

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL123019\
 Data File : VL034529.D
 Acq On : 31 Dec 2019 2:27
 Operator : SY/AP
 Sample : K6470-01
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 27-1

Quant Time: Dec 31 05:02:55 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL123019AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 30 14:58:50 2019
 QLast Update : Mon Dec 30 14:58:50 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	884069	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.20	114	1815433	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.13	117	1781790	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.47	95	1503480	10.11	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.10%

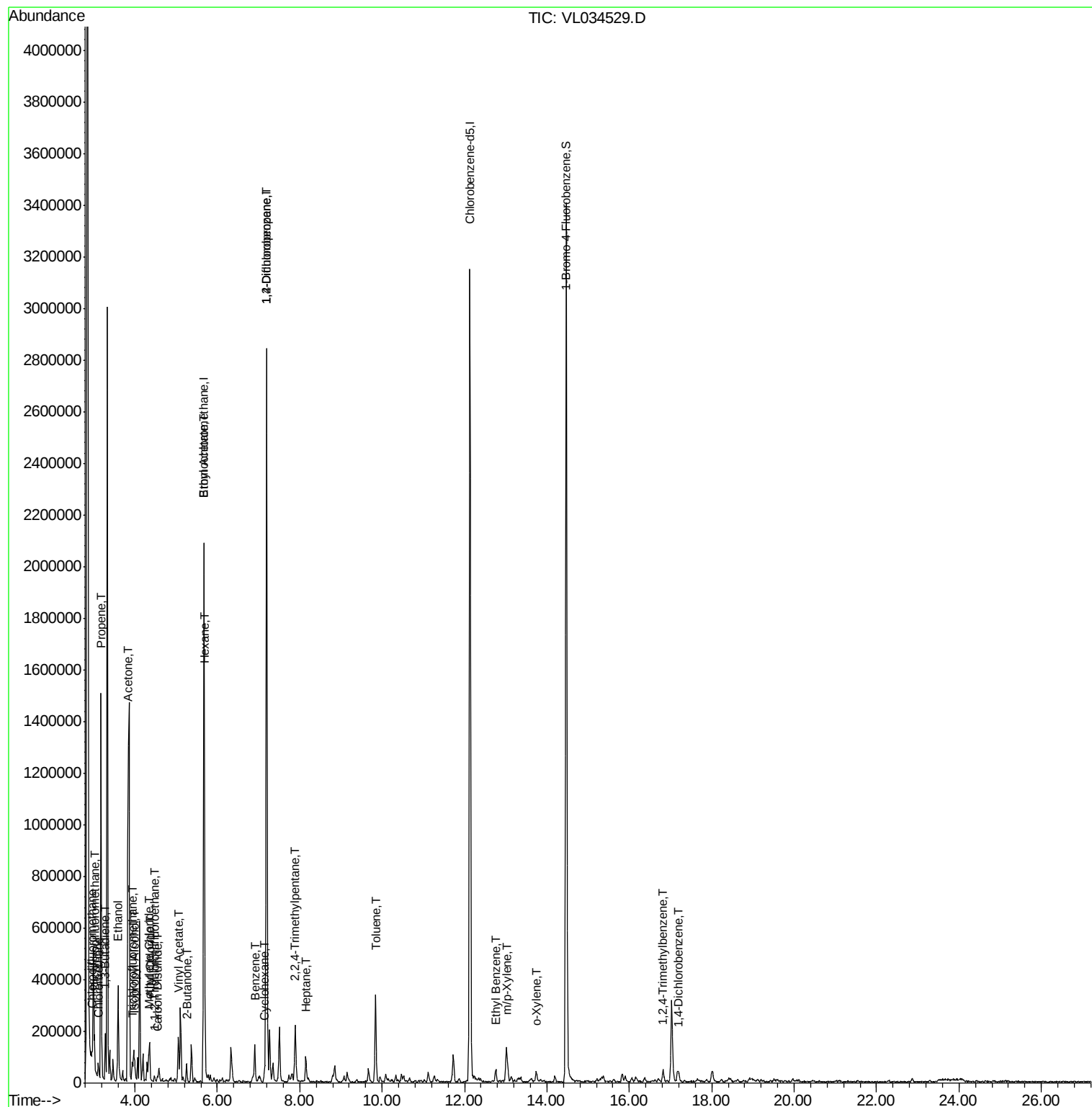
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	88189	0.633	ppbv	99
3) Chlorodifluoromethane	2.95	51	75654	0.718	ppbv #	88
4) Chloromethane	3.11	50	42395	0.678	ppbv	88
9) Propene	3.18	41	386809	9.525	ppbv	95
10) Heptane	8.15	43	11575	0.110	ppbv #	26
11) Trichlorofluoromethane	3.93	101	39117	0.242	ppbv	84
12) 1,1,2-Trichlorotrifluoroet	4.48	101	6080	0.059	ppbv	86
13) Ethanol	3.59	45	344852	30.605	ppbv	98
15) Acetone	3.83	43	1616559	12.529	ppbv #	90
16) 1,3-Butadiene	3.28	39	46850	0.944	ppbv #	8
19) Isopropyl Alcohol	3.99	45	11948	0.143	ppbv #	95
20) Methylene Chloride	4.33	84	27683	0.545	ppbv	84
21) Allyl Chloride	4.35	41	19903	0.268	ppbv #	42
23) Vinyl Acetate	5.06	43	92670	0.622	ppbv #	58
25) Ethyl Acetate	5.68	43	30105	0.149	ppbv #	90
26) Hexane	5.69	57	74000	0.872	ppbv #	44
27) Carbon Disulfide	4.55	76	8943	0.083	ppbv #	6
30) Cyclohexane	7.14	84	6484	0.103	ppbv #	1
34) 2-Butanone	5.25	43	73774	0.569	ppbv	97
36) Benzene	6.91	78	102943	0.651	ppbv #	90
39) 1,2-Dichloropropane	7.20	63	533537	8.199	ppbv #	22
44) 2,2,4-Trimethylpentane	7.89	57	152472	0.521	ppbv #	82
53) Toluene	9.84	91	119238	0.686	ppbv #	20
58) Ethyl Benzene	12.76	91	14120	0.059	ppbv	99
59) m/p-Xylene	13.04	91	15619	0.074	ppbv #	32
60) o-Xylene	13.74	91	6716	0.032	ppbv #	33
74) 1,2,4-Trimethylbenzene	16.82	105	27375	0.111	ppbv #	71
76) 1,4-Dichlorobenzene	17.20	146	6275	0.044	ppbv #	21

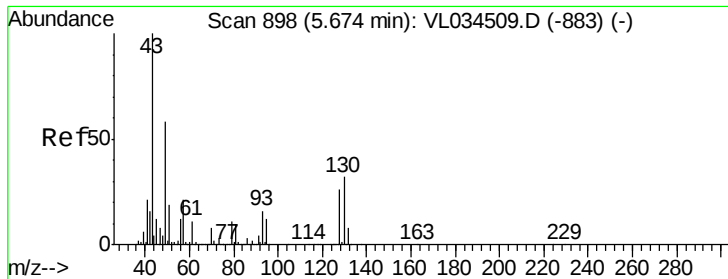
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 30 14:58:50 2019
QLast Update : Mon Dec 30 14:58:50 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 897

Delta R.T. -0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

27-1

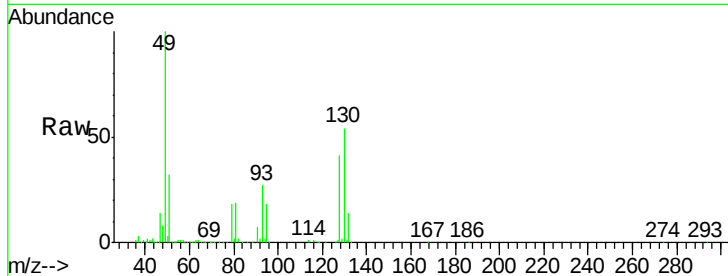
Tgt Ion: 49 Resp: 884069

Ion Ratio Lower Upper

49 100

128 43.4 22.4 67.2

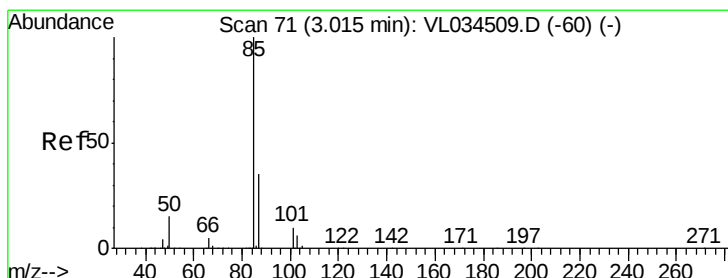
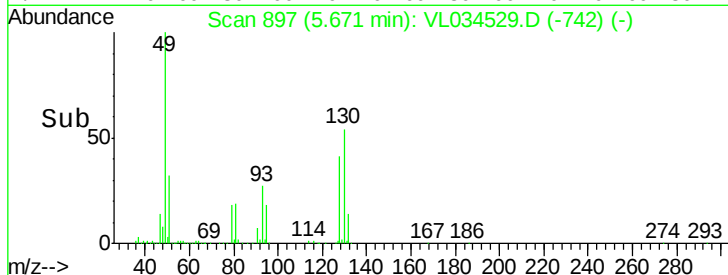
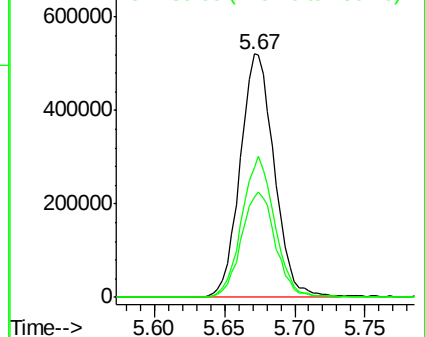
130 56.4 28.3 85.0



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



#2

Dichlorodifluoromethane

Concen: 0.633 ppbv

RT: 3.02 min Scan# 72

Delta R.T. 0.00 min

Lab File: VL034529.D

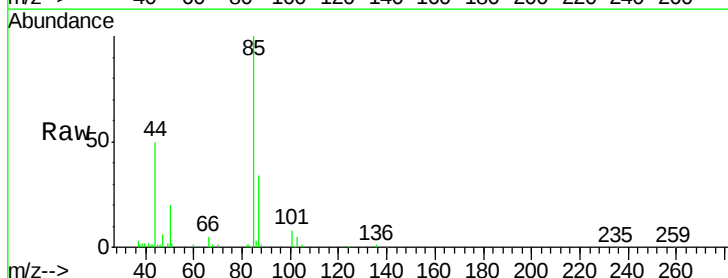
Acq: 31 Dec 2019 2:27

Tgt Ion: 85 Resp: 88189

Ion Ratio Lower Upper

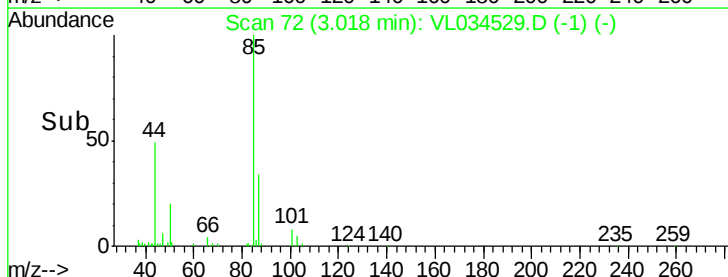
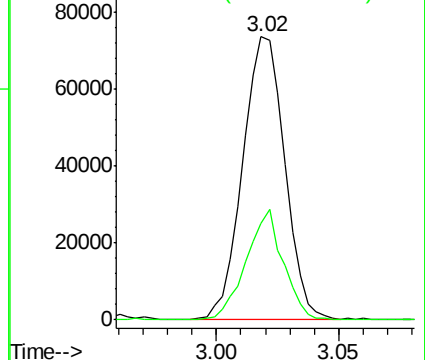
85 100

