

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111820\
 Data File : VL035985.D
 Acq On : 18 Nov 2020 22:45
 Operator : SY/AP
 Sample : L4781-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Quant Time: Nov 19 08:13:04 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 04 02:40:06 2020
 QLast Update : Wed Nov 04 02:40:06 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.62	49	1095931	10.00	ppbv	-0.05
33) 1,4-Difluorobenzene	7.13	114	3854732	10.00	ppbv	-0.05
55) Chlorobenzene-d5	12.04	117	3558030	10.00	ppbv	-0.05

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.37	95	2653569	10.50	ppbv	-0.05
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.00%

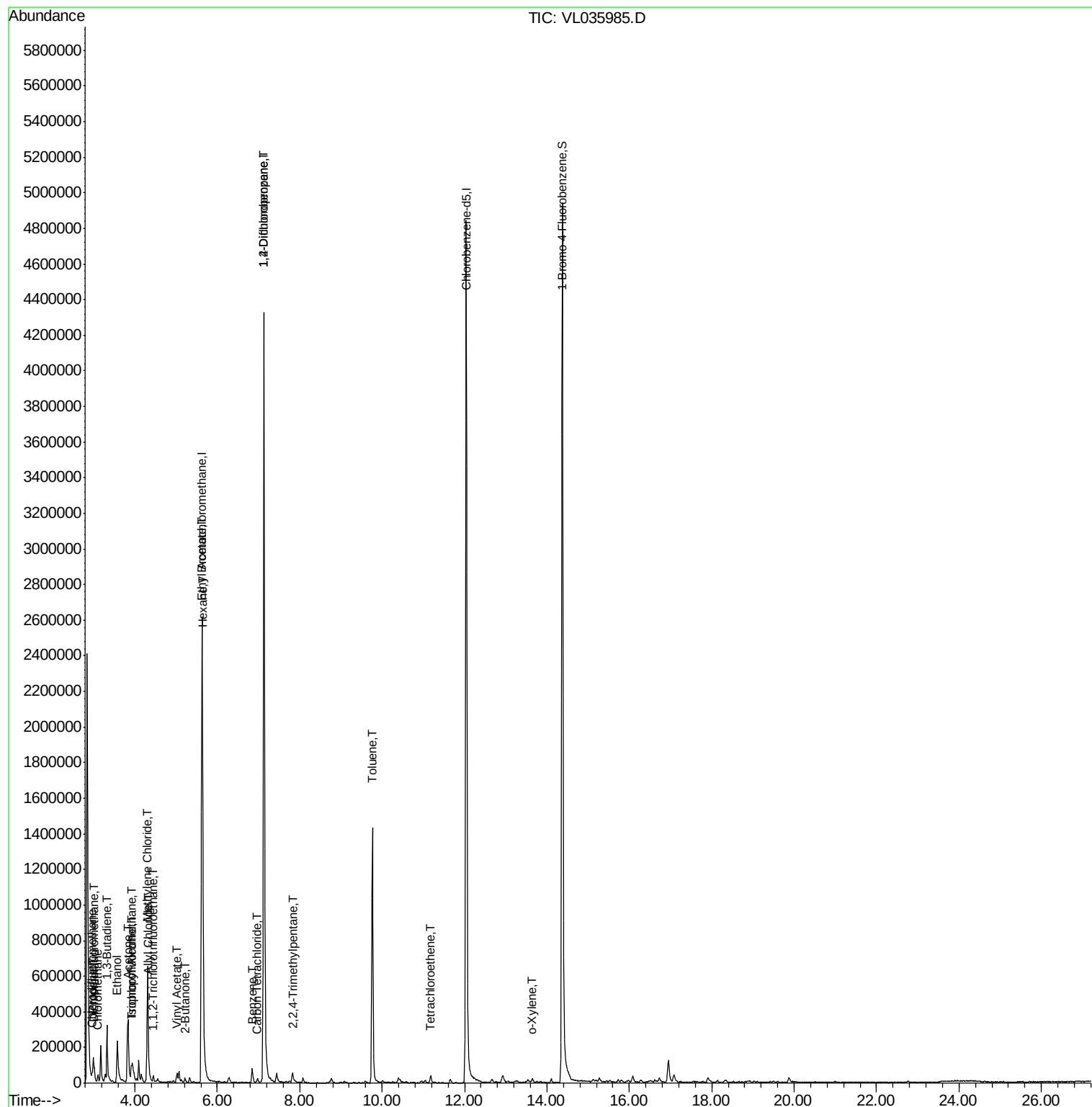
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.01	85	48321	0.234	ppbv	90
3) Chlorodifluoromethane	2.95	51	66732	0.508	ppbv #	90
4) Chloromethane	3.11	50	34462	0.541	ppbv	90
9) Propene	2.99	41	39574	0.824	ppbv	92
11) Trichlorofluoromethane	3.91	101	65240	0.252	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.45	101	14732	0.076	ppbv	94
13) Ethanol	3.57	45	331412	31.802	ppbv	97
15) Acetone	3.82	43	404411	3.452	ppbv	92
16) 1,3-Butadiene	3.32	39	51678	1.024	ppbv #	10
19) Isopropyl Alcohol	3.94	45	111578	1.550	ppbv #	86
20) Methylene Chloride	4.30	84	361243	4.380	ppbv	98
21) Allyl Chloride	4.33	41	2041	0.032	ppbv #	1
23) Vinyl Acetate	5.02	43	29861	0.182	ppbv #	64
25) Ethyl Acetate	5.64	43	205615	0.891	ppbv #	75
26) Hexane	5.65	57	337260	2.649	ppbv #	47
34) 2-Butanone	5.21	43	26739	0.214	ppbv	95
35) Carbon Tetrachloride	6.97	117	10795	0.052	ppbv	95
36) Benzene	6.84	78	73479	0.256	ppbv	95
39) 1,2-Dichloropropane	7.13	63	791217	8.201	ppbv #	30
44) 2,2,4-Trimethylpentane	7.82	57	18746	0.049	ppbv #	1
52) Tetrachloroethene	11.17	164	4116	0.030	ppbv	86
53) Toluene	9.76	91	1212399	3.506	ppbv	98
60) o-Xylene	13.65	91	16617	0.047	ppbv	98

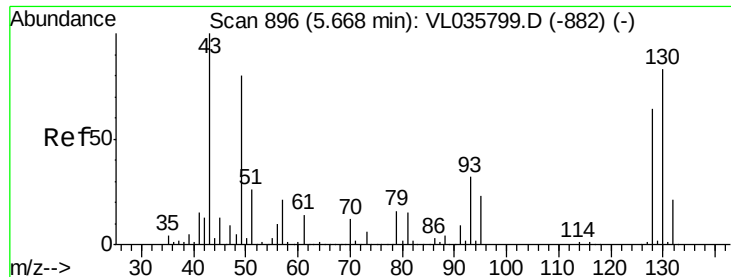
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Nov 04 02:40:06 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.62 min Scan# 882

Delta R.T. -0.05 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

QA1

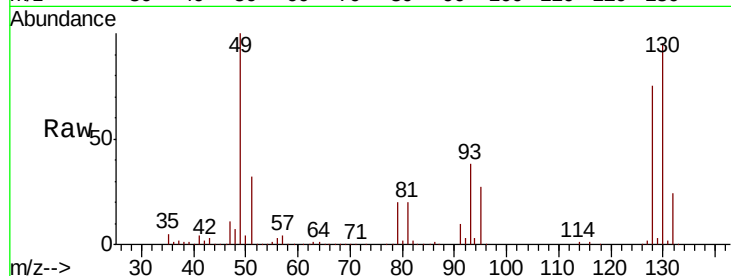
Tot Ion: 49 Resp: 1095931

Ion Ratio Lower Upper

49 100

128 76.3 41.5 124.6

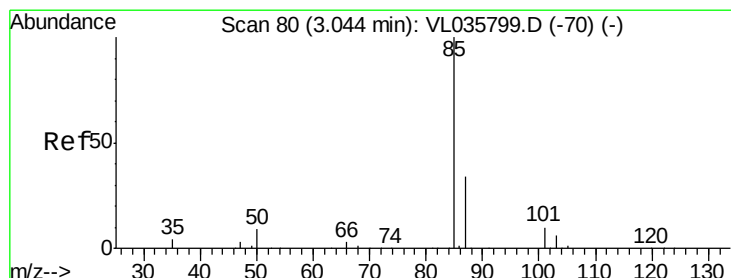
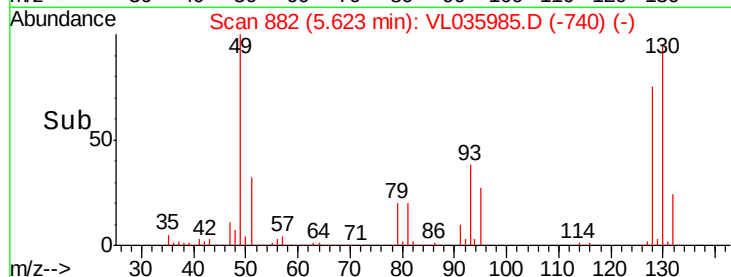
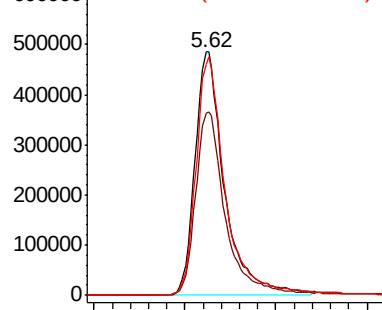
130 98.0 53.7 161.1



