

Data File : VL032416.D
Acq On : 21 Aug 2018 9:35
Operator : SY/AP
Sample : J4576-02
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
OA1

Quant Time: Aug 21 11:32:33 2018
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL081518AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Aug 15 14:58:02 2018
QLast Update : Wed Aug 15 14:58:02 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.80	49	1789735	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.34	114	3318747	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.30	117	3282537	10.00	ppbv	-0.01

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.63 95 2538421 10.14 ppbv -0.02
Spiked Amount 10.000 Range 65 - 135 Recovery = 101.40%

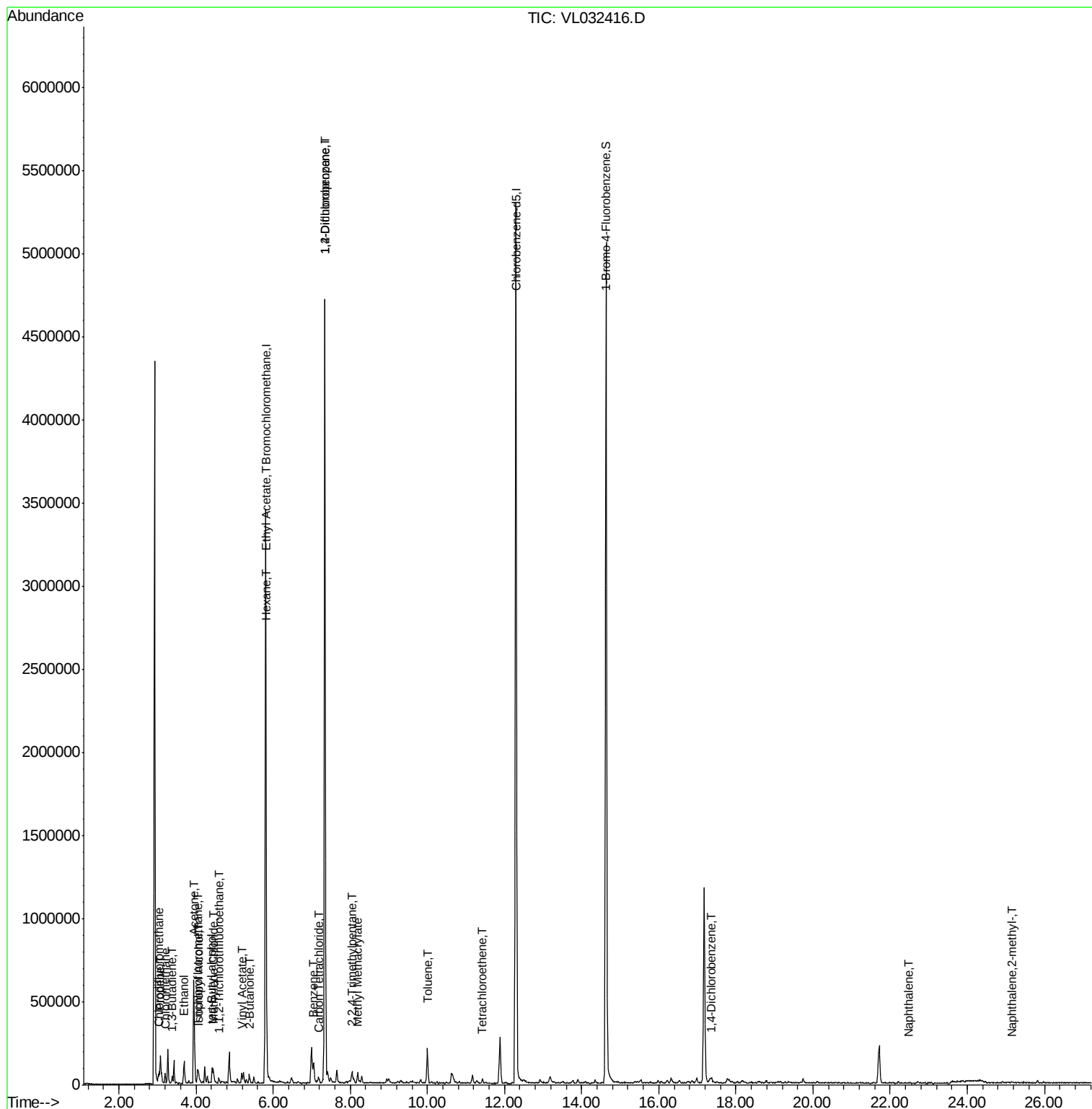
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.11	85	26133	Below Cal		95
3) Chlorodifluoromethane	3.04	51	91272	0.551 ppbv #		86
4) Chloromethane	3.21	50	51318	0.520 ppbv		90
9) Propene	3.08	41	41252	0.581 ppbv		92
11) Trichlorofluoromethane	4.04	101	52955	0.265 ppbv		90