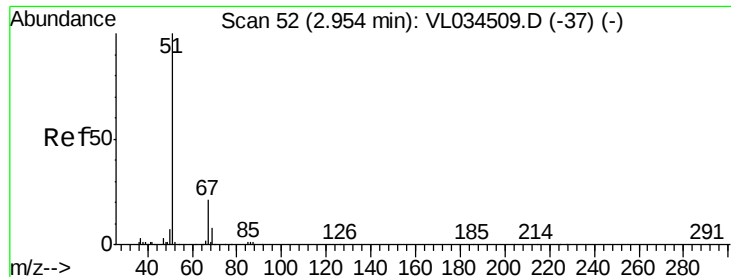
87 34.3 27.9 41.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.718 ppbv

RT: 2.95 min Scan# 52

Delta R.T. 0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

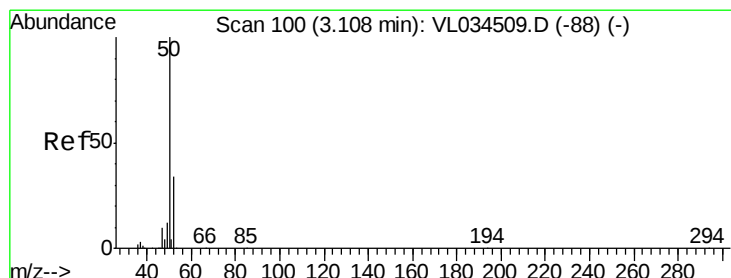
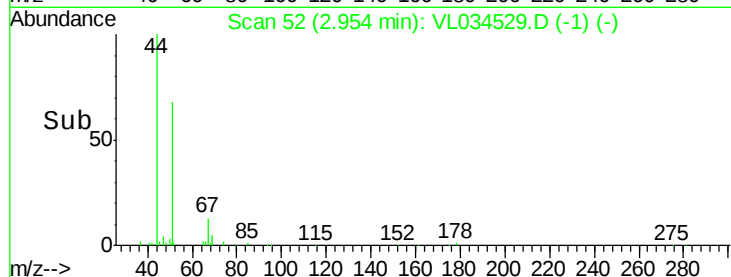
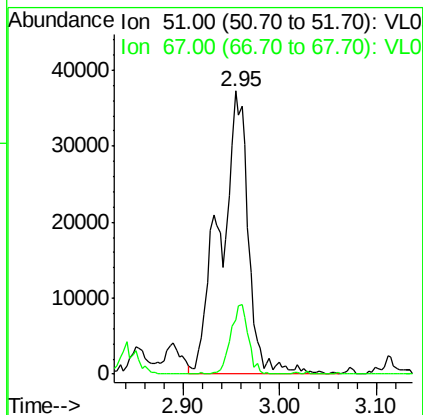
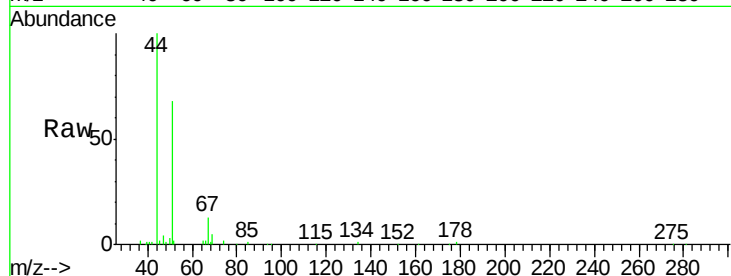
27-1

Tgt Ion: 51 Resp: 75654

Ion Ratio Lower Upper

51 100

67 15.3 16.8 25.2#



#4

Chloromethane

Concen: 0.678 ppbv

RT: 3.11 min Scan# 101

Delta R.T. 0.00 min

Lab File: VL034529.D

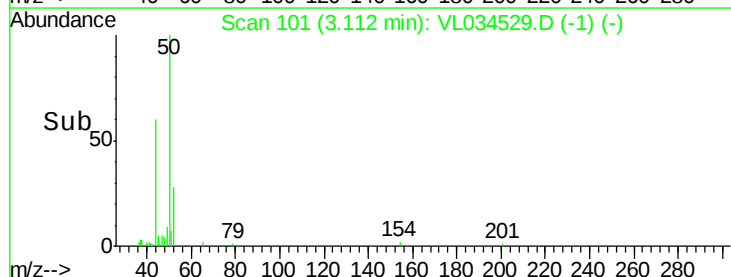
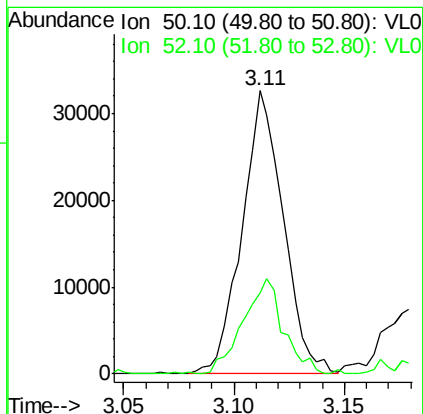
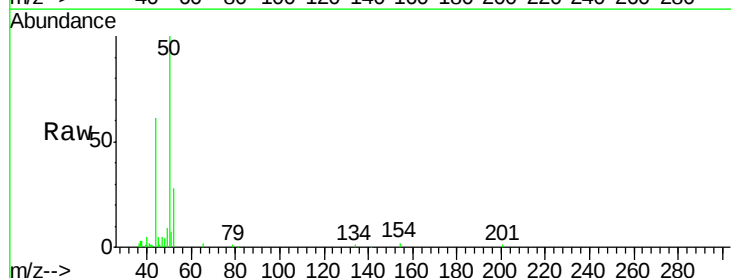
Acq: 31 Dec 2019 2:27

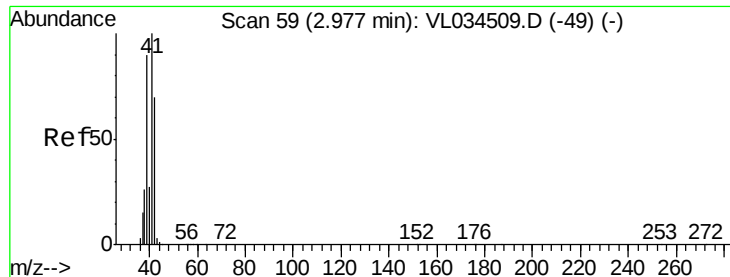
Tgt Ion: 50 Resp: 42395

Ion Ratio Lower Upper

50 100

52 27.7 27.6 41.4





#9

Propene

Concen: 9.525 ppbv

RT: 3.18 min Scan# 122

Delta R.T. 0.20 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

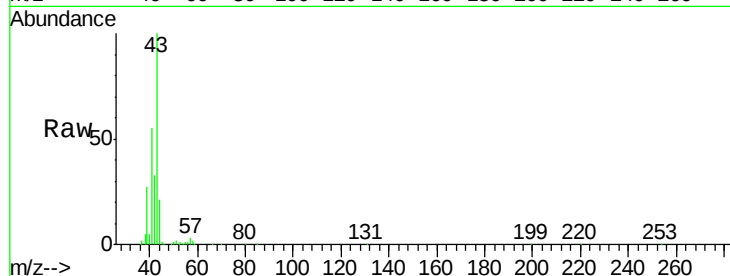
27-1

Tgt Ion: 41 Resp: 386809

Ion Ratio Lower Upper

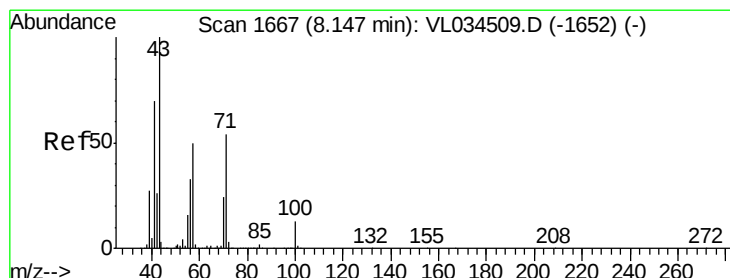
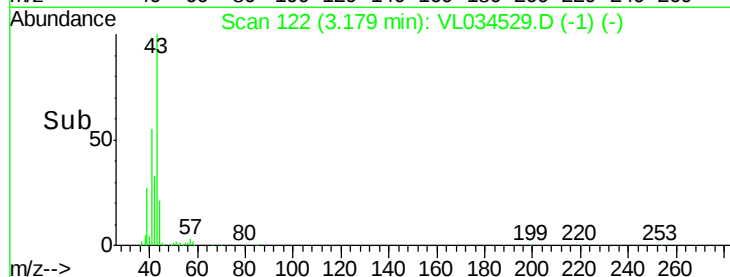
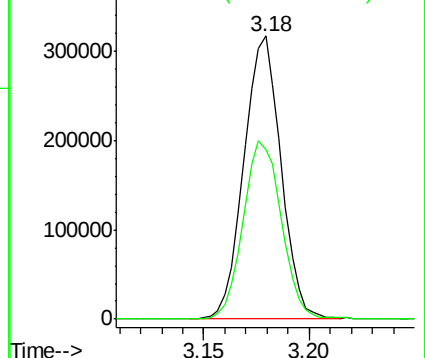
41 100

42 65.7 55.8 83.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.110 ppbv

RT: 8.15 min Scan# 1667

Delta R.T. 0.00 min

Lab File: VL034529.D

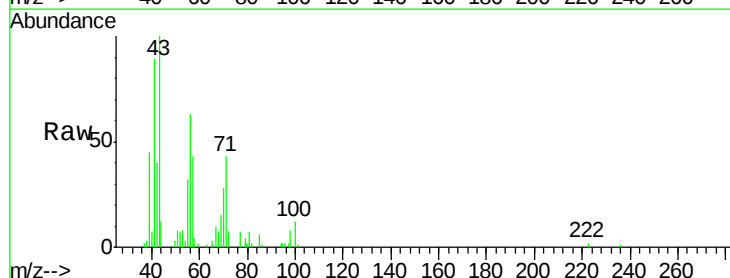
Acq: 31 Dec 2019 2:27

Tgt Ion: 43 Resp: 11575

Ion Ratio Lower Upper

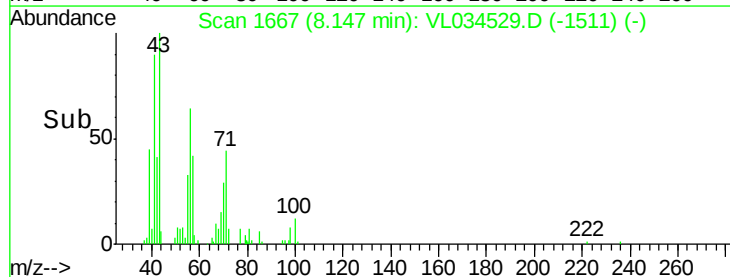
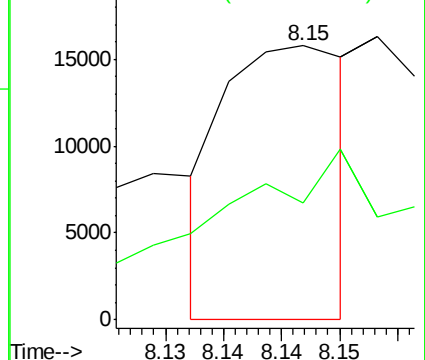
43 100

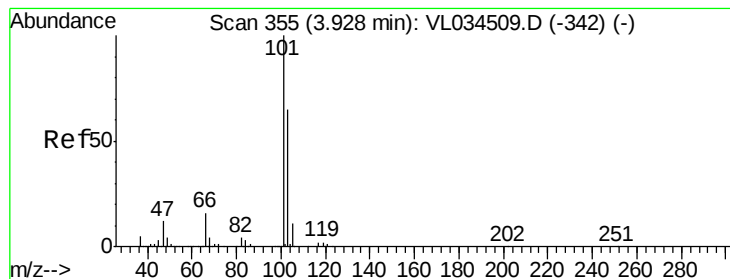
57 0.0 41.0 61.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#11

