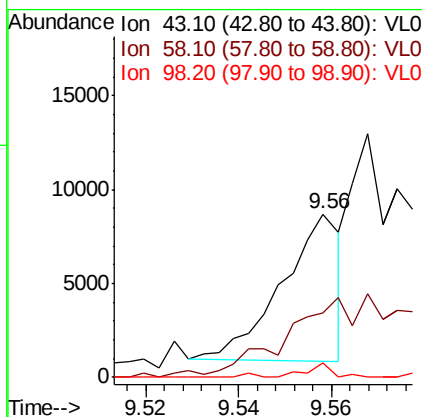
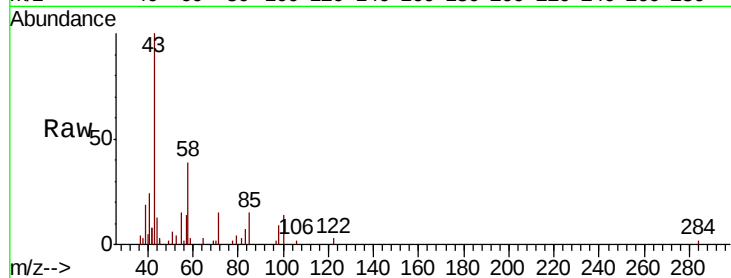
Tgt Ion	57	Resp	10560
Ion Ratio	Lower	Upper	
57	100		
41	104.3	27.4	41.2#
56	113.8	24.5	36.7#





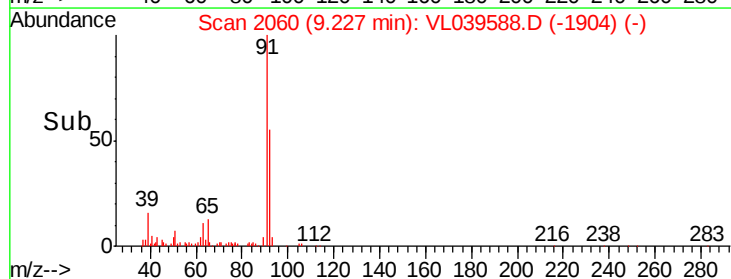
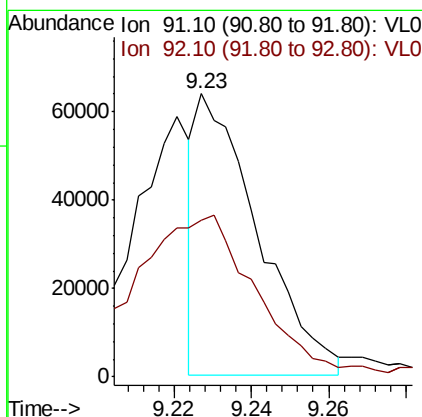
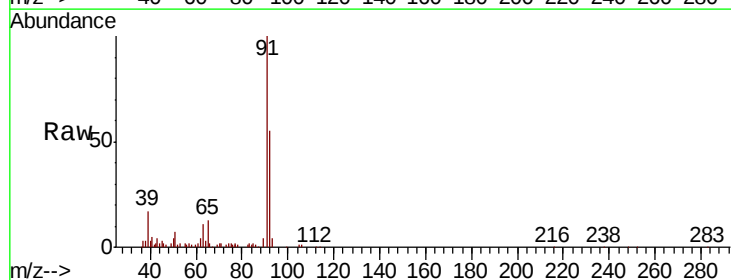
#51
2-Hexanone
Concen: 0.047 ppbv
RT: 9.56
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 25 Aug 2022 21:44

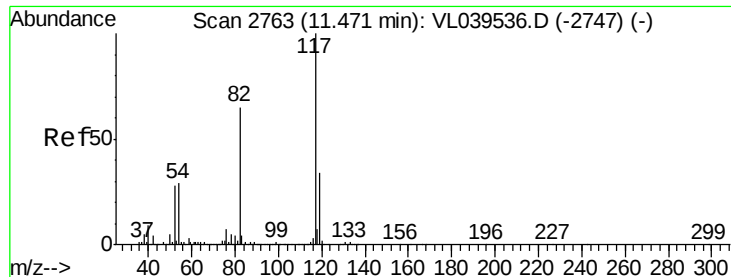
Tot Ion	43	Resp	6847
Ion Ratio	Lower	Upper	
43	100		
58	0.0	38.4	57.6#
98	4.7	0.3	0.5#



#53
Toluene
Concen: 0.320 ppbv
RT: 9.23 min Scan# 2060
Delta R.T. 0.00 min
Lab File: VL039588.D
Acq: 25 Aug 2022 21:44