12) 1,1,2-Trichlorotrifluoroet	4.59	101	6207	0.046 ppbv #		17
13) Ethanol	3.69	45	134362	7.373 ppbv		99
15) Acetone	3.94	43	652667	3.838 ppbv		99
16) 1,3-Butadiene	3.38	39	12967	0.185 ppbv #		23
17) tert-Butyl alcohol	4.40	59	3670	0.129 ppbv #		30
19) Isopropyl Alcohol	4.07	45	61901	0.541 ppbv #		1
20) Methylene Chloride	4.45	84	14311	0.223 ppbv		92
23) Vinyl Acetate	5.19	43	50273	0.171 ppbv #		76
25) Ethyl Acetate	5.82	43	56437	0.155 ppbv #		96
26) Hexane	5.83	57	34660	0.213 ppbv #		68
34) 2-Butanone	5.38	43	28120	0.124 ppbv #		55
35) Carbon Tetrachloride	7.19	117	7718	0.039 ppbv #		77
36) Benzene	7.05	78	68110	0.242 ppbv #		96
39) 1,2-Dichloropropane	7.34	63	897108	7.633 ppbv #		24
43) Methyl Methacrylate	8.19	69	19708	0.176 ppbv #		75
44) 2,2,4-Trimethylpentane	8.04	57	49291	0.097 ppbv #		48
52) Tetrachloroethene	11.43	164	3972	0.048 ppbv #		52
53) Toluene	10.00	91	145530	0.472 ppbv		97
76) 1,4-Dichlorobenzene	17.36	146	8422	0.039 ppbv #		23
79) Naphthalene	22.48	128	1772	0.332 ppbv #		78
80) Naphthalene,2-methyl-	25.15	142	2307	0.031 ppbv #		83