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.234 ppbv

RT: 3.01 min Scan# 70

Delta R.T. -0.03 min

Lab File: VL035985.D

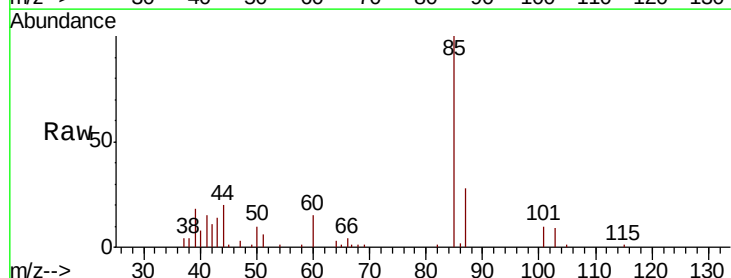
Acq: 18 Nov 2020 22:45

Tgt Ion: 85 Resp: 48321

Ion Ratio Lower Upper

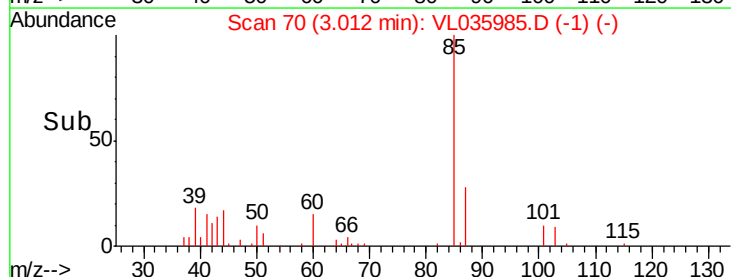
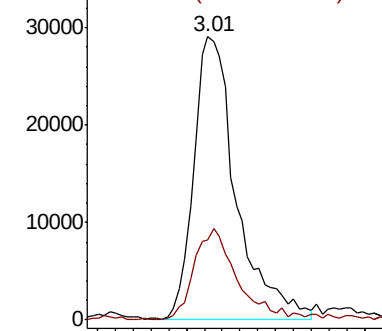
85 100

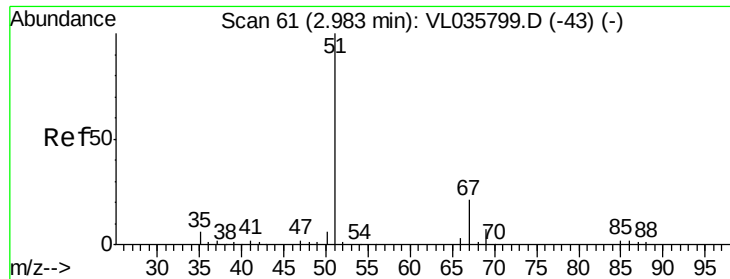
87 28.1 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.508 ppbv

RT: 2.95 min Scan# 52

Delta R.T. -0.03 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

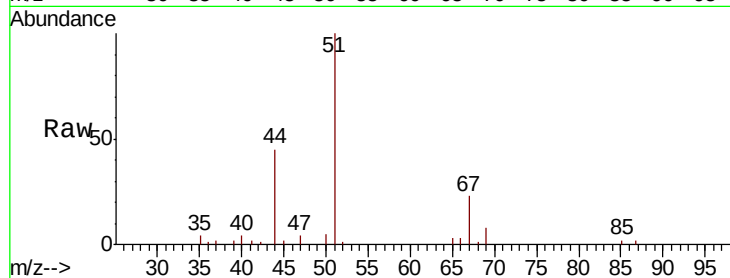
OA1

Tot Ion: 51 Resp: 66732

Ion Ratio Lower Upper

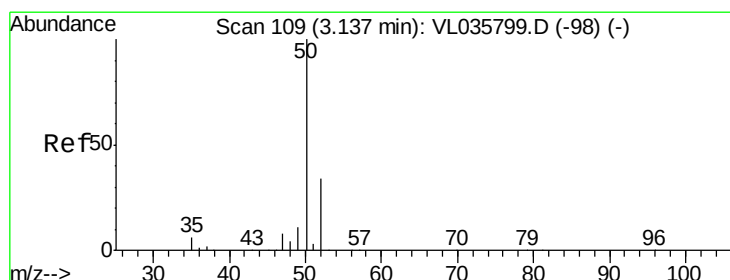
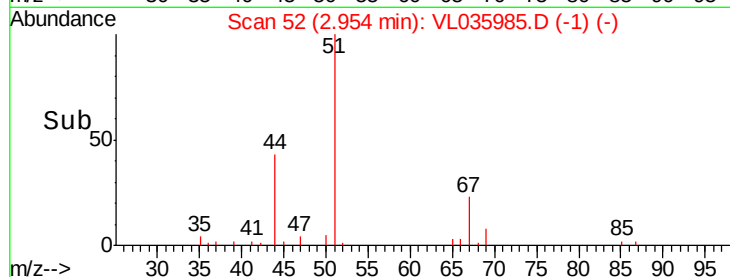
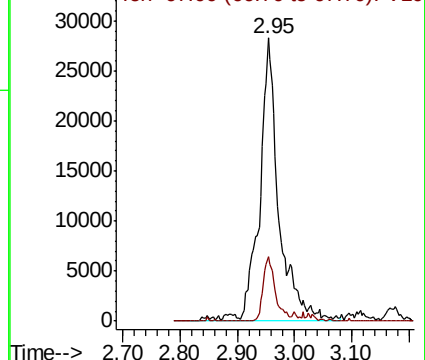
51 100

67 16.7 17.0 25.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.541 ppbv

RT: 3.11 min Scan# 99

Delta R.T. -0.03 min

Lab File: VL035985.D

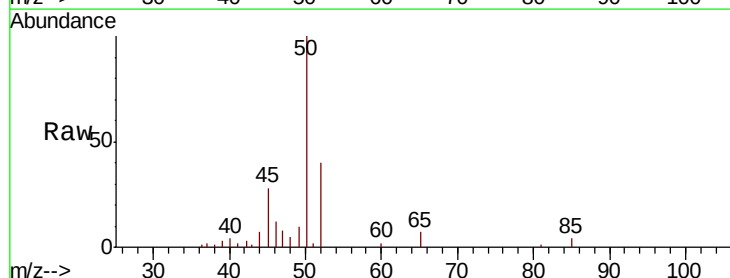
Acq: 18 Nov 2020 22:45

Tgt Ion: 50 Resp: 34462

Ion Ratio Lower Upper

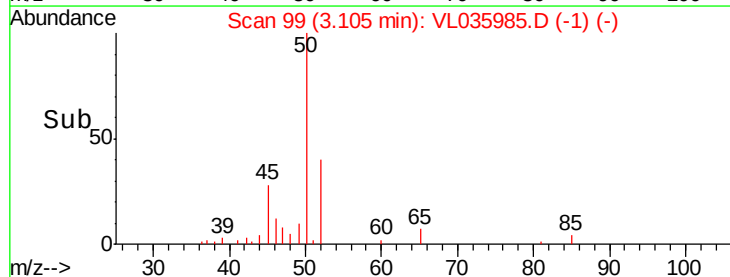
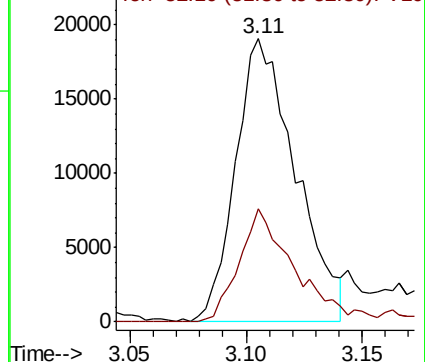
50 100

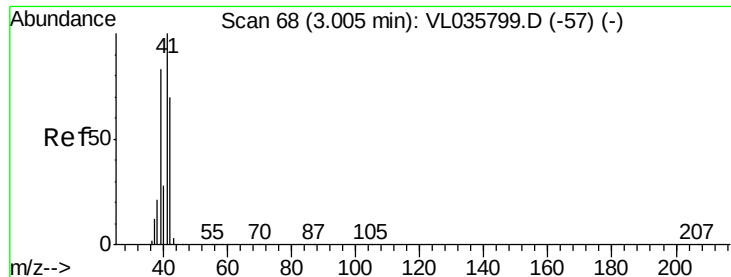
52 39.8 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.824 ppbv

RT: 2.99 min Scan# 62

Delta R.T. -0.02 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

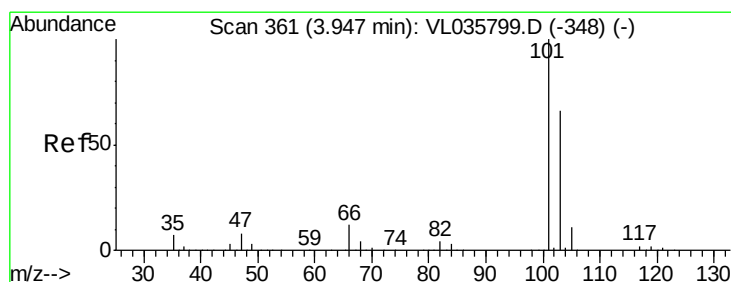
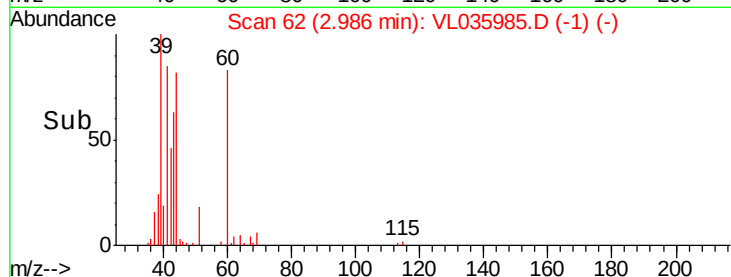
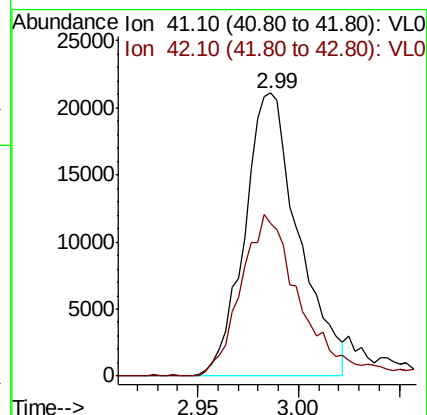
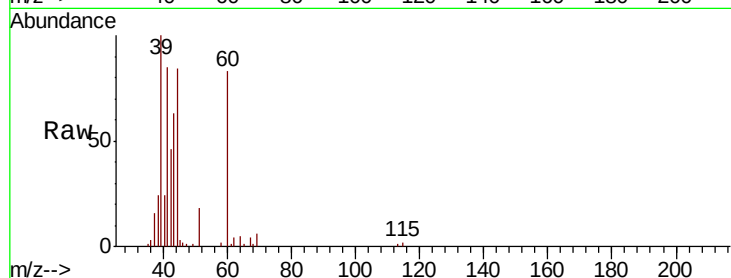
QA1