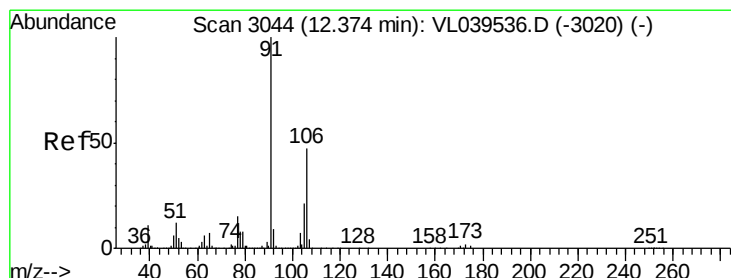
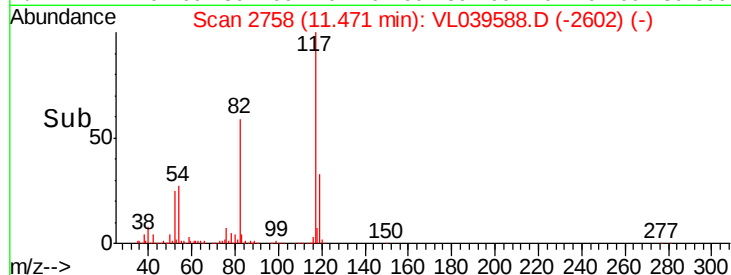
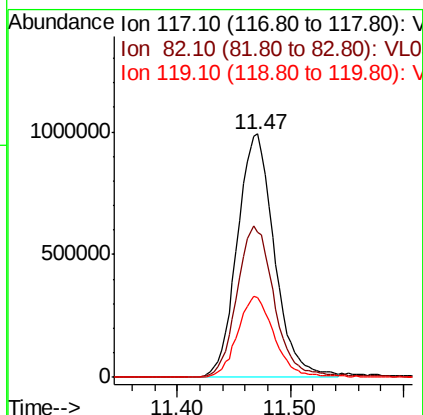
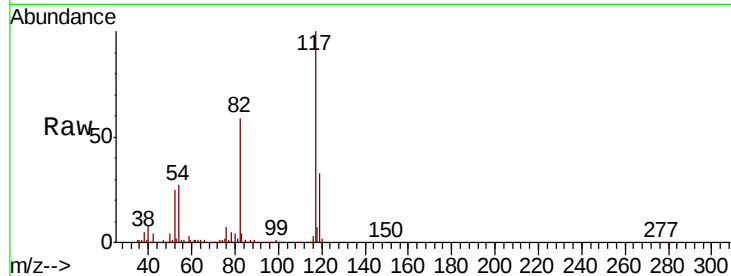
Tgt Ion	91	Resp	69730
Ion Ratio	Lower	Upper	
91	100		
92	116.9	48.2	72.2#





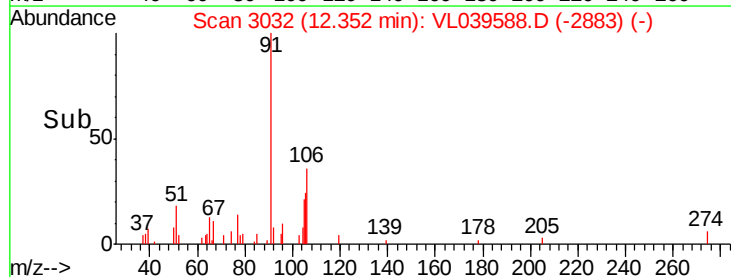
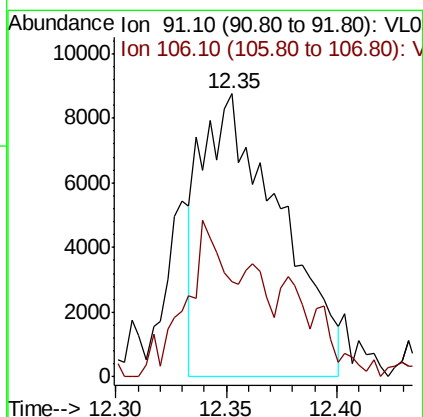
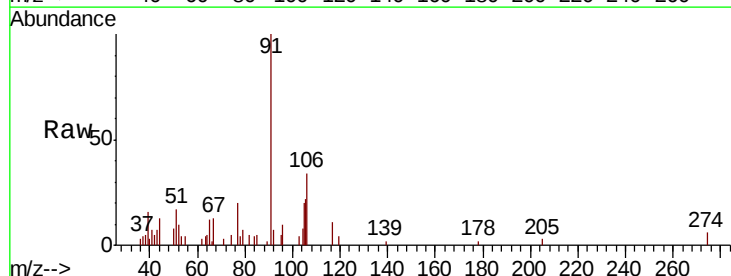
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.47 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 25 Aug 2022 21:44