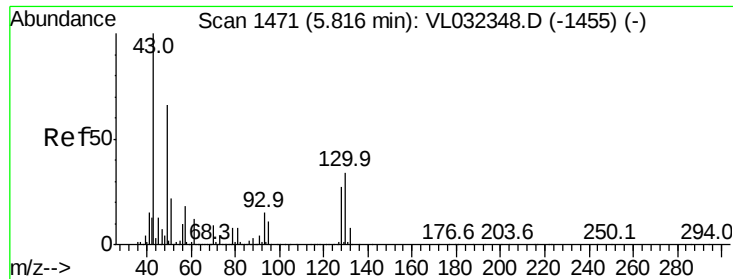
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.80 min Scan# 1467

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

OA1

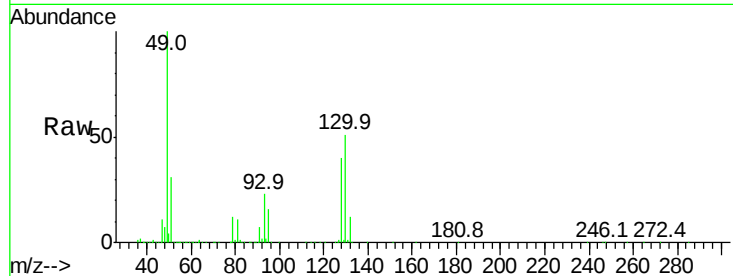
Tgt Ion: 49 Resp: 1789735

Ion Ratio Lower Upper

49 100

128 41.6 20.5 61.6

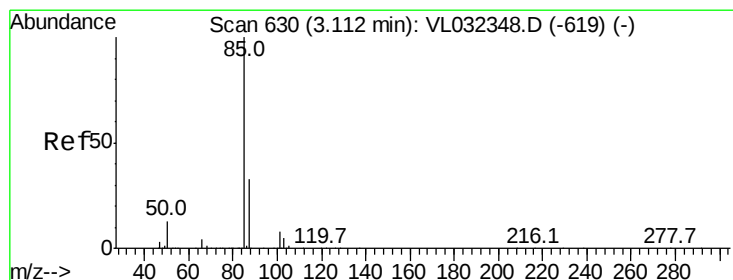
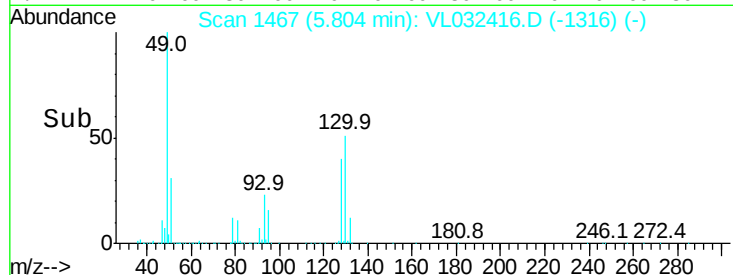
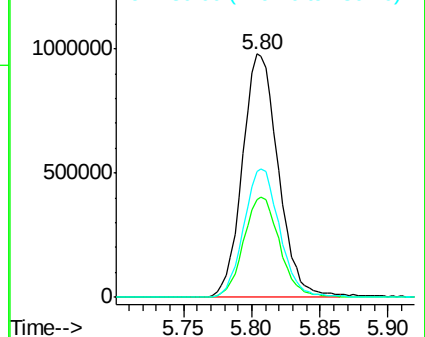
130 53.0 26.2 78.5



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: Below Cal

RT: 3.11 min Scan# 628

Delta R.T. -0.01 min

Lab File: VL032416.D

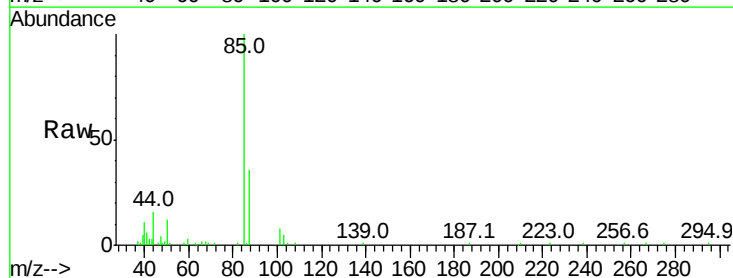
Acq: 21 Aug 2018 9:35

Tgt Ion: 85 Resp: 26133

Ion Ratio Lower Upper

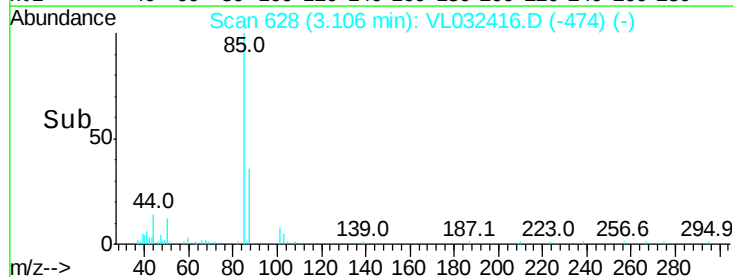
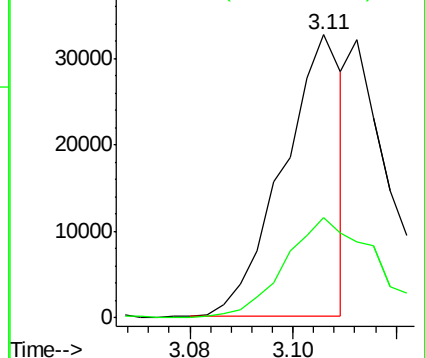
85 100