Tot Ion: 41 Resp: 39574

Ion Ratio Lower Upper

41 100

42 63.8 56.2 84.4



#11

Trichlorofluoromethane

Concen: 0.252 ppbv

RT: 3.91 min Scan# 349

Delta R.T. -0.04 min

Lab File: VL035985.D

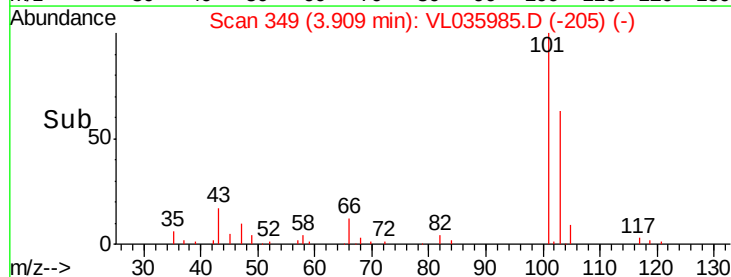
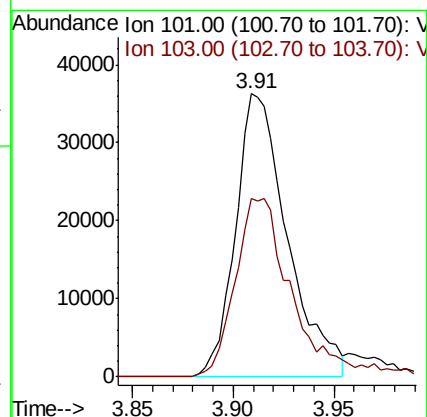
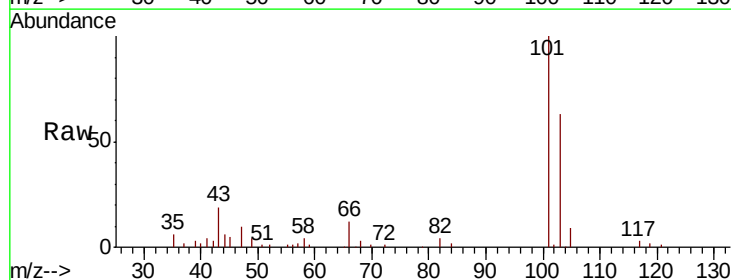
Acq: 18 Nov 2020 22:45

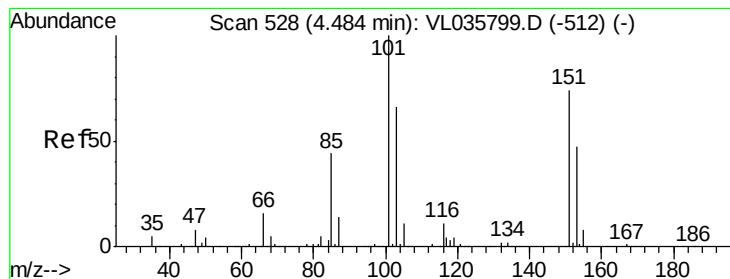
Tgt Ion: 101 Resp: 65240

Ion Ratio Lower Upper

101 100

103 63.0 53.0 79.4





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.076 ppbv

RT: 4.45 min Scan# 516

Delta R.T. -0.04 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

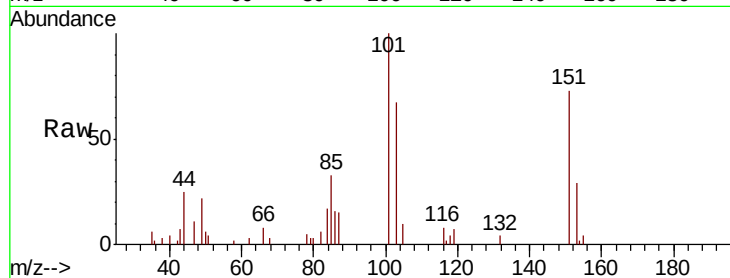
OA1

Tot Ion:101 Resp: 14732

Ion Ratio Lower Upper

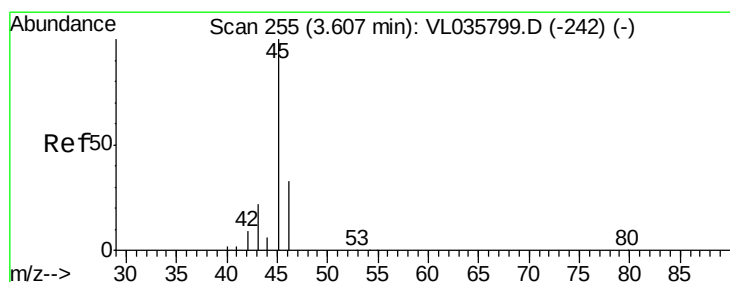
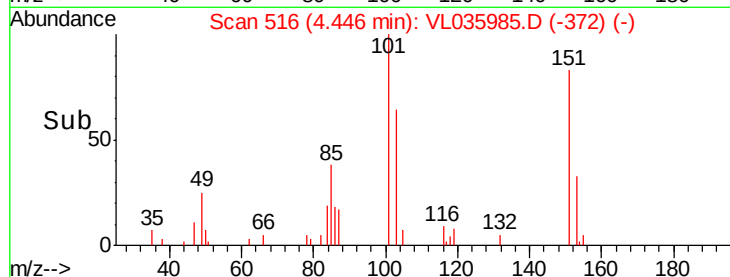
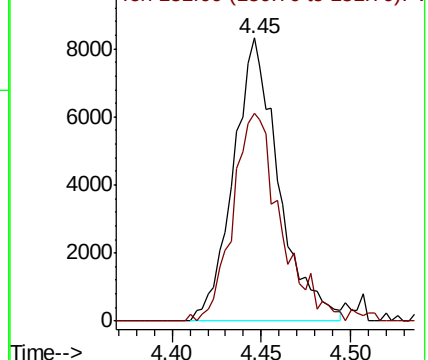
101 100

151 78.6 58.9 88.3



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 31.802 ppbv

RT: 3.57 min Scan# 243

Delta R.T. -0.04 min

Lab File: VL035985.D

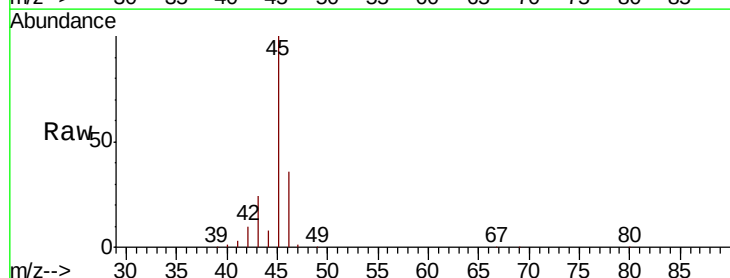
Acq: 18 Nov 2020 22:45

Tgt Ion: 45 Resp: 331412

Ion Ratio Lower Upper

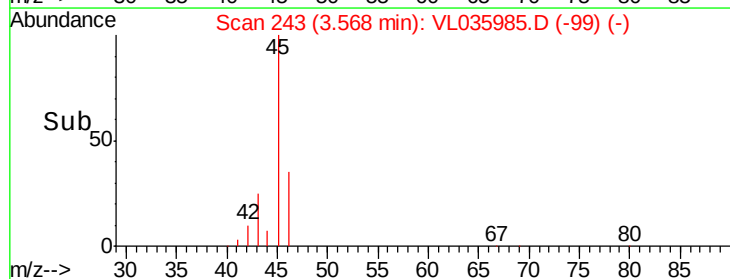
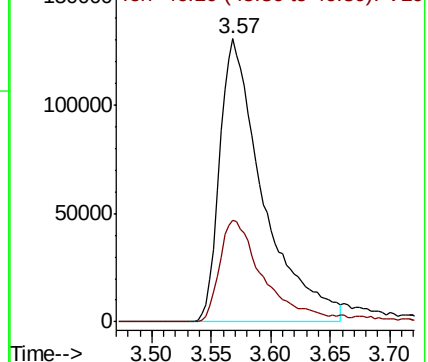
45 100

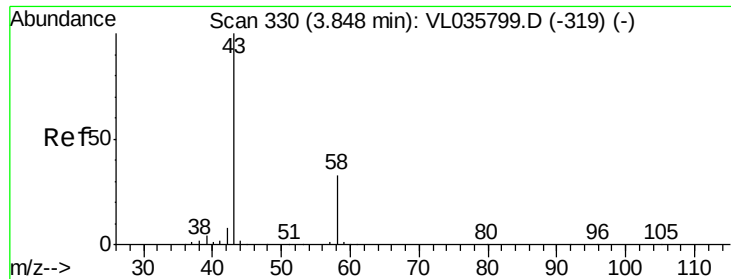
46 38.7 16.1 64.5



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 3.452 ppbv

RT: 3.82 min Scan# 320

Delta R.T. -0.03 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

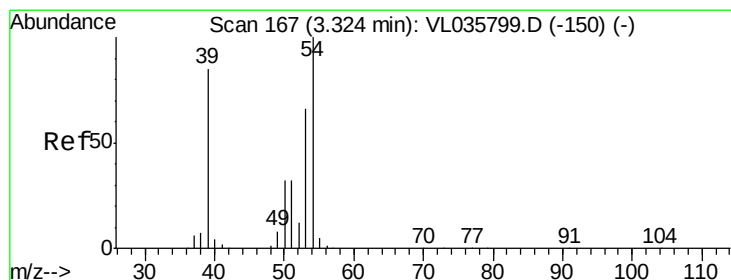
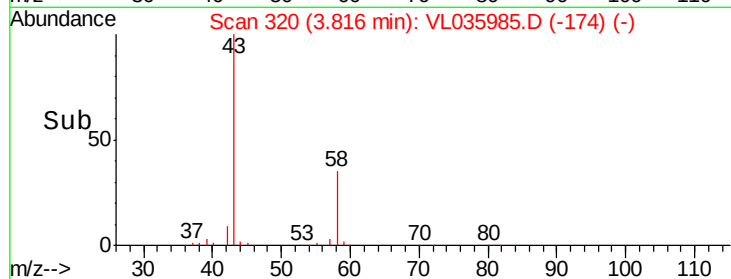
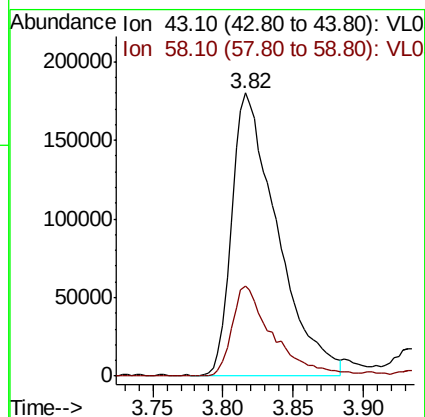
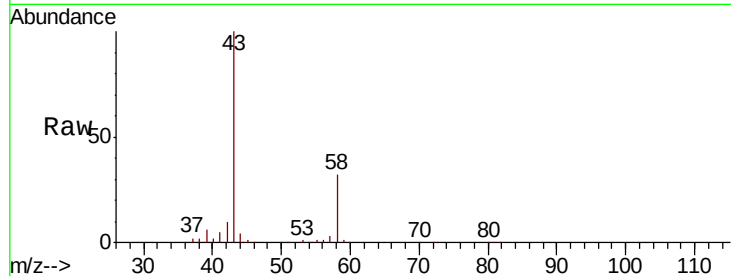
OA1