Trichlorofluoromethane

Concen: 0.242 ppbv

RT: 3.93 min Scan# 357

Delta R.T. 0.01 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

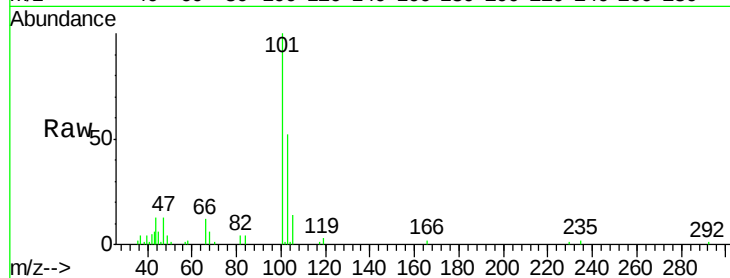
27-1

Tgt Ion:101 Resp: 39117

Ion Ratio Lower Upper

101 100

103 52.4 52.1 78.1



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

30000

20000

10000

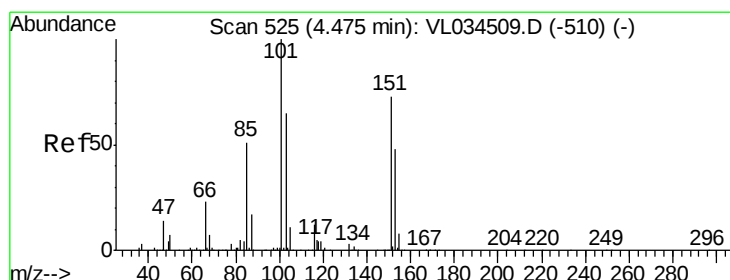
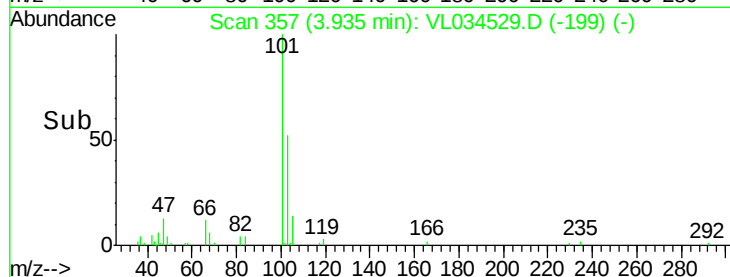
0

3.93

3.90

3.95

Time-->



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.059 ppbv

RT: 4.48 min Scan# 527

Delta R.T. 0.01 min

Lab File: VL034529.D

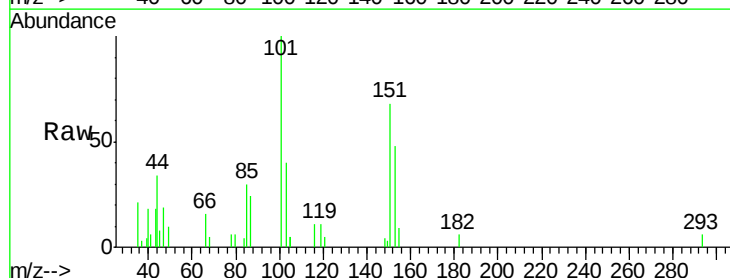
Acq: 31 Dec 2019 2:27

Tgt Ion:101 Resp: 6080

Ion Ratio Lower Upper

101 100

151 84.1 57.8 86.6



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

6000

5000

4000

3000

2000

1000

0

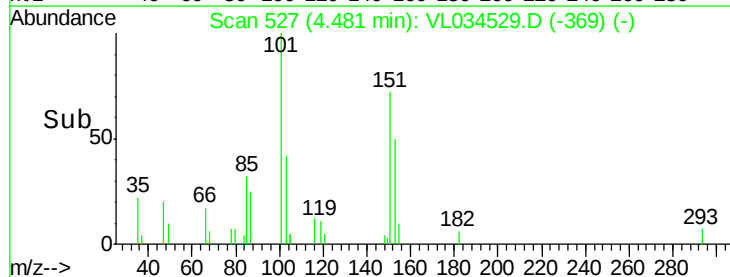
4.48

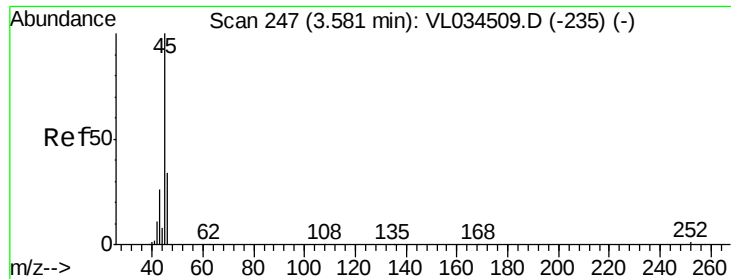
4.44

4.46

4.48

Time-->

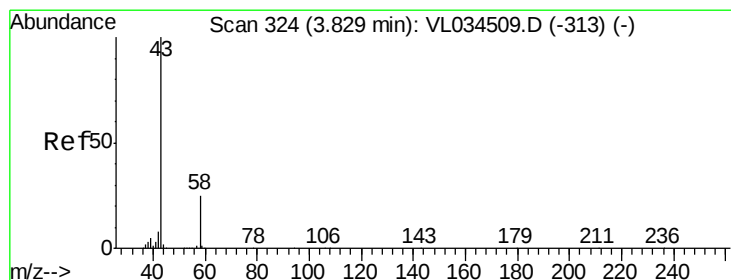
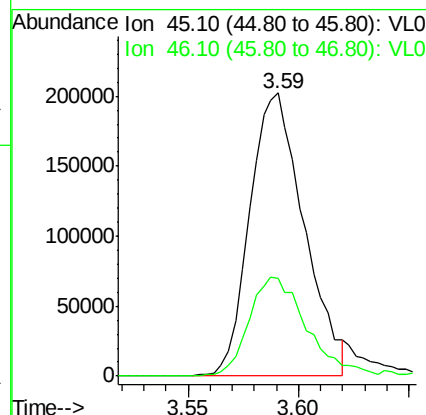
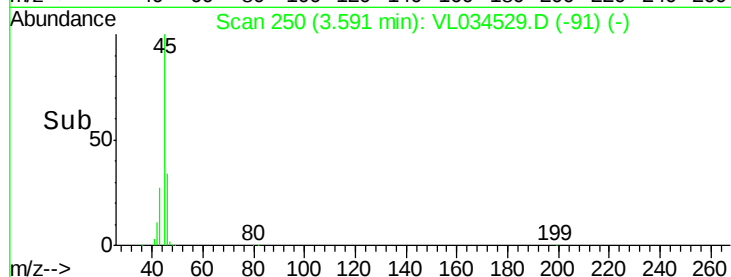
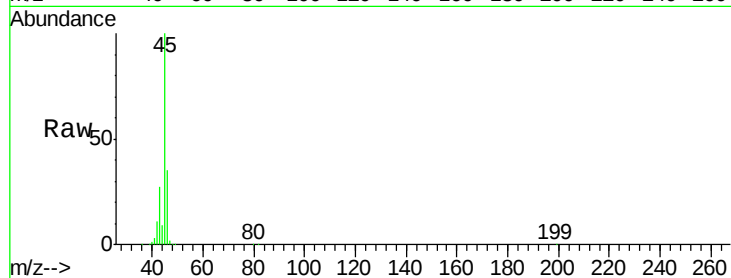




#13
Ethanol
Concen: 30.605 ppbv
RT: 3.59 min Scan# 250
Delta R.T. 0.01 min
Lab File: VL034529.D
Acq: 31 Dec 2019 2:27

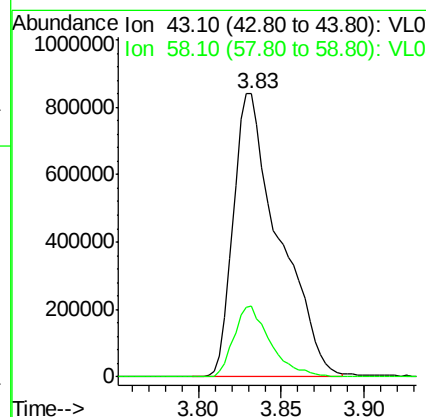
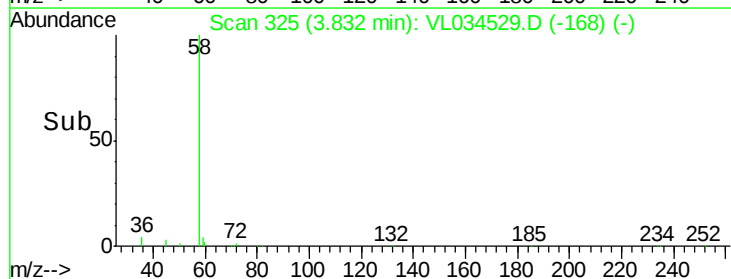
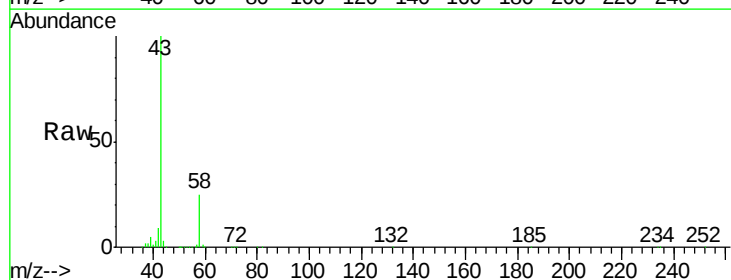
Instrument :
MSVOA_L
ClientSampled :
27-1

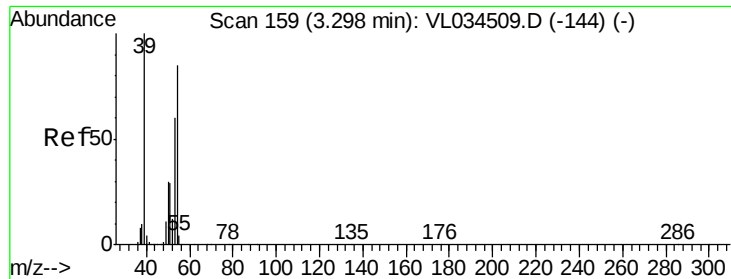
Tgt Ion: 45 Resp: 344852
Ion Ratio Lower Upper
45 100
46 38.4 14.9 59.7



#15
Acetone
Concen: 12.529 ppbv
RT: 3.83 min Scan# 325
Delta R.T. 0.00 min
Lab File: VL034529.D
Acq: 31 Dec 2019 2:27