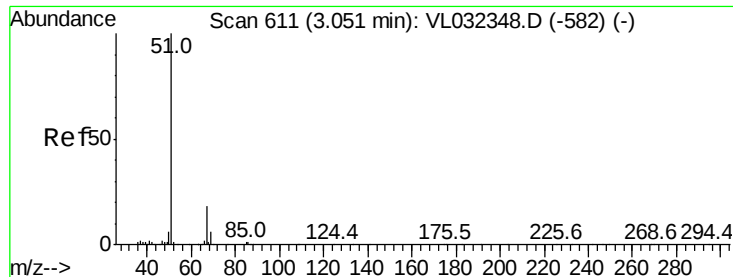
87 35.7 26.3 39.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.551 ppbv

RT: 3.04 min Scan# 609

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

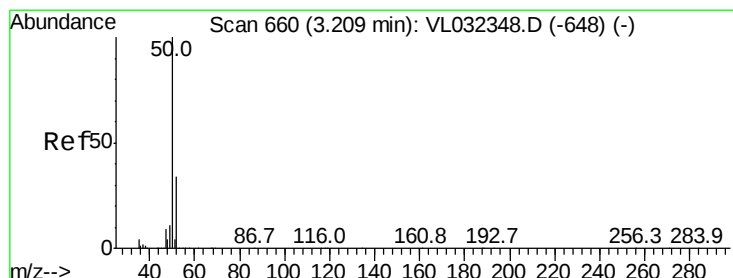
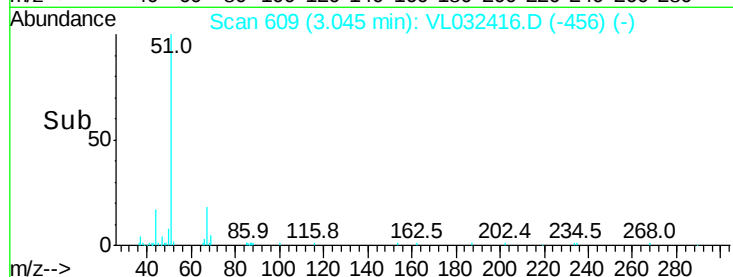
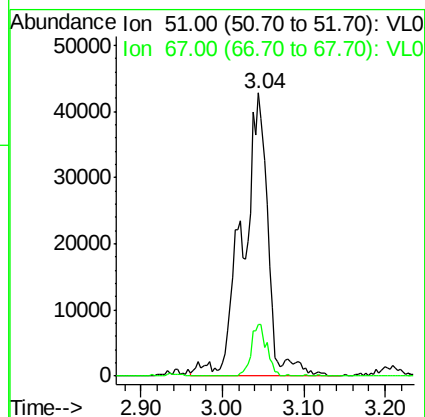
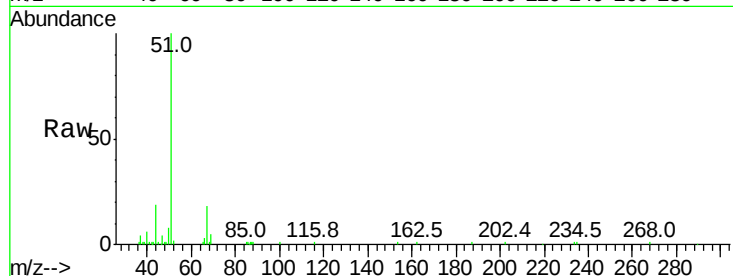
OA1