Tot Ion: 43 Resp: 404411

Ion Ratio Lower Upper

43 100

58 29.5 27.5 41.3



#16

1,3-Butadiene

Concen: 1.024 ppbv

RT: 3.32 min Scan# 166

Delta R.T. -0.00 min

Lab File: VL035985.D

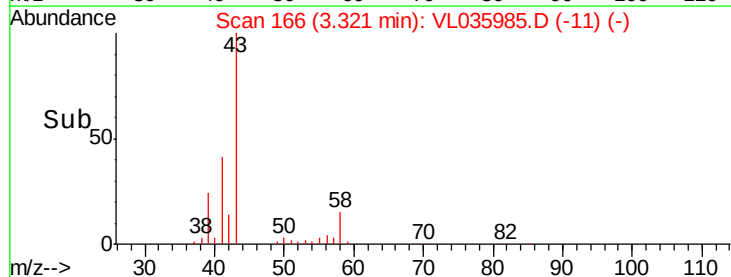
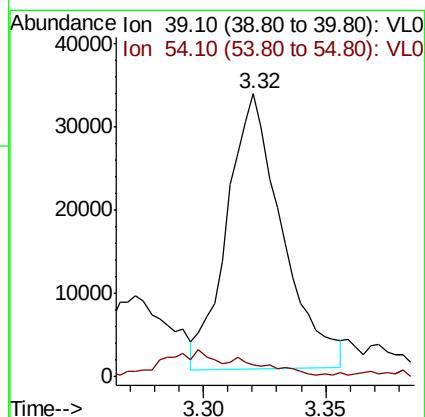
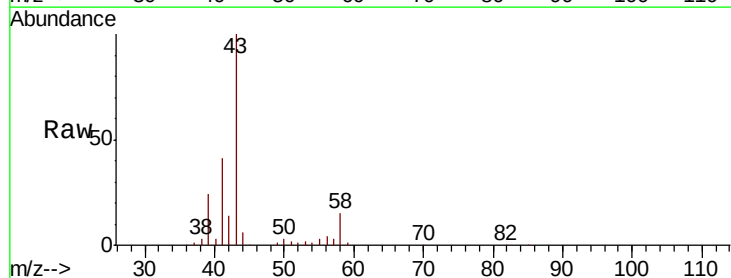
Acq: 18 Nov 2020 22:45

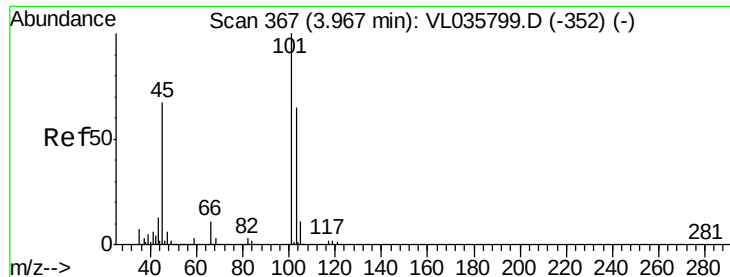
Tgt Ion: 39 Resp: 51678

Ion Ratio Lower Upper

39 100

54 14.6 87.1 130.7#





#19

Isopropyl Alcohol

Concen: 1.550 ppbv

RT: 3.94 min Scan# 358

Delta R.T. -0.03 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

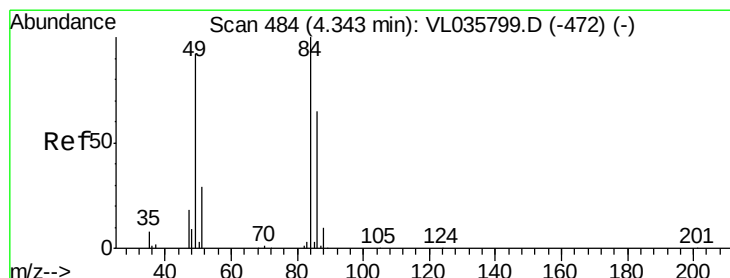
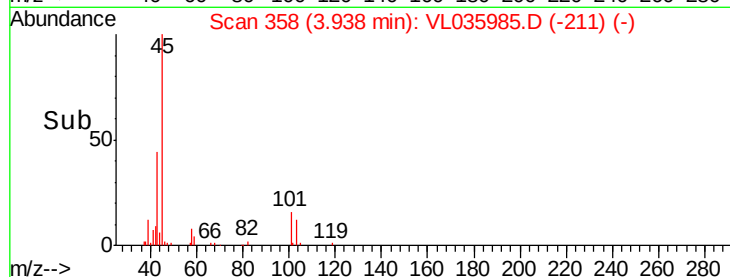
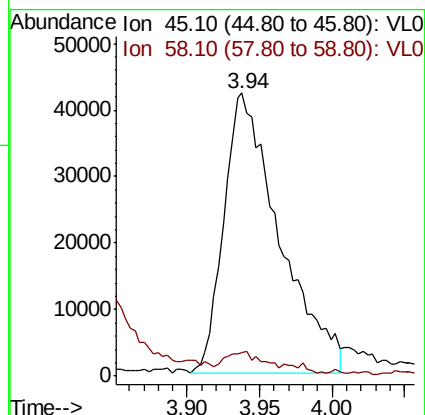
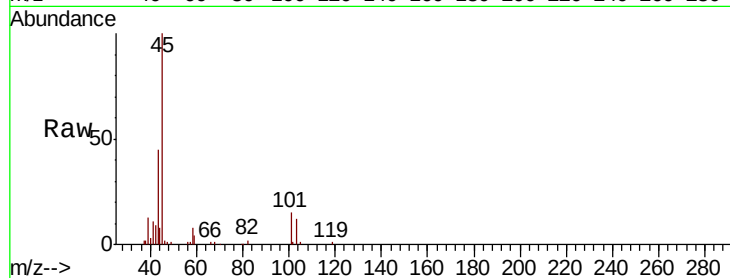
QA1

Tot Ion: 45 Resp: 111578

Ion Ratio Lower Upper

45 100

58 7.8 2.6 3.8#



#20

Methylene Chloride

Concen: 4.380 ppbv

RT: 4.30 min Scan# 472

Delta R.T. -0.04 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Tgt Ion: 84 Resp: 361243

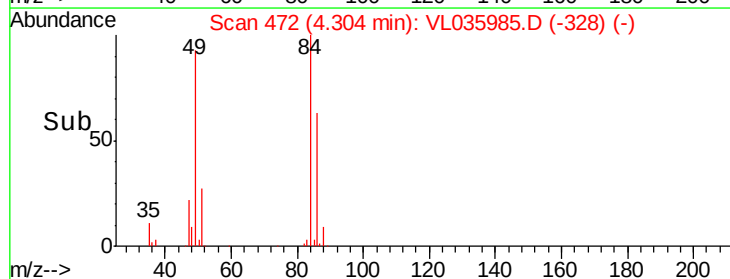
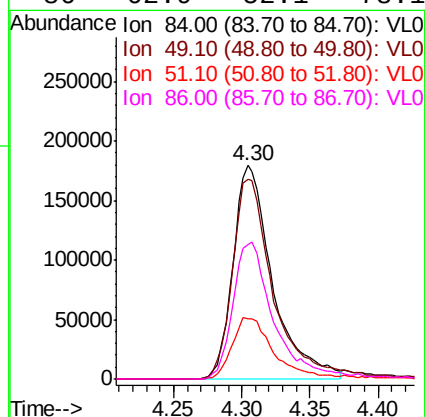
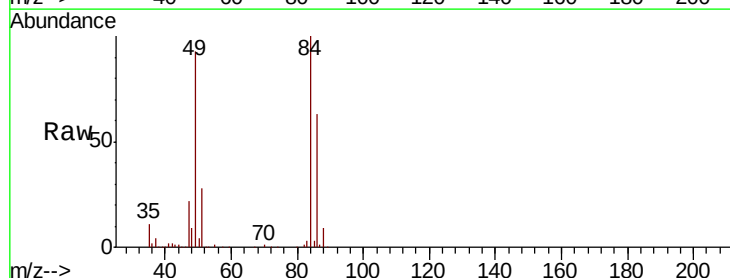
Ion Ratio Lower Upper