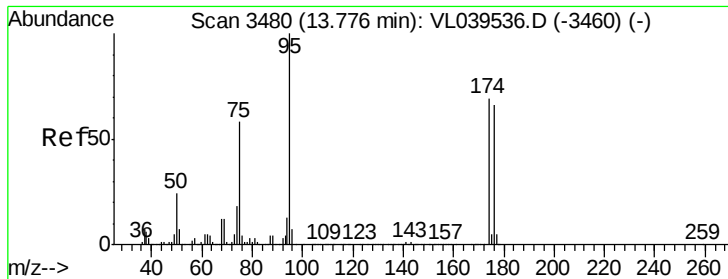
Tot Ion:117 Resp: 2266709
Ion Ratio Lower Upper
117 100
82 63.2 50.8 76.2
119 33.3 24.1 36.1



#59
m/p-Xylene
Concen: 0.092 ppbv
RT: 12.35 min Scan# 3032
Delta R.T. -0.02 min
Lab File: VL039588.D
Acq: 25 Aug 2022 21:44

Tgt Ion: 91 Resp: 21601
Ion Ratio Lower Upper
91 100
106 0.0 35.4 53.2#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.793 ppbv

RT: 13.78

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Aug 2022 21:44

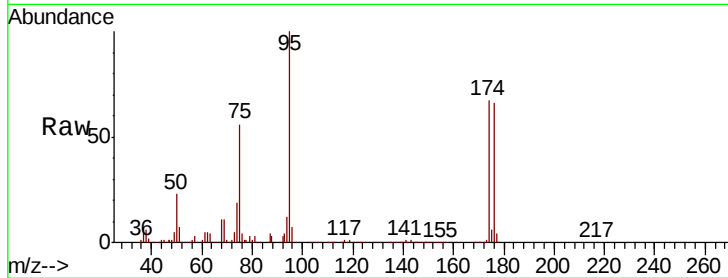
Tot Ion: 95 Resp: 1674597

Ion Ratio Lower Upper

95 100

174 72.1 55.9 83.9

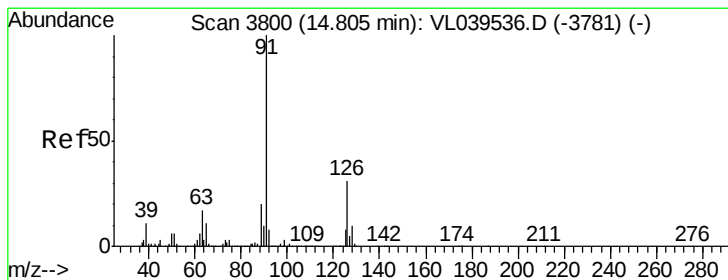
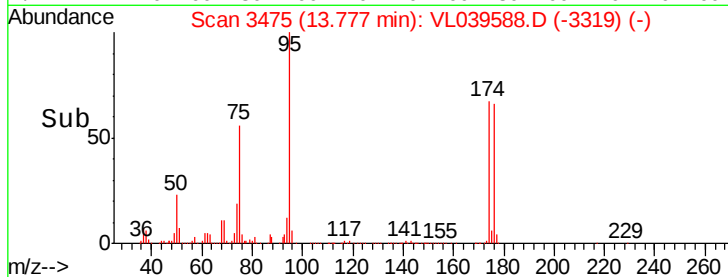
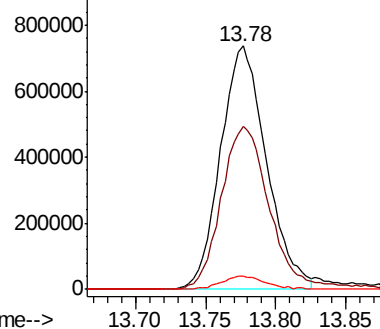
175 5.4 4.2 6.4



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



#71

2-Chlorotoluene

Concen: 1.790 ppbv

RT: 14.67 min Scan# 3754

Delta R.T. -0.13 min

Lab File: VL039588.D

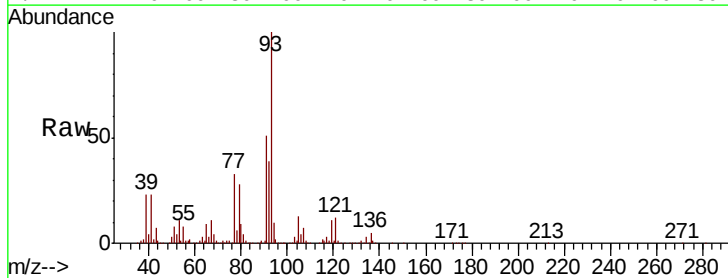
Acq: 25 Aug 2022 21:44

Tgt Ion: 91 Resp: 439756

Ion Ratio Lower Upper

91 100

126 0.0 13.0 51.8#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V