Tgt Ion: 43 Resp: 1616559
Ion Ratio Lower Upper
43 100
58 20.3 20.4 30.6#

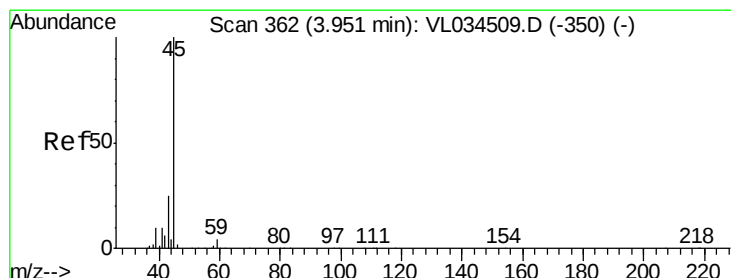
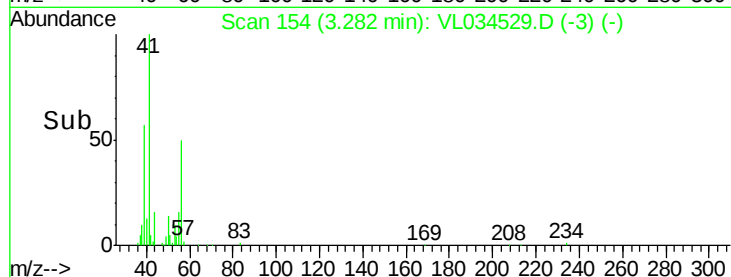
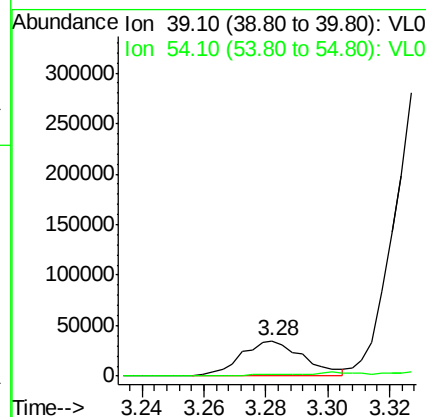
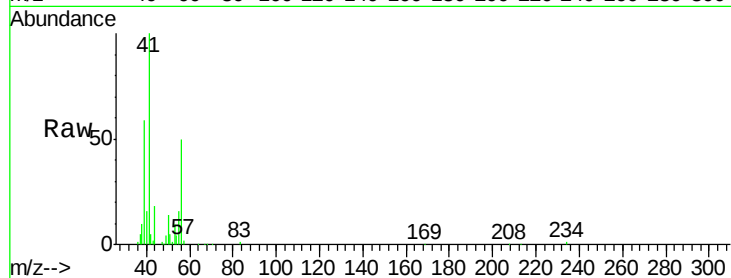




#16
 1,3-Butadiene
 Concen: 0.944 ppbv
 RT: 3.28 min Scan# 154
 Delta R.T. -0.02 min
 Lab File: VL034529.D
 Acq: 31 Dec 2019 2:27

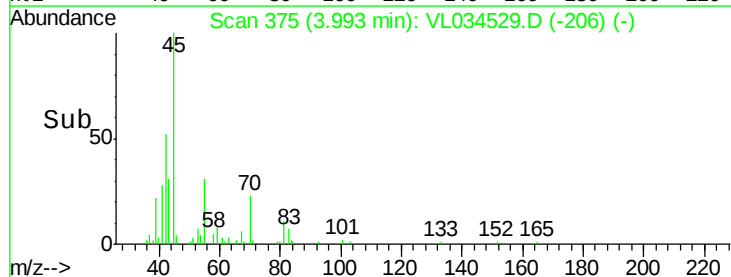
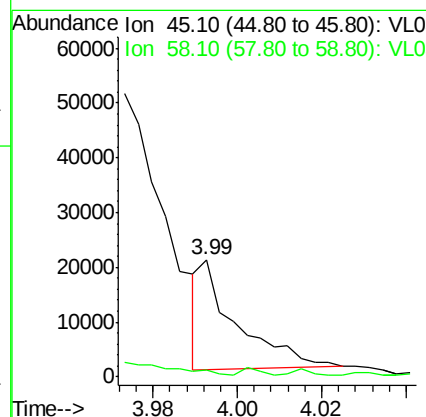
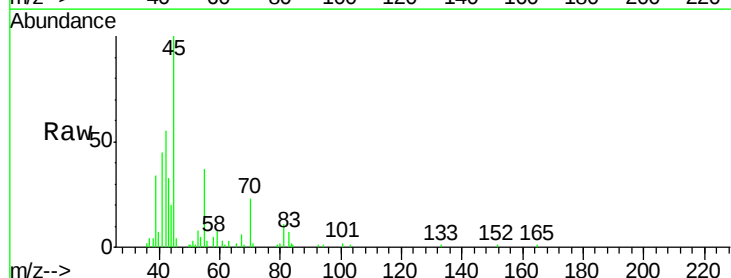
Instrument :
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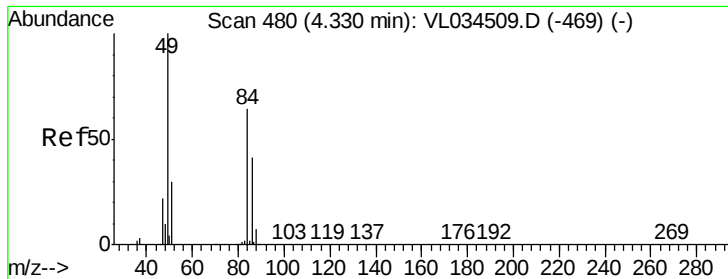
Tgt Ion: 39 Resp: 46850
 Ion Ratio Lower Upper
 39 100
 54 0.0 66.2 99.2#



#19
 Isopropyl Alcohol
 Concen: 0.143 ppbv
 RT: 3.99 min Scan# 375
 Delta R.T. 0.04 min
 Lab File: VL034529.D
 Acq: 31 Dec 2019 2:27

Tgt Ion: 45 Resp: 11948
 Ion Ratio Lower Upper
 45 100
 58 0.0 1.4 2.0#

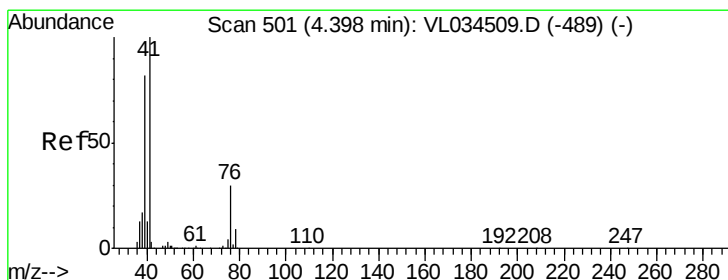
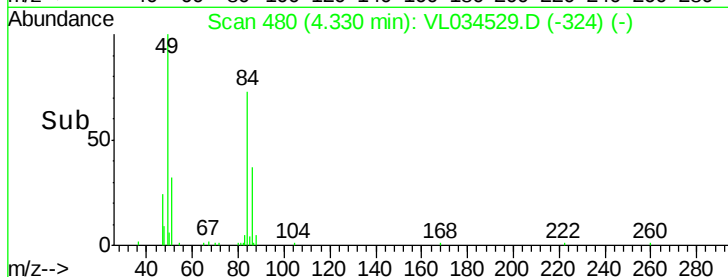
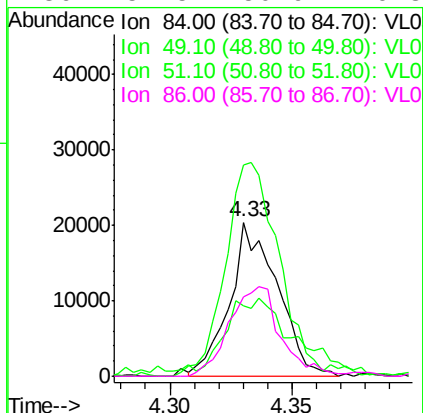
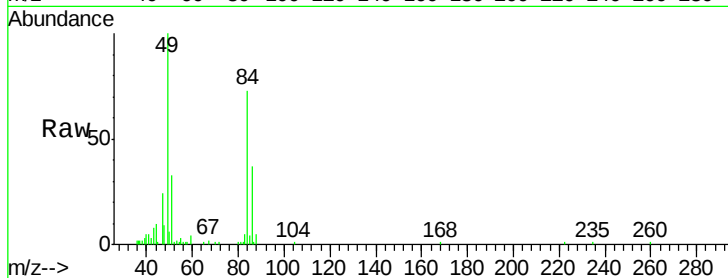




#20
Methylene Chloride
Concen: 0.545 ppbv
RT: 4.33 min Scan# 480
Delta R.T. 0.00 min
Lab File: VL034529.D
Acq: 31 Dec 2019 2:27

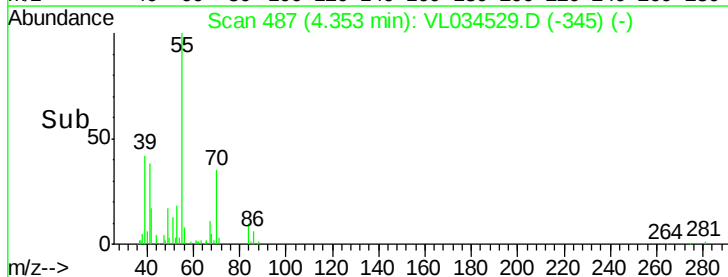
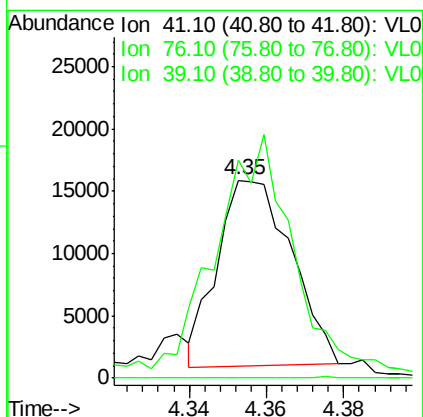
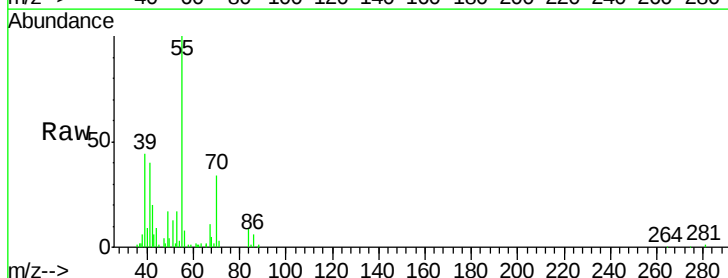
Instrument :
MSVOA_L
ClientSampleId :
27-1

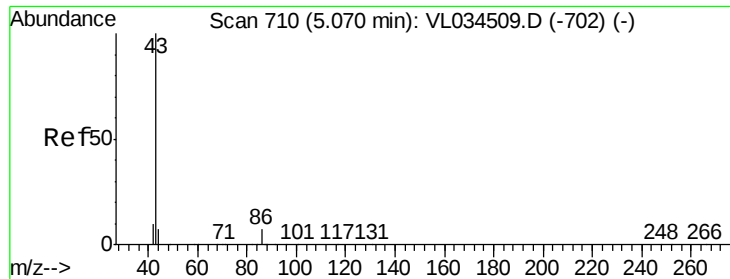
Tgt Ion:	84	Resp:	27683
Ion	Ratio	Lower	Upper
84	100		
49	132.3	124.4	186.6
51	38.8	37.0	55.6
86	51.5	50.9	76.3



#21
Allyl Chloride
Concen: 0.268 ppbv
RT: 4.35 min Scan# 487
Delta R.T. -0.04 min
Lab File: VL034529.D
Acq: 31 Dec 2019 2:27

Tgt Ion:	41	Resp:	19903
Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.2	36.4#
39	134.5	65.8	98.6#





#23

Vinyl Acetate

Concen: 0.622 ppbv

RT: 5.06 min Scan# 708

Delta R.T. -0.01 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

27-1

Tgt Ion: 43 Resp: 92670

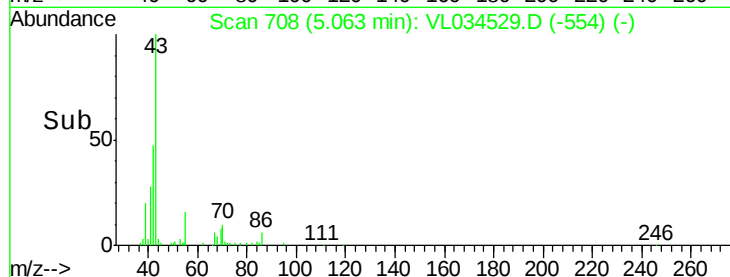
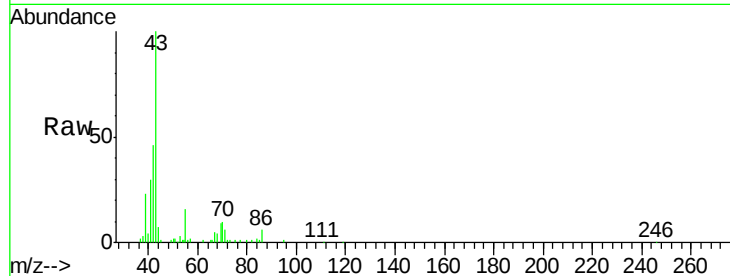
Ion Ratio Lower Upper