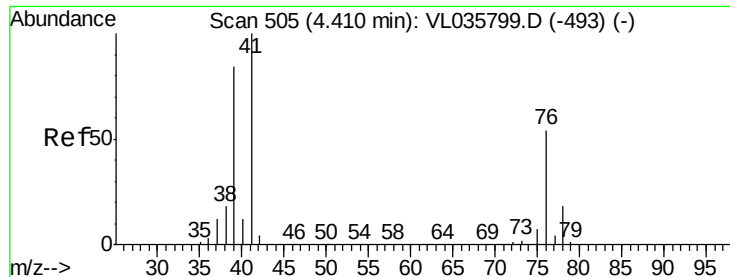
84 100

49 93.2 73.8 110.8

51 28.3 23.0 34.4

86 62.9 52.1 78.1





#21

Allvl Chloride

Concen: 0.032 ppbv

RT: 4.33 min Scan# 480

Delta R.T. -0.08 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

OA1

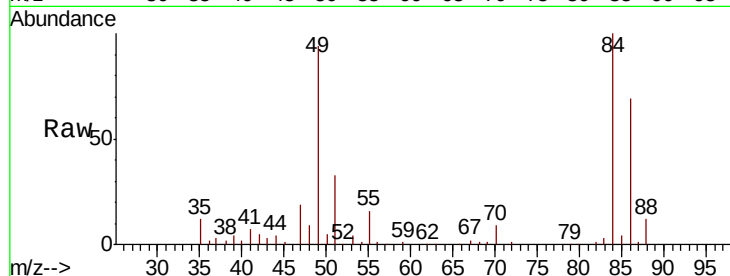
Tot Ion: 41 Resp: 2041

Ion Ratio Lower Upper

41 100

76 0.0 42.6 63.8#

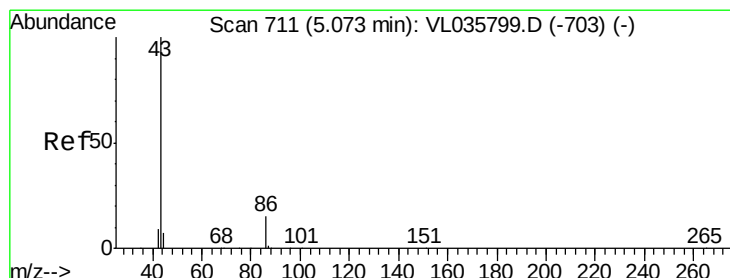
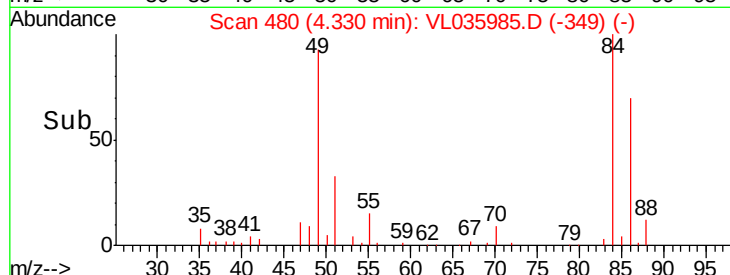
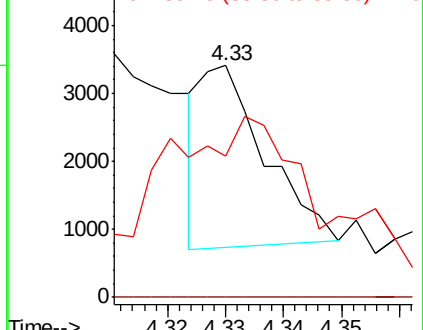
39 360.1 67.0 100.4#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

Ion 39.10 (38.80 to 39.80): VL0



#23

Vinyl Acetate

Concen: 0.182 ppbv

RT: 5.02 min Scan# 696

Delta R.T. -0.05 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Tgt Ion: 43 Resp: 29861

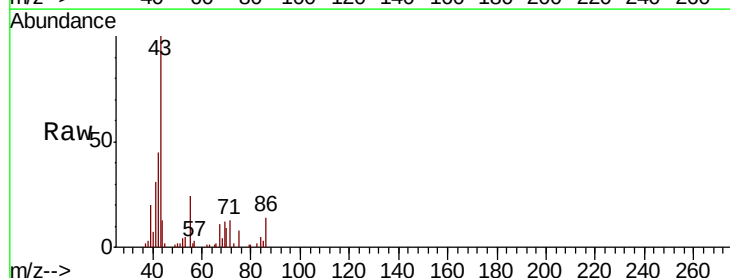
Ion Ratio Lower Upper

43 100

86 14.3 9.8 14.6

42 44.2 8.1 12.1#

44 5.8 4.2 6.4

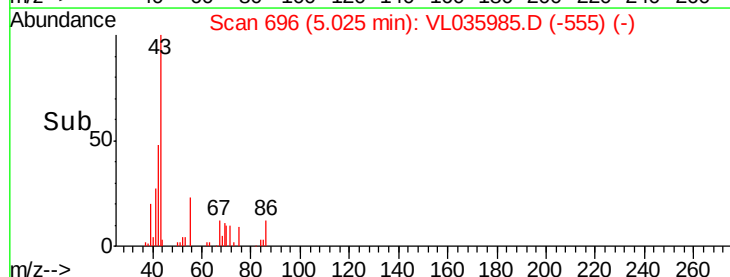
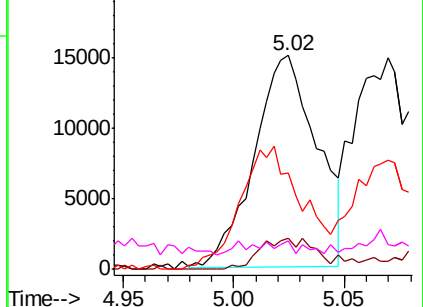


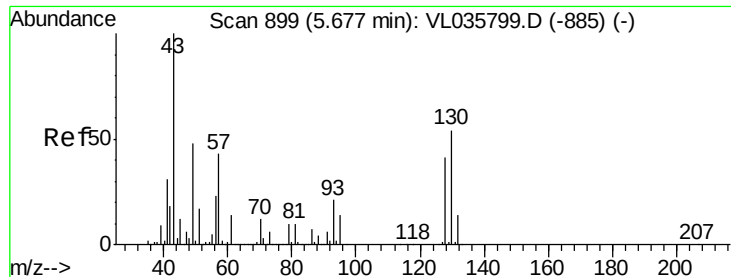
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

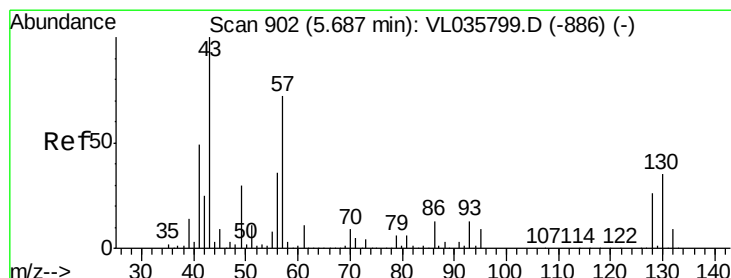
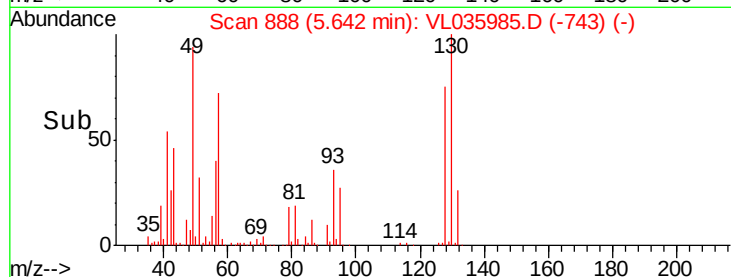
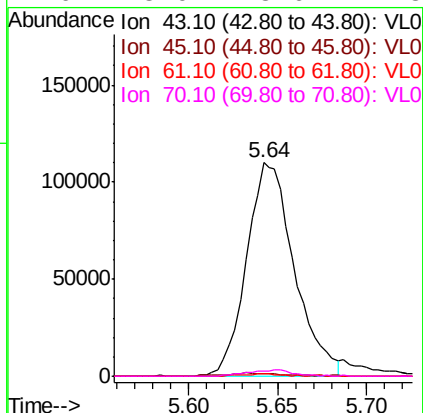
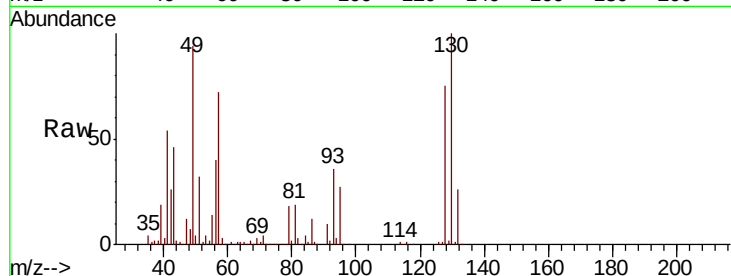




#25
Ethyl Acetate
Concen: 0.891 ppbv
RT: 5.64 min Scan# 888
Delta R.T. -0.04 min
Lab File: VL035985.D
Acq: 18 Nov 2020 22:45

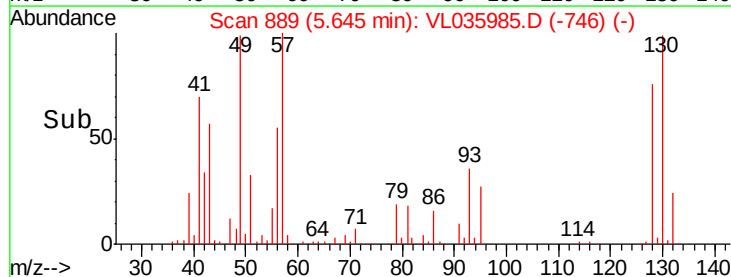
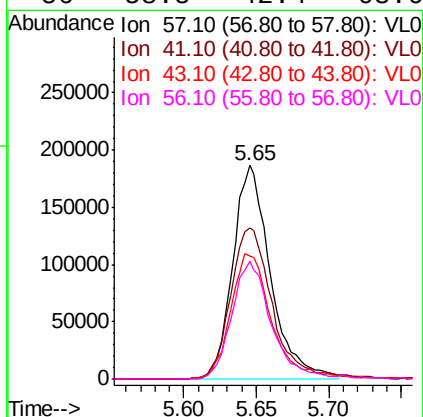
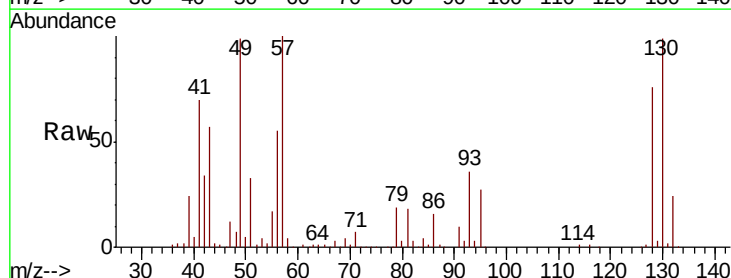
Instrument :
MSVOA_L
ClientSampleId :
OA1

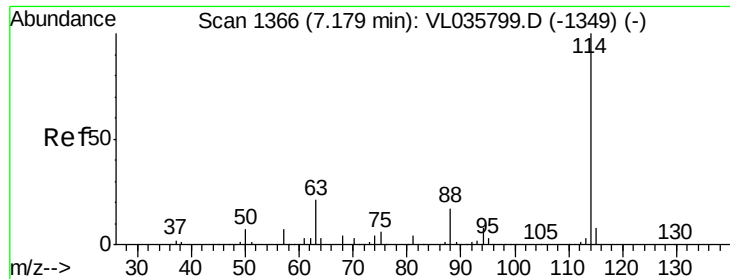
Tot Ion:	43	Resp:	205615
Ion	Ratio	Lower	Upper
43	100		
45	1.9	8.5	12.7#
61	1.2	10.7	16.1#
70	3.0	8.6	12.8#



#26
Hexane
Concen: 2.649 ppbv
RT: 5.65 min Scan# 889
Delta R.T. -0.04 min
Lab File: VL035985.D
Acq: 18 Nov 2020 22:45

Tgt Ion:	57	Resp:	337260
Ion	Ratio	Lower	Upper
57	100		
41	79.4	58.9	88.3
43	64.5	150.2	225.2#
56	58.5	42.4	63.6





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.13 min Scan# 1351

Delta R.T. -0.05 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

QA1

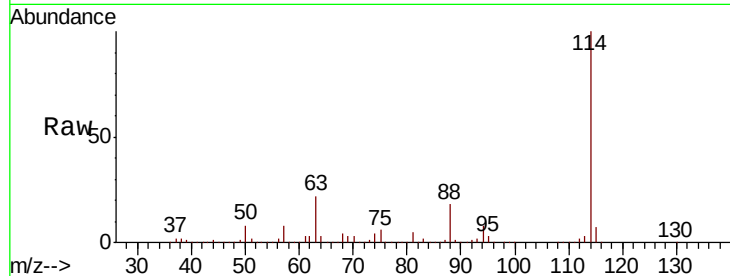
Tot Ion:114 Resp: 3854732

Ion Ratio Lower Upper

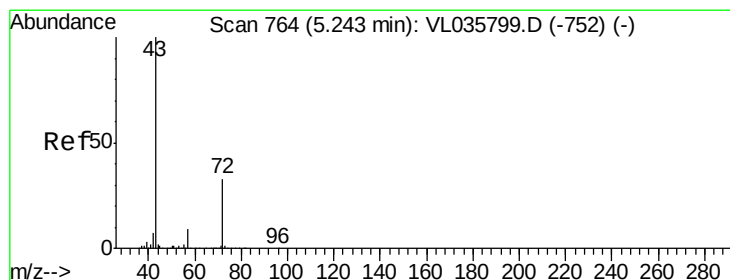
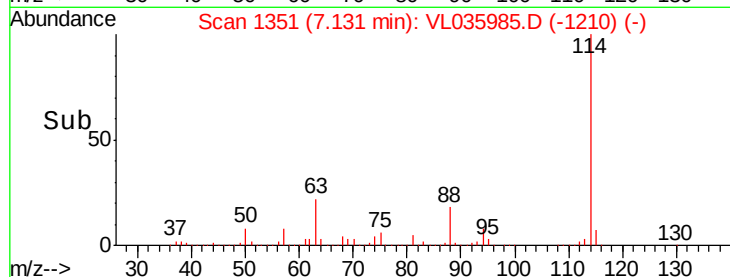
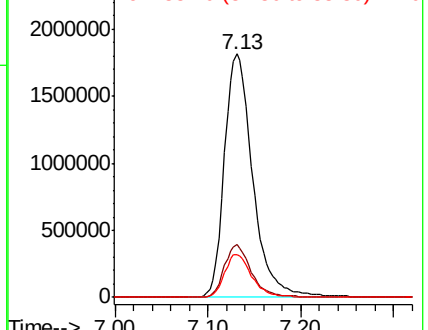
114 100

63 20.9 16.1 24.1

88 17.3 13.7 20.5



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



#34

2-Butanone

Concen: 0.214 ppbv

RT: 5.21 min Scan# 753

Delta R.T. -0.04 min

Lab File: VL035985.D

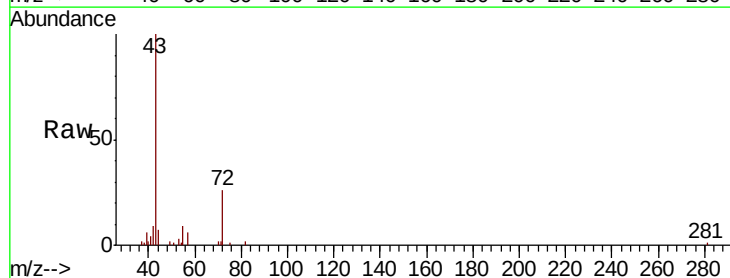
Acq: 18 Nov 2020 22:45

Tgt Ion: 43 Resp: 26739

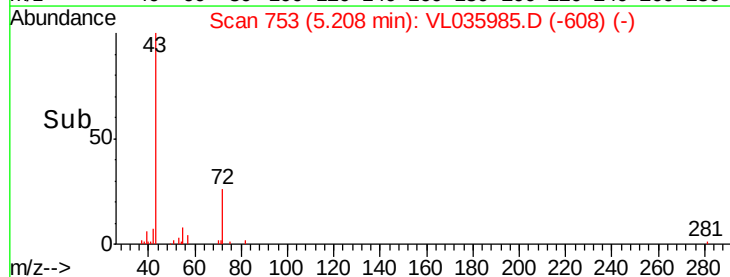
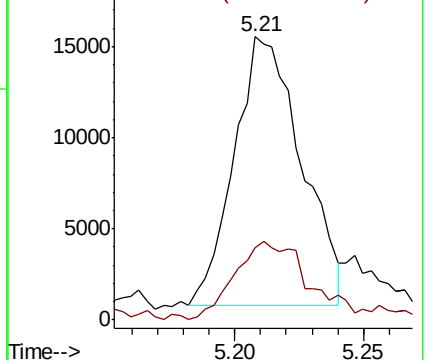
Ion Ratio Lower Upper

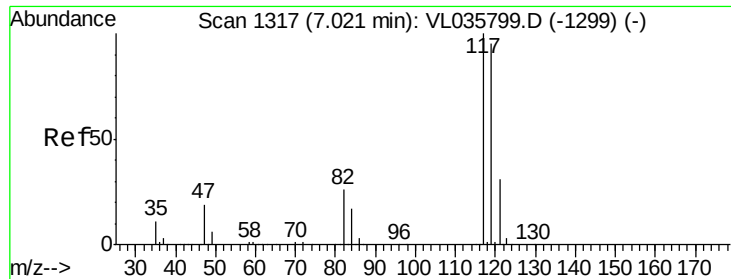
43 100

72 36.1 26.5 39.7



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.052 ppbv

RT: 6.97 min Scan# 1301

Delta R.T. -0.05 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

QA1

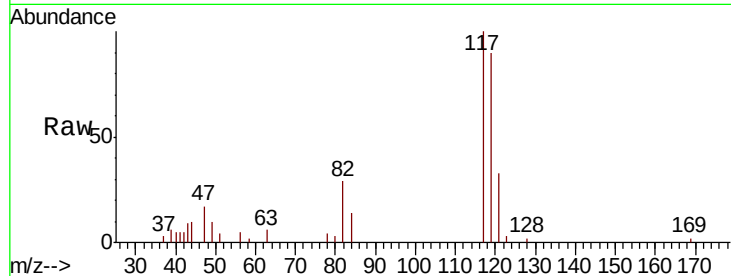
Tot Ion:117 Resp: 10795

Ion Ratio Lower Upper

117 100

119 88.1 75.6 113.4

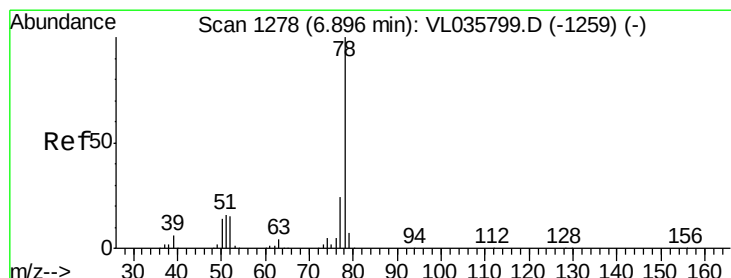
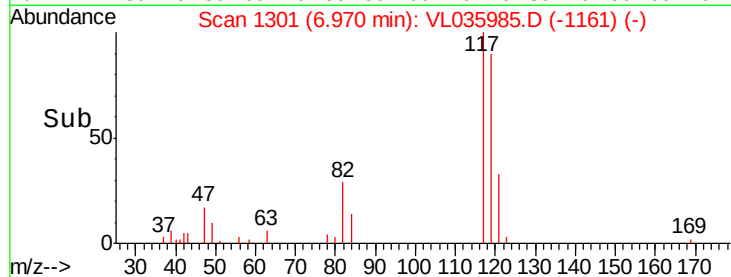
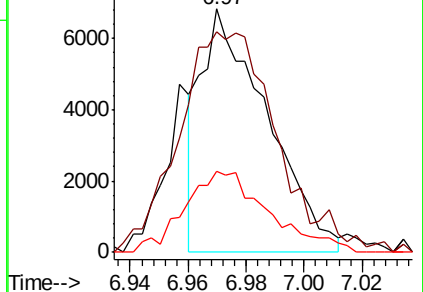
121 31.4 25.1 37.7