43 100

86 5.9 5.4 8.2

42 43.9 8.9 13.3#

44 4.5 5.0 7.4#

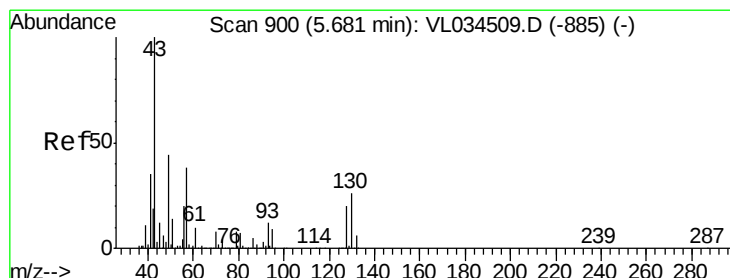
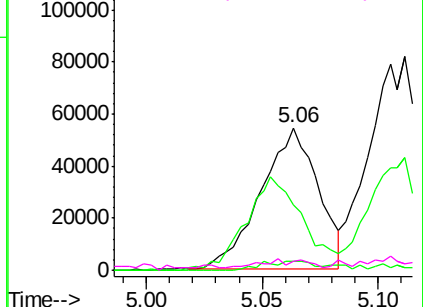


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.149 ppbv

RT: 5.68 min Scan# 901

Delta R.T. 0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Tgt Ion: 43 Resp: 30105

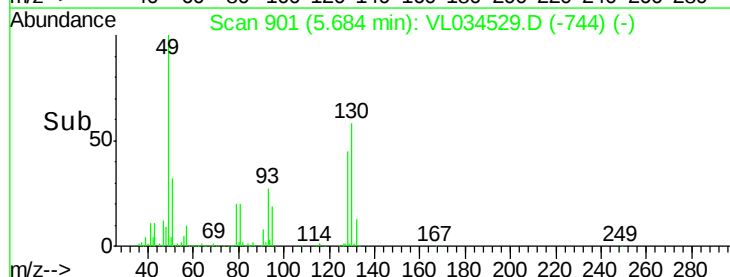
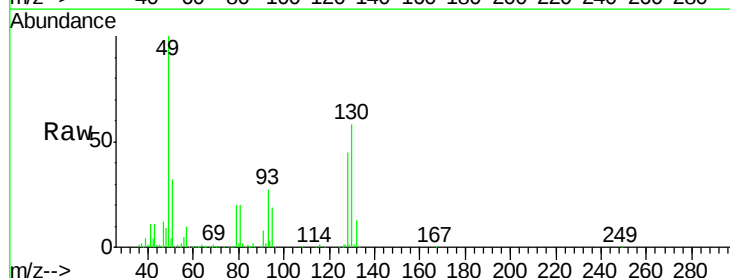
Ion Ratio Lower Upper

43 100

45 12.8 8.3 12.5#

61 7.0 7.8 11.6#

70 0.4 5.8 8.8#

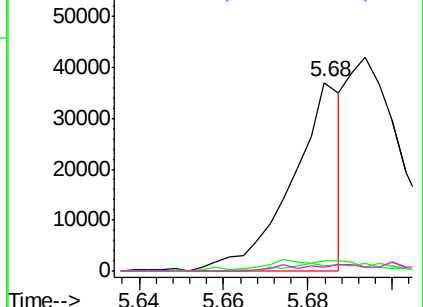


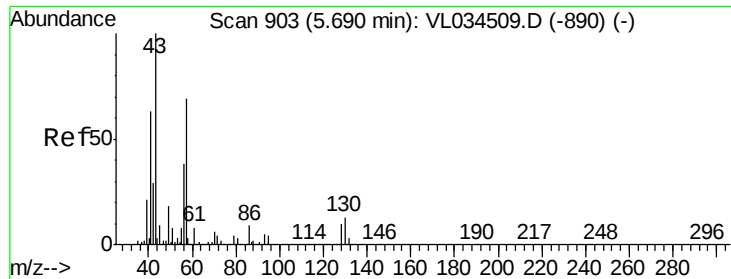
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.872 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

27-1

Tgt Ion: 57 Resp: 74000

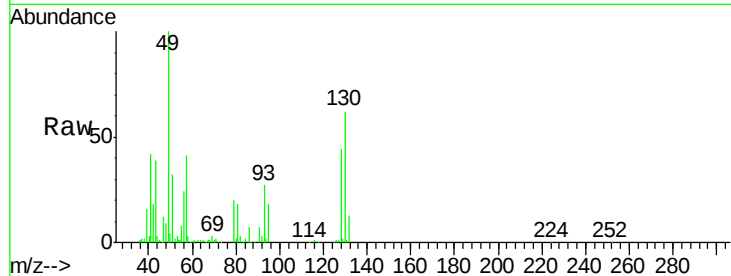
Ion Ratio Lower Upper

57 100

41 108.7 75.3 112.9

43 96.9 189.4 284.2#

56 60.8 42.8 64.2

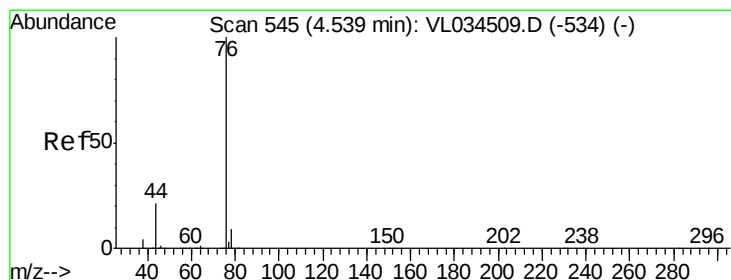
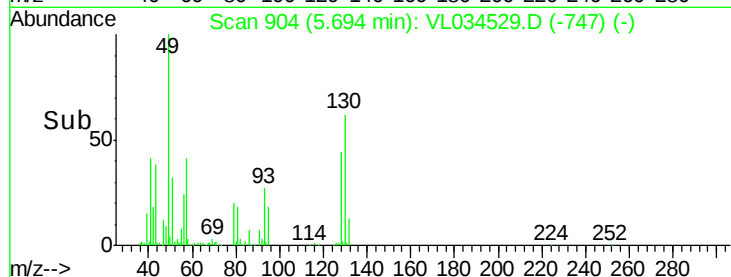
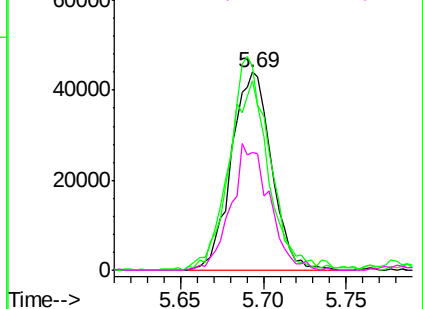


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#27

Carbon Disulfide

Concen: 0.083 ppbv

RT: 4.55 min Scan# 548

Delta R.T. 0.01 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

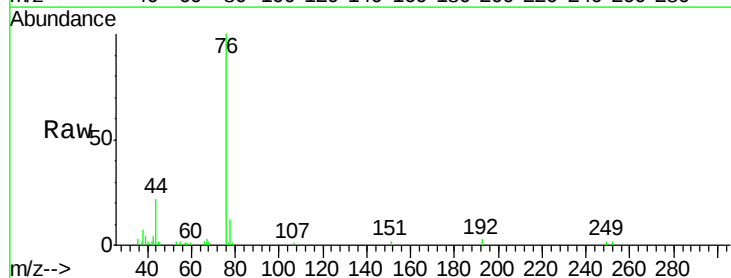
Tgt Ion: 76 Resp: 8943

Ion Ratio Lower Upper

76 100

44 75.7 16.6 25.0#

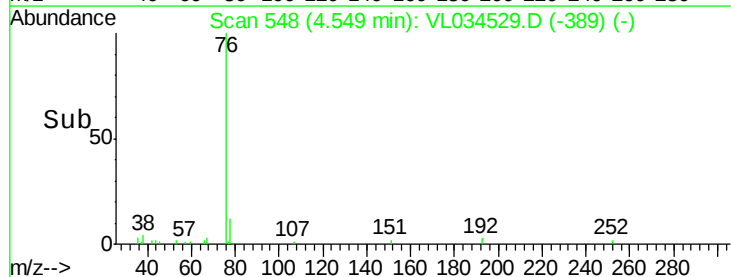
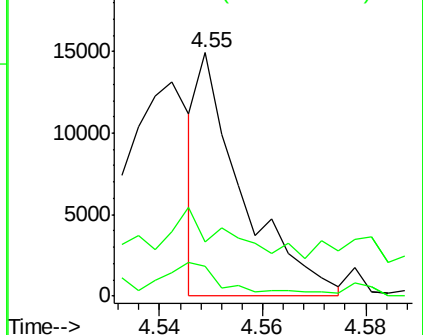
78 24.0 7.4 11.0#

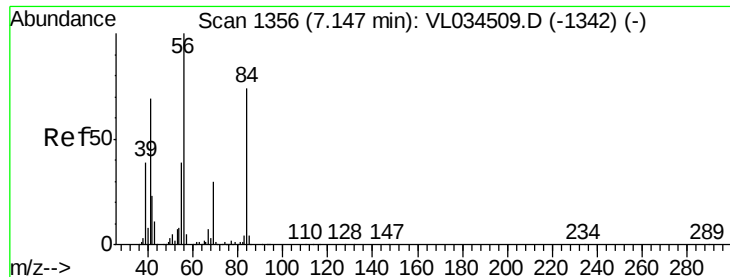


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0

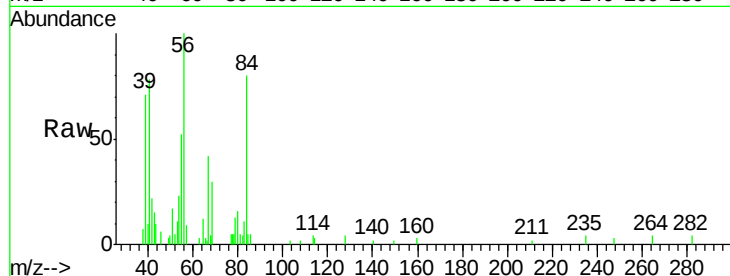




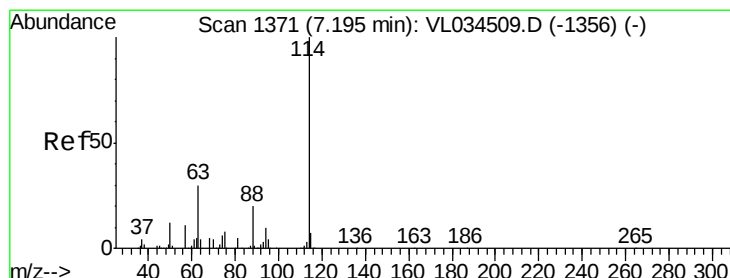
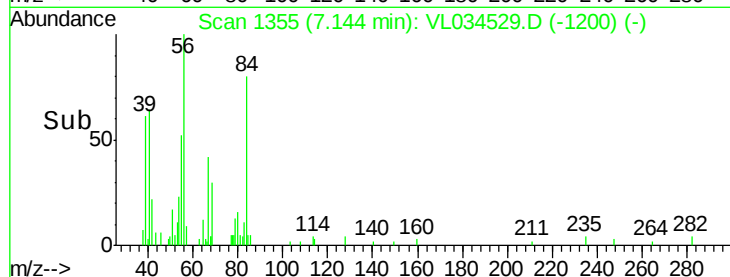
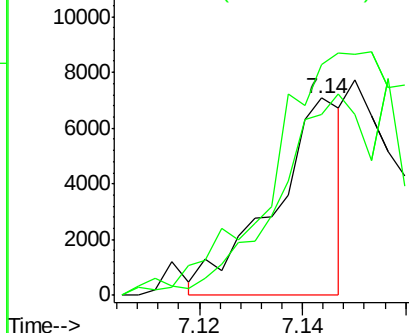
#30
Cyclohexane
Concen: 0.103 ppbv
RT: 7.14 min Scan# 1355
Delta R.T. -0.00 min
Lab File: VL034529.D
Acq: 31 Dec 2019 2:27

Instrument :
MSVOA_L
ClientSampled :
27-1

Tgt Ion: 84 Resp: 6484
Ion Ratio Lower Upper
84 100
56 0.0 112.7 169.1#
41 0.0 73.0 109.4#

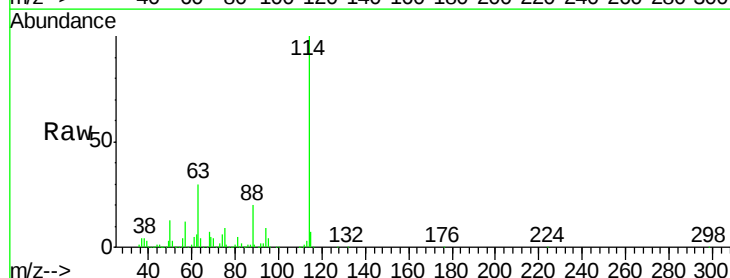


Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

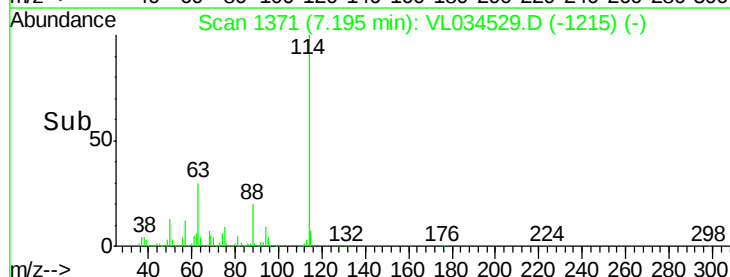
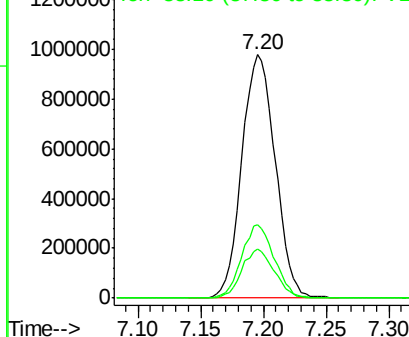


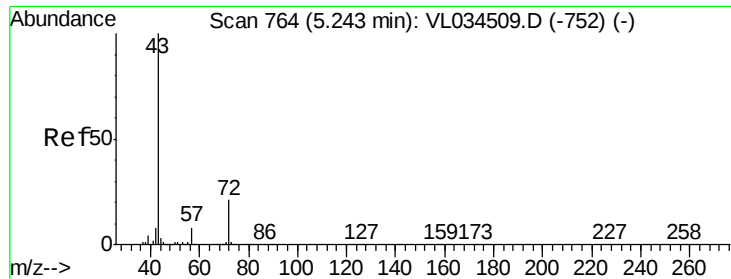
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.20 min Scan# 1371
Delta R.T. 0.00 min
Lab File: VL034529.D
Acq: 31 Dec 2019 2:27

Tgt Ion: 114 Resp: 1815433
Ion Ratio Lower Upper
114 100
63 29.5 24.1 36.1
88 19.5 15.7 23.5



Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0

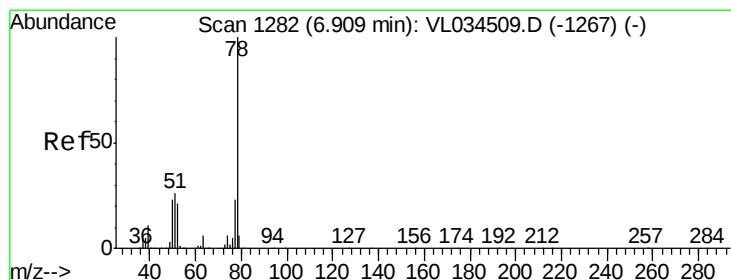
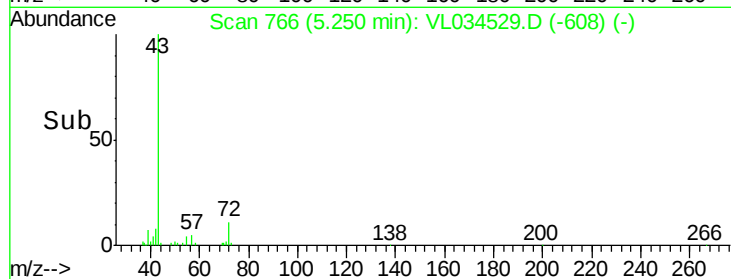
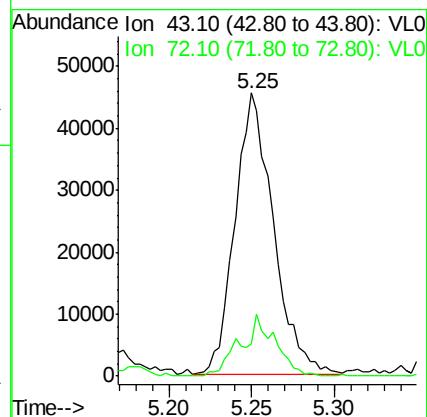
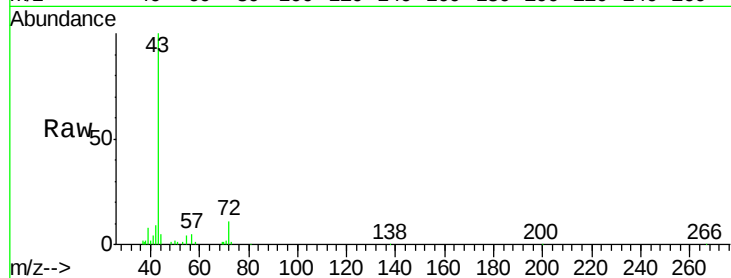




#34
 2-Butanone
 Concen: 0.569 ppbv
 RT: 5.25 min Scan# 766
 Delta R.T. 0.01 min
 Lab File: VL034529.D
 Acq: 31 Dec 2019 2:27

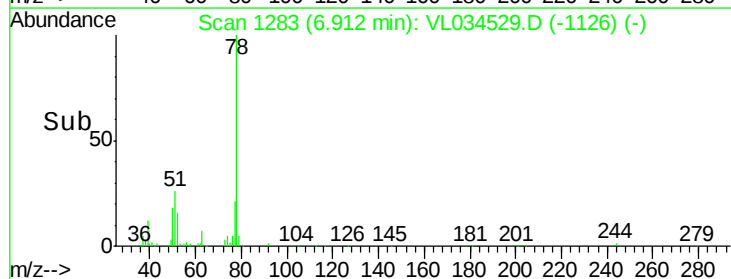
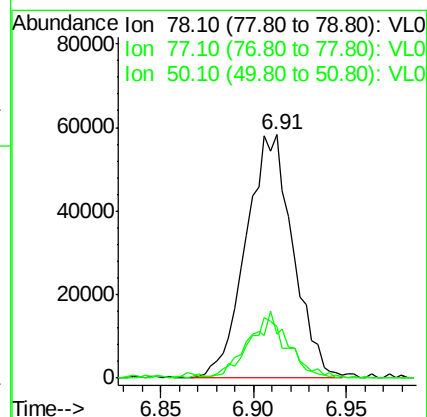
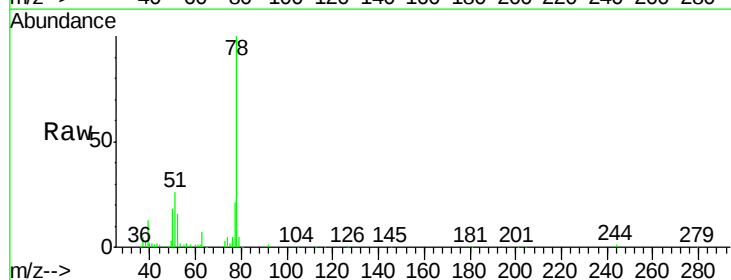
Instrument :
 MSVOA_L
 ClientSampled :
 27-1

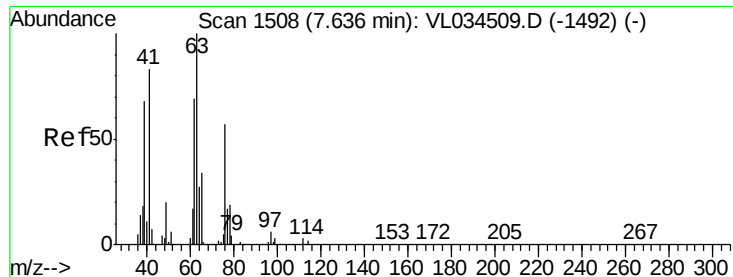
Tgt Ion: 43 Resp: 73774
 Ion Ratio Lower Upper
 43 100
 72 19.6 17.0 25.4



#36
 Benzene
 Concen: 0.651 ppbv
 RT: 6.91 min Scan# 1283
 Delta R.T. 0.00 min
 Lab File: VL034529.D
 Acq: 31 Dec 2019 2:27

Tgt Ion: 78 Resp: 102943
 Ion Ratio Lower Upper
 78 100
 77 20.2 18.6 28.0
 50 17.3 18.8 28.2#





#39

1,2-Dichloropropane

Concen: 8.199 ppbv

RT: 7.20 min Scan# 1371

Delta R.T. -0.44 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

27-1

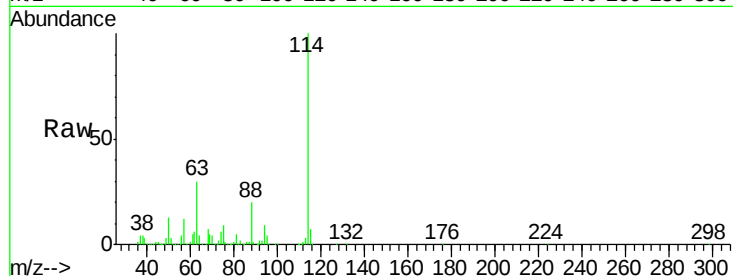
Tgt Ion: 63 Resp: 533537

Ion Ratio Lower Upper

63 100

41 0.0 66.1 99.1#

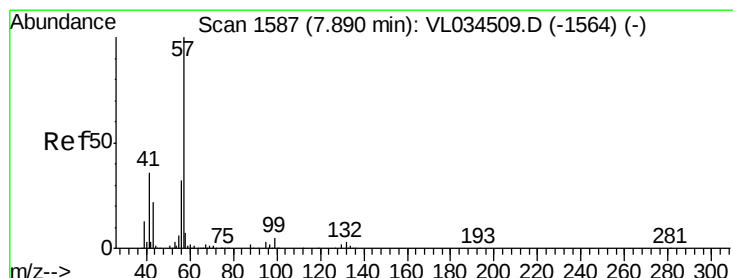
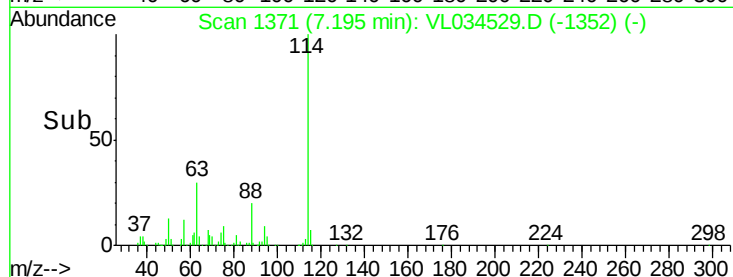
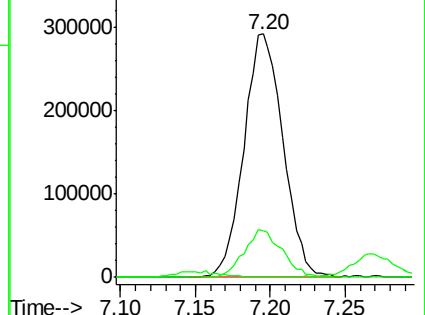
62 19.0 54.9 82.3#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.521 ppbv