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.256 ppbv

RT: 6.84 min Scan# 1262

Delta R.T. -0.05 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

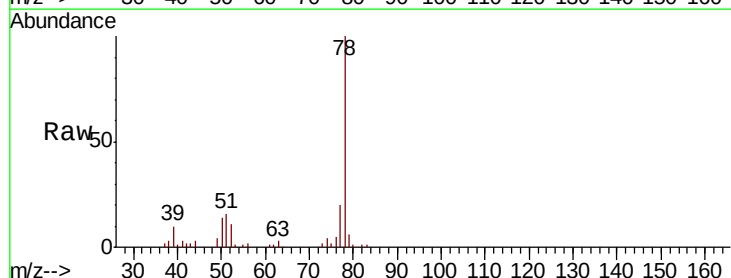
Tgt Ion: 78 Resp: 73479

Ion Ratio Lower Upper

78 100

77 20.1 19.3 28.9

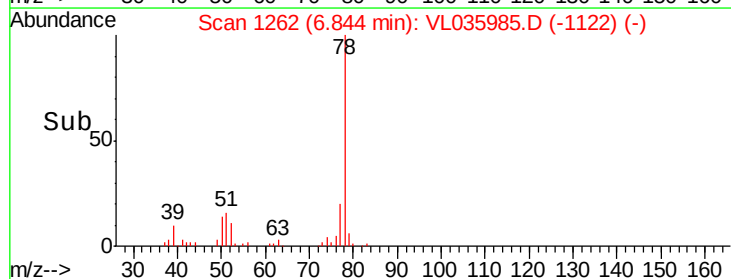
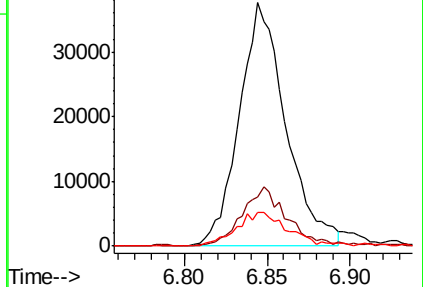
50 13.9 11.4 17.2

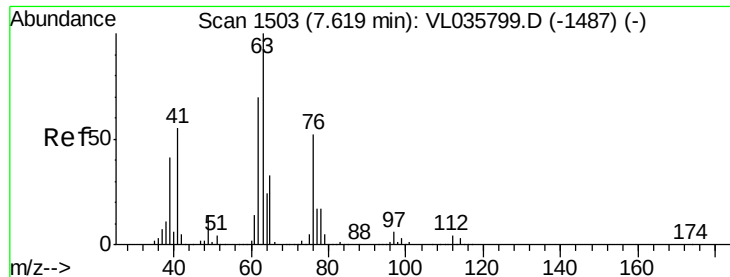


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#39

1,2-Dichloropropane

Concen: 8.201 ppbv

RT: 7.13 min Scan# 1351

Delta R.T. -0.49 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampled :

OA1

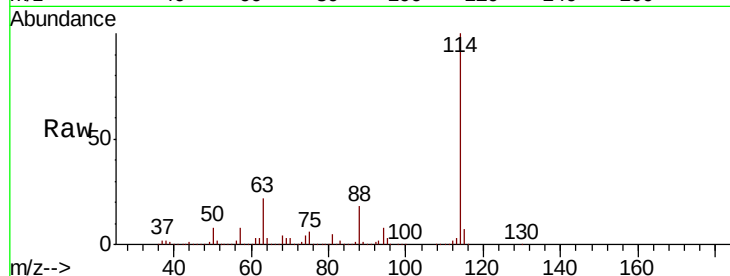
Tot Ion: 63 Resp: 791217

Ion Ratio Lower Upper

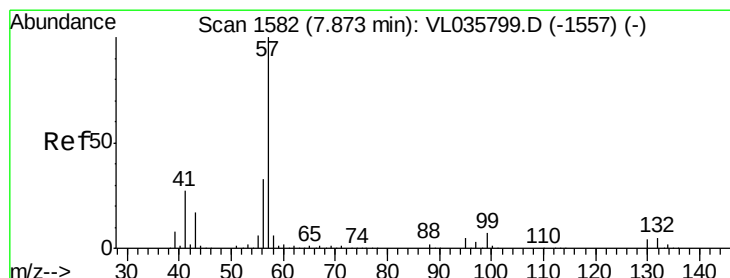
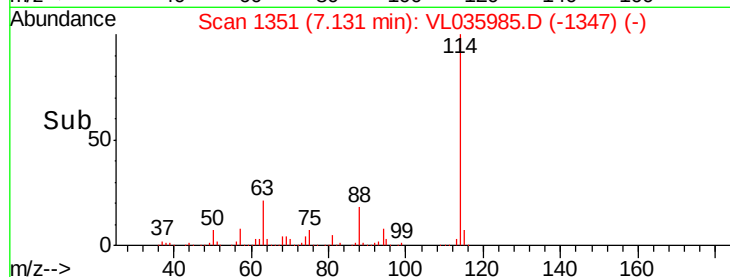
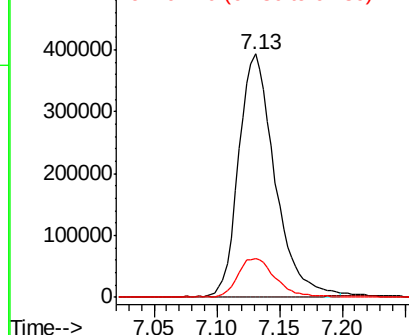
63 100

41 0.0 43.8 65.6#

62 16.0 56.2 84.2#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.049 ppbv

RT: 7.82 min Scan# 1565

Delta R.T. -0.05 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

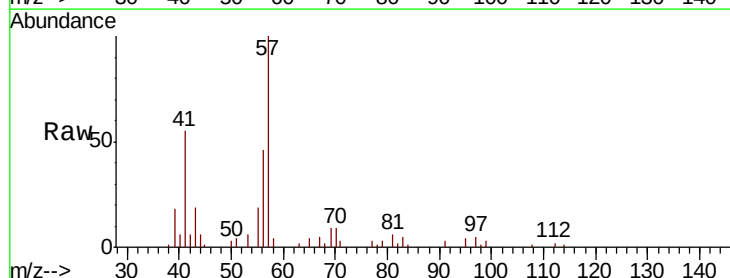
Tgt Ion: 57 Resp: 18746

Ion Ratio Lower Upper

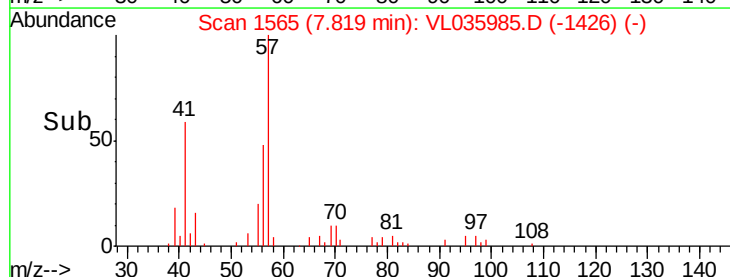
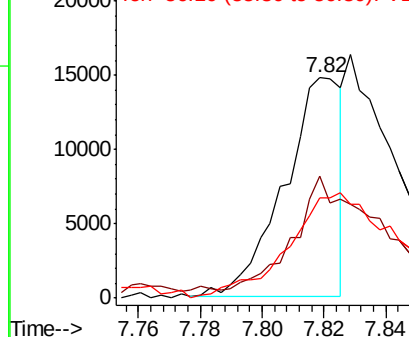
57 100

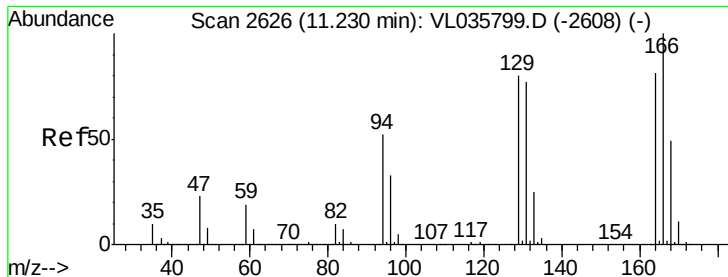
41 121.7 21.0 31.4#

56 0.0 25.4 38.0#



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 0.030 ppbv

RT: 11.17 min Scan# 2607

Delta R.T. -0.06 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

OA1

Tot Ion:164 Resp: 4116

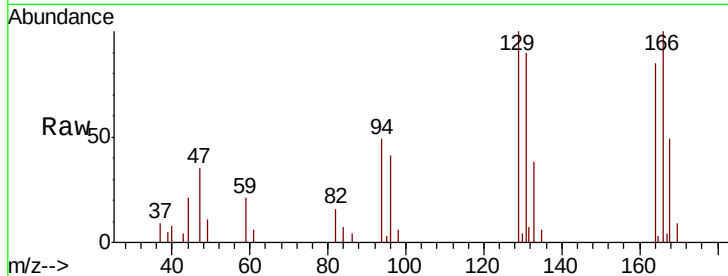
Ion Ratio Lower Upper

164 100

166 112.2 99.3 148.9

129 111.3 79.3 118.9

131 114.6 76.5 114.7

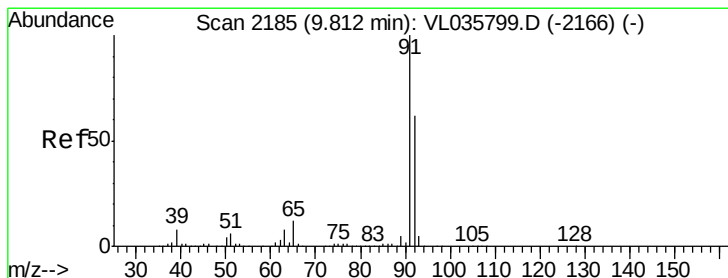
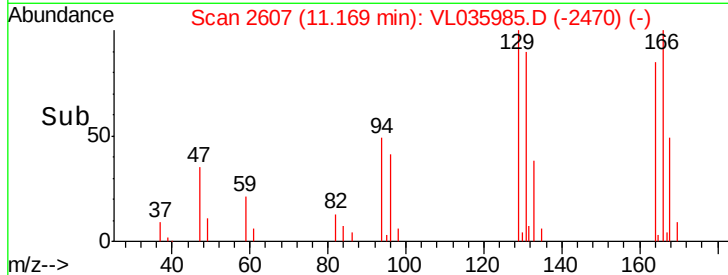
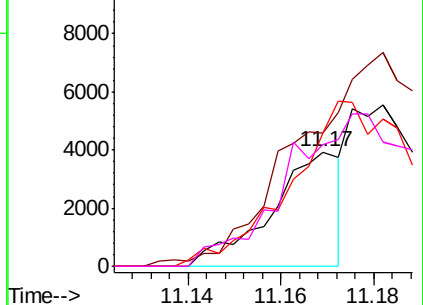