RT: 7.89 min Scan# 1588

Delta R.T. 0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

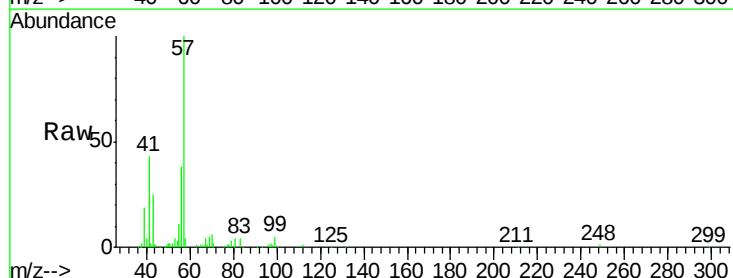
Tgt Ion: 57 Resp: 152472

Ion Ratio Lower Upper

57 100

41 48.7 29.0 43.4#

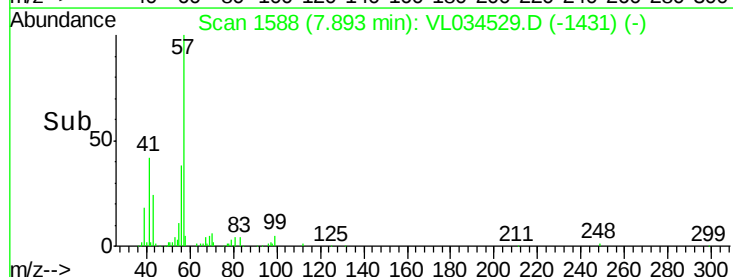
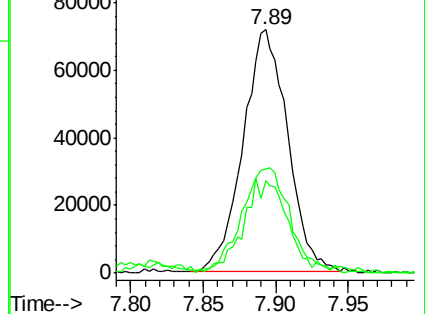
56 39.4 24.9 37.3#

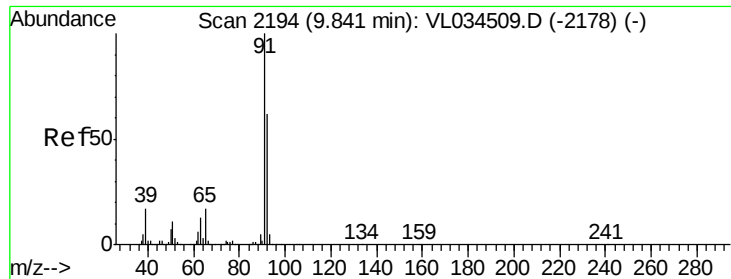


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#53

Toluene

Concen: 0.686 ppbv

RT: 9.84 min Scan# 2194

Delta R.T. 0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

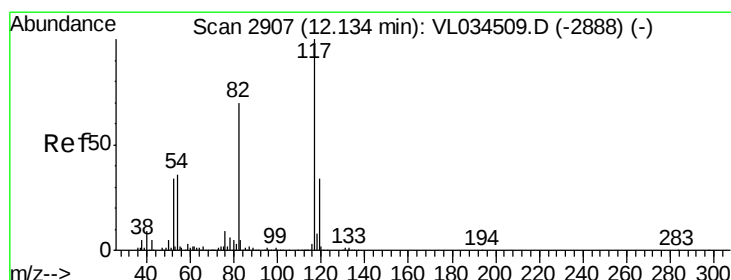
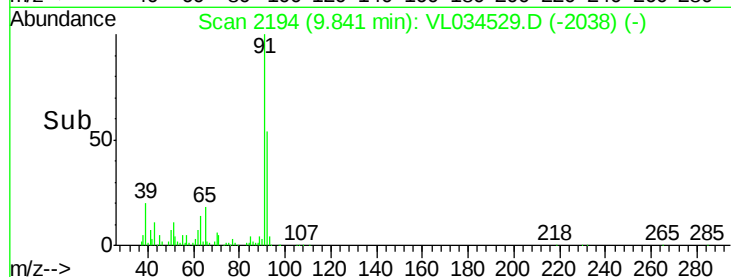
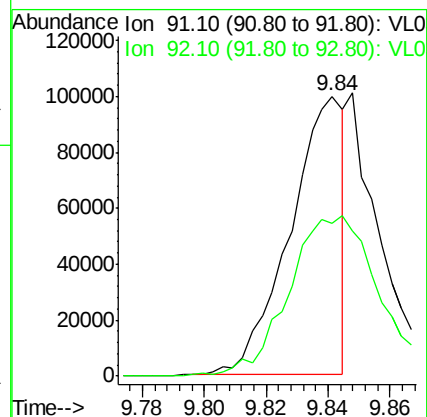
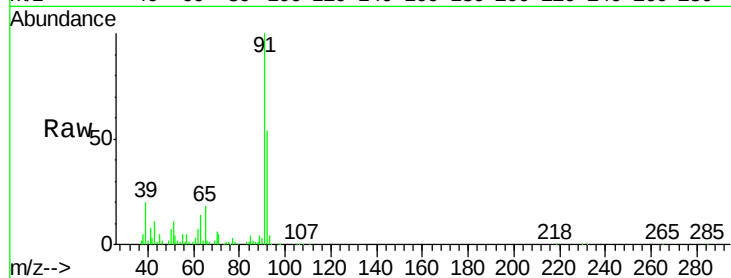
27-1

Tgt Ion: 91 Resp: 119238

Ion Ratio Lower Upper

91 100

92 0.0 48.4 72.6#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.13 min Scan# 2906

Delta R.T. -0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

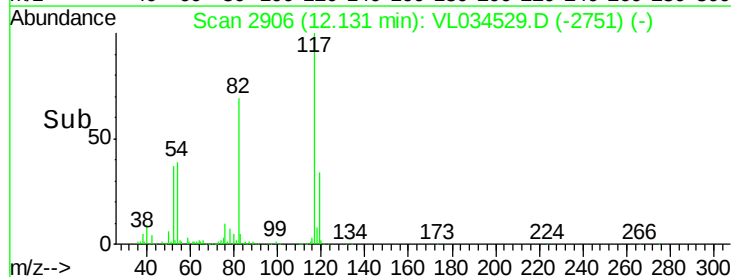
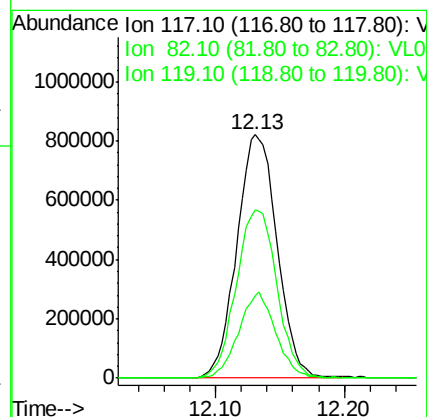
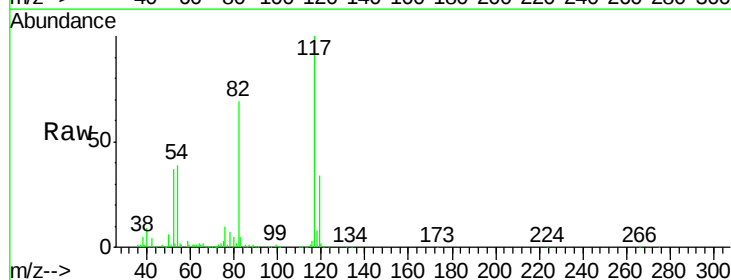
Tgt Ion: 117 Resp: 1781790

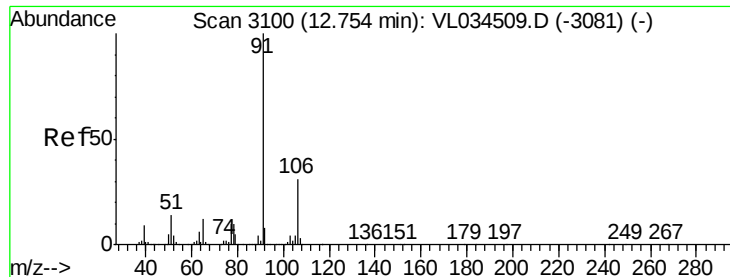
Ion Ratio Lower Upper

117 100

82 70.1 56.2 84.4

119 32.5 27.1 40.7





#58

Ethyl Benzene

Concen: 0.059 ppbv

RT: 12.76 min Scan# 3102

Delta R.T. 0.01 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

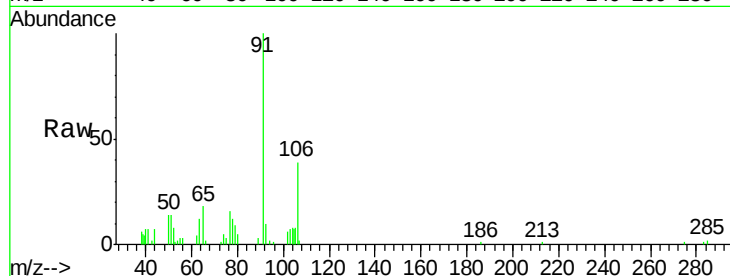
27-1

Tgt Ion: 91 Resp: 14120

Ion Ratio Lower Upper

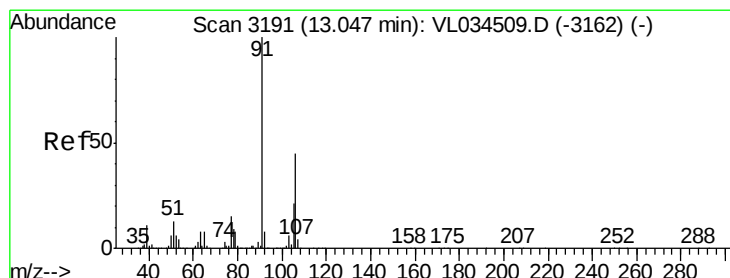
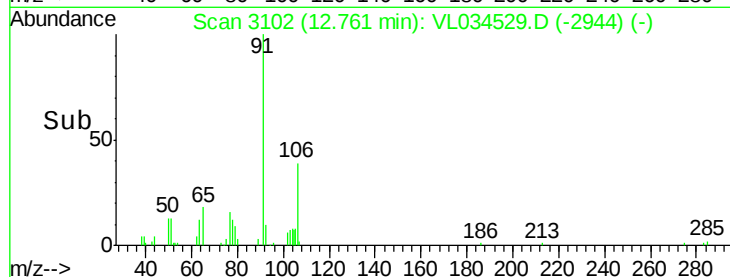
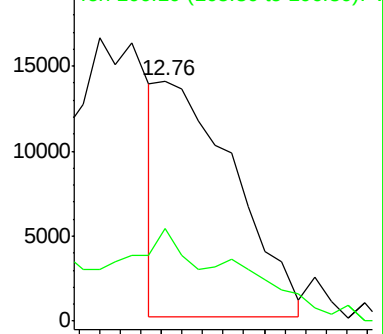
91 100