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 3.506 ppbv

RT: 9.76 min Scan# 2169

Delta R.T. -0.05 min

Lab File: VL035985.D

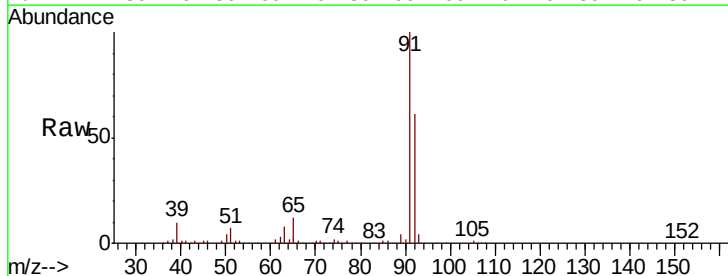
Acq: 18 Nov 2020 22:45

Tgt Ion: 91 Resp: 1212399

Ion Ratio Lower Upper

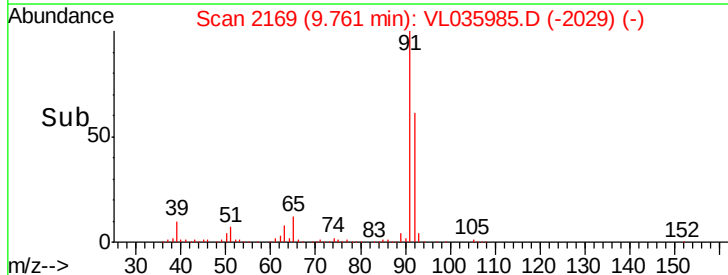
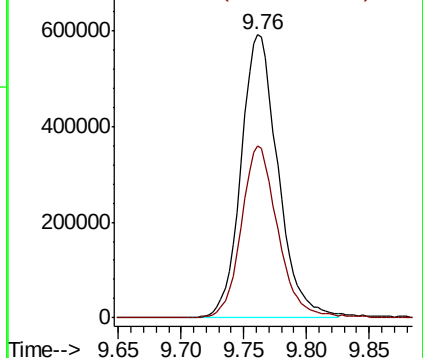
91 100

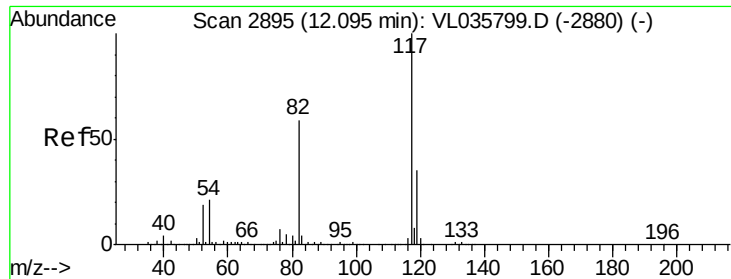
92 60.5 49.8 74.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

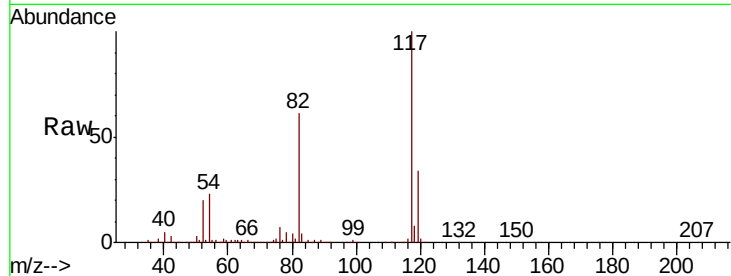




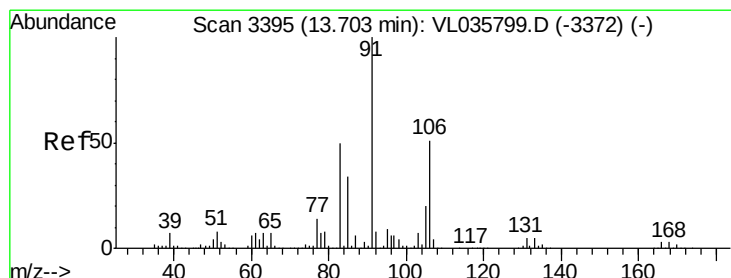
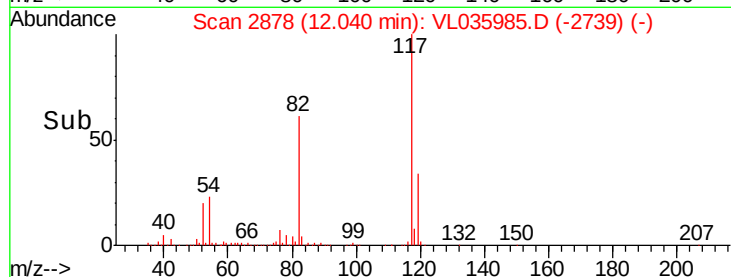
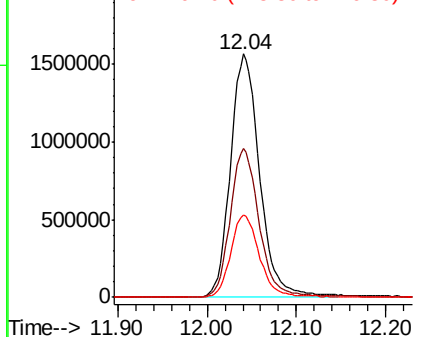
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.04 min Scan# 2878
Delta R.T. -0.05 min
Lab File: VL035985.D
Acq: 18 Nov 2020 22:45

Instrument :
MSVOA_L
ClientSampleId :
OA1

Tot Ion:117 Resp: 3558030
Ion Ratio Lower Upper
117 100
82 61.6 50.6 76.0
119 34.0 52.6 78.8#

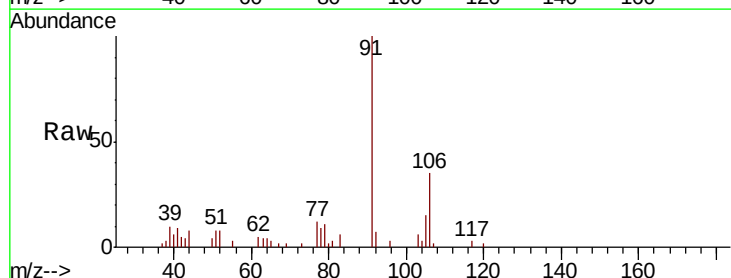


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

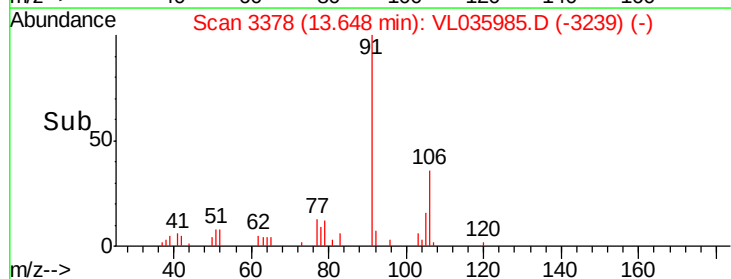
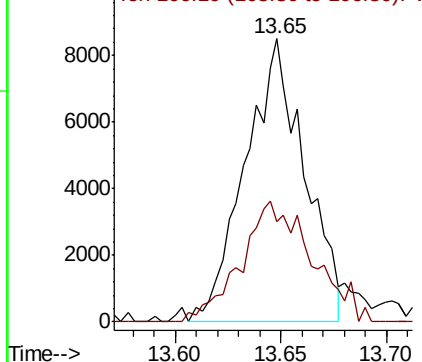


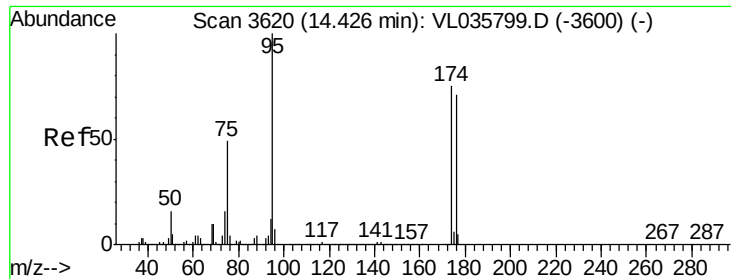
#60
o-Xylene
Concen: 0.047 ppbv
RT: 13.65 min Scan# 3378
Delta R.T. -0.05 min
Lab File: VL035985.D
Acq: 18 Nov 2020 22:45

Tgt Ion: 91 Resp: 16617
Ion Ratio Lower Upper
91 100
106 51.2 24.8 74.4



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 10.497 ppbv

RT: 14.37 min Scan# 3603

Delta R.T. -0.05 min

Lab File: VL035985.D

Acq: 18 Nov 2020 22:45

Instrument :

MSVOA_L

ClientSampleId :

OA1

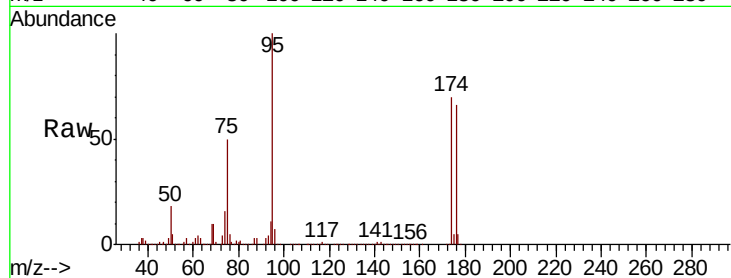
Tot Ion: 95 Resp: 2653569

Ion Ratio Lower Upper

95 100

174 71.2 59.8 89.6

175 5.0 4.3 6.5



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