106 30.0 24.6 36.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.074 ppbv

RT: 13.04 min Scan# 3190

Delta R.T. -0.00 min

Lab File: VL034529.D

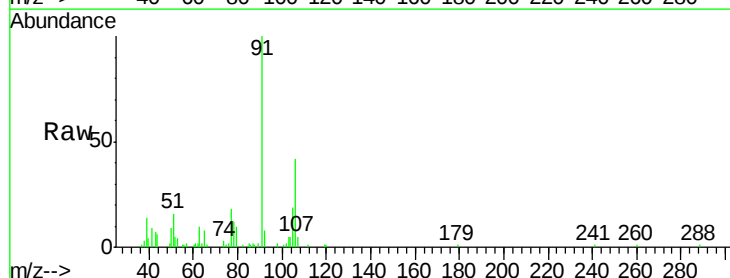
Acq: 31 Dec 2019 2:27

Tgt Ion: 91 Resp: 15619

Ion Ratio Lower Upper

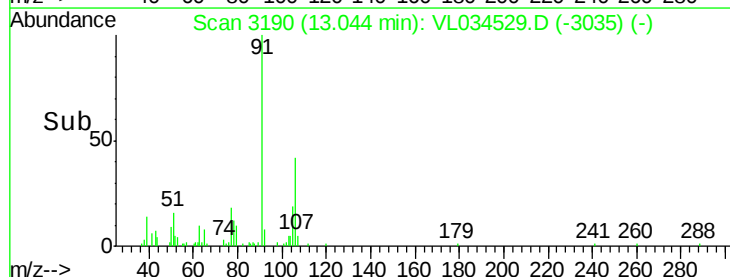
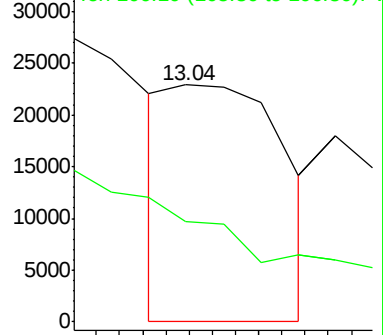
91 100

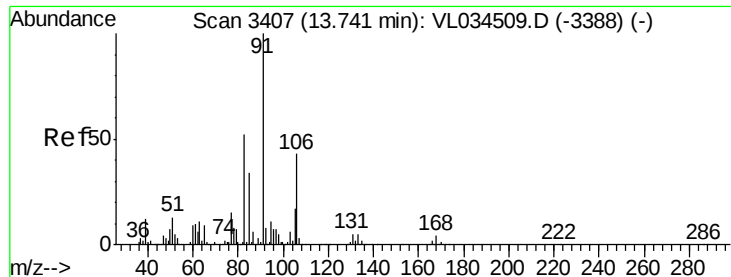
106 0.0 35.6 53.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#60

o-Xylene

Concen: 0.032 ppbv

RT: 13.74 min Scan# 3405

Delta R.T. -0.01 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

Instrument :

MSVOA_L

ClientSampleId :

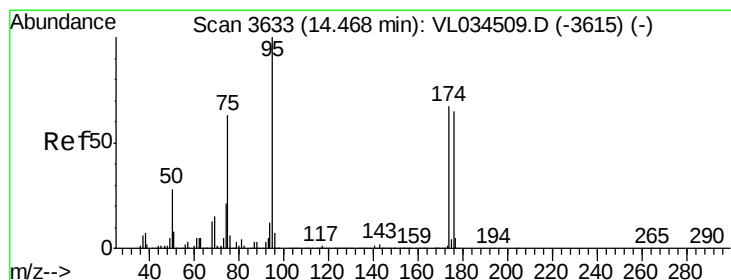
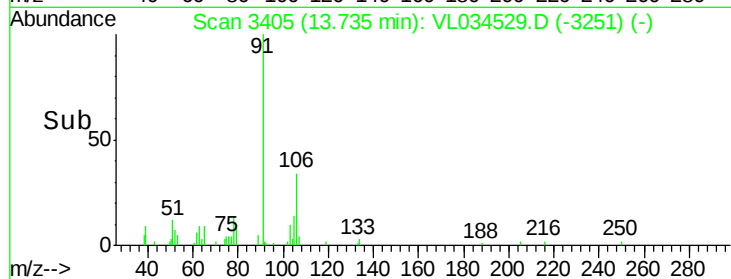
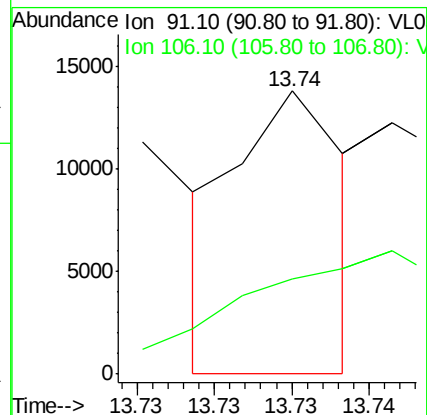
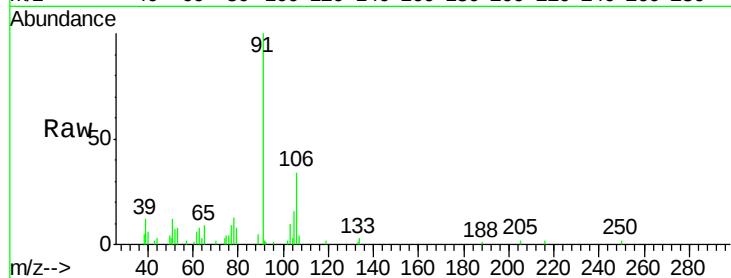
27-1

Tgt Ion: 91 Resp: 6716

Ion Ratio Lower Upper

91 100

106 0.0 21.4 64.3#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.112 ppbv

RT: 14.47 min Scan# 3633

Delta R.T. 0.00 min

Lab File: VL034529.D

Acq: 31 Dec 2019 2:27

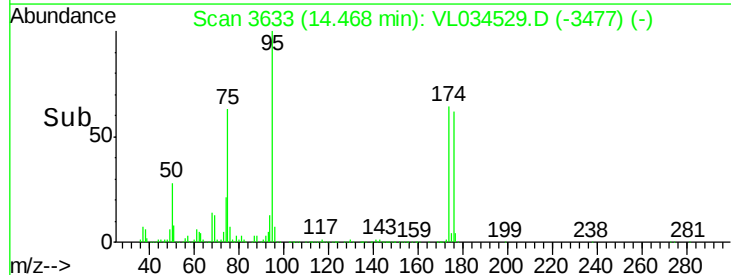
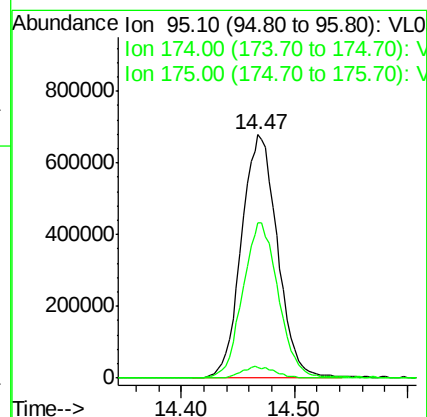
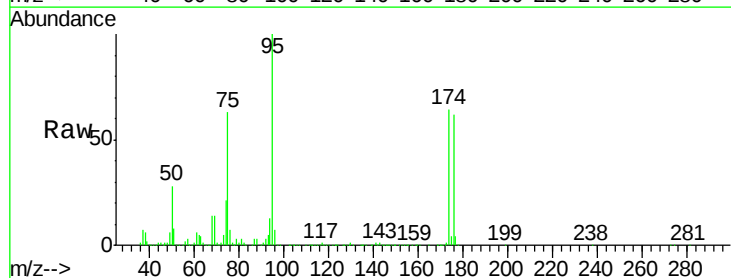
Tgt Ion: 95 Resp: 1503480

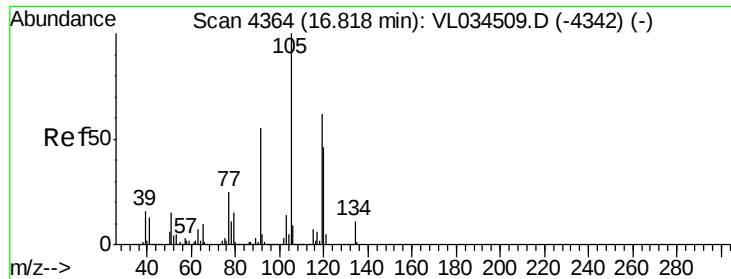
Ion Ratio Lower Upper

95 100

174 63.5 52.4 78.6

175 4.4 3.9 5.9

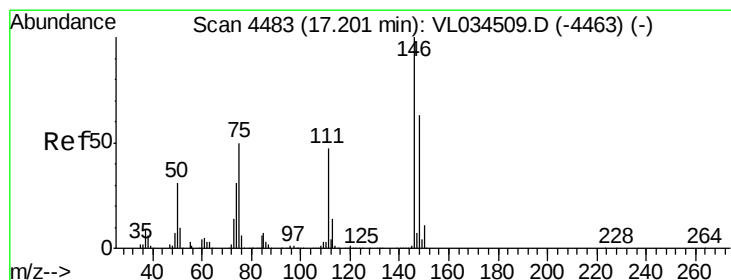
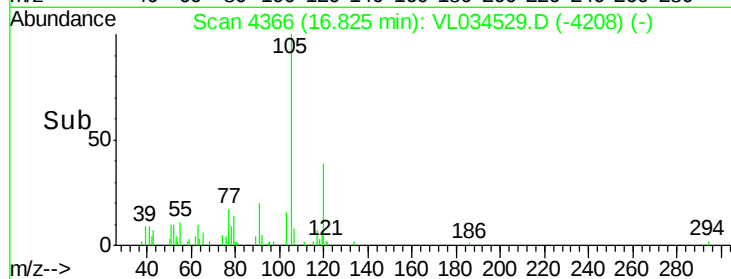
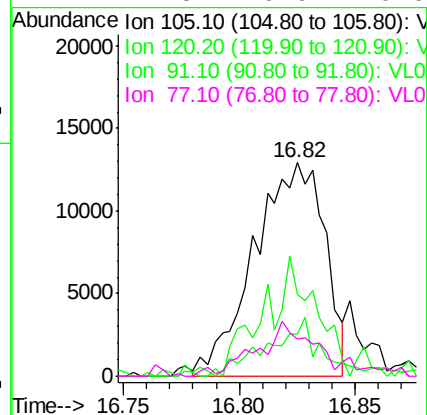
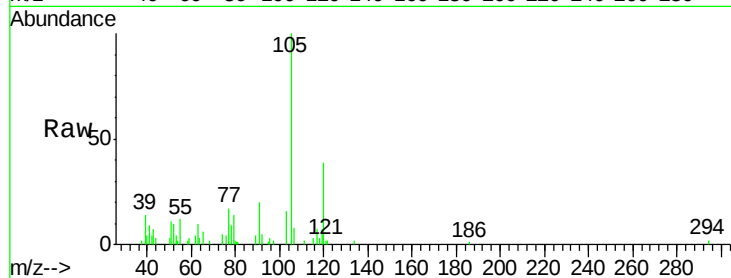




#74
 1,2,4-Trimethylbenzene
 Concen: 0.111 ppbv
 RT: 16.82 min Scan# 4366
 Delta R.T. 0.01 min
 Lab File: VL034529.D
 Acq: 31 Dec 2019 2:27

Instrument :
 MSVOA_L
 ClientSampleId :
 27-1

Tgt Ion:	105	Resp:	27375
Ion	Ratio	Lower	Upper
105	100		
120	37.7	36.7	55.1
91	18.7	44.0	66.0#
77	17.8	19.9	29.9#



#76
 1,4-Dichlorobenzene
 Concen: 0.044 ppbv
 RT: 17.20 min Scan# 4484
 Delta R.T. 0.00 min
 Lab File: VL034529.D
 Acq: 31 Dec 2019 2:27

Tgt Ion:	146	Resp:	6275
Ion	Ratio	Lower	Upper
146	100		
111	108.3	23.5	70.6#
148	118.4	32.1	96.3#