Tgt Ion: 51 Resp: 91272

Ion Ratio Lower Upper

51 100

67 11.0 13.7 20.5#



#4

Chloromethane

Concen: 0.520 ppbv

RT: 3.21 min Scan# 659

Delta R.T. -0.00 min

Lab File: VL032416.D

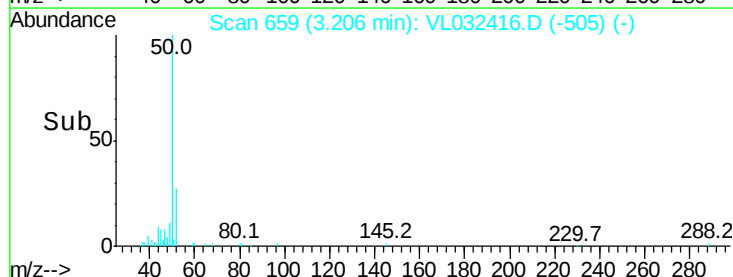
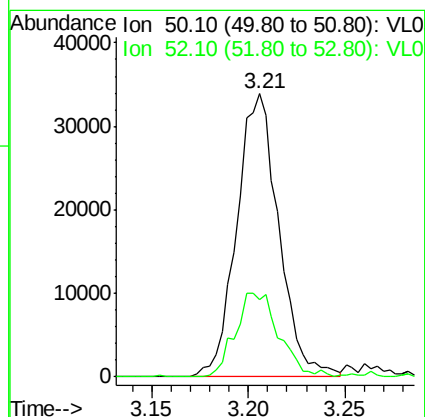
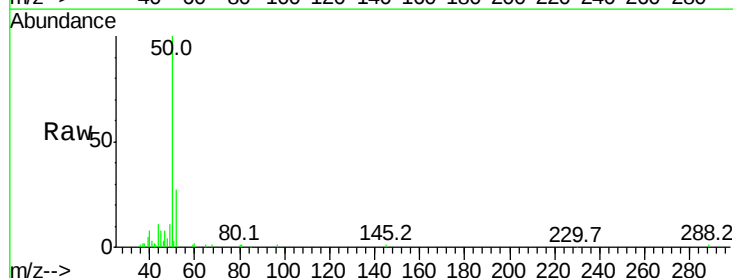
Acq: 21 Aug 2018 9:35

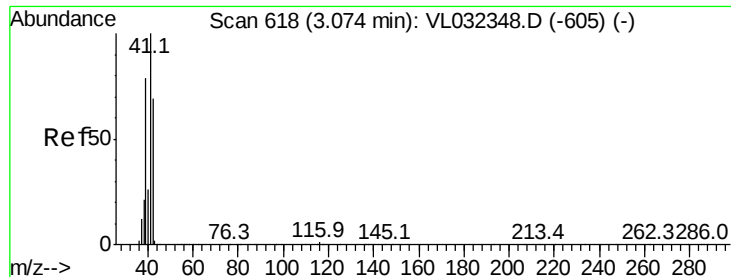
Tgt Ion: 50 Resp: 51318

Ion Ratio Lower Upper

50 100

52 27.7 26.8 40.2





#9

Propene

Concen: 0.581 ppbv

RT: 3.08 min Scan# 619

Delta R.T. 0.00 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

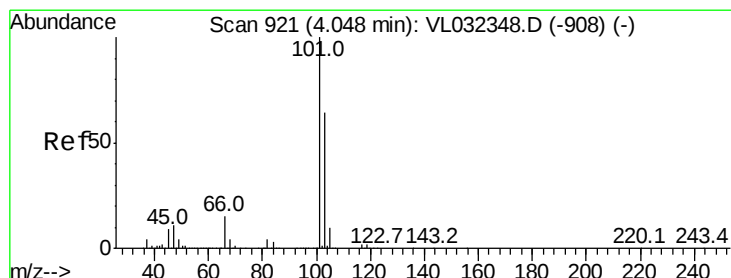
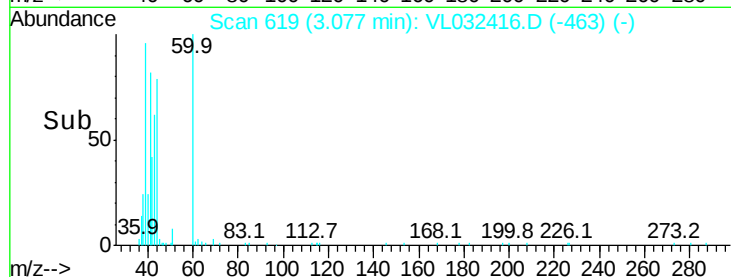
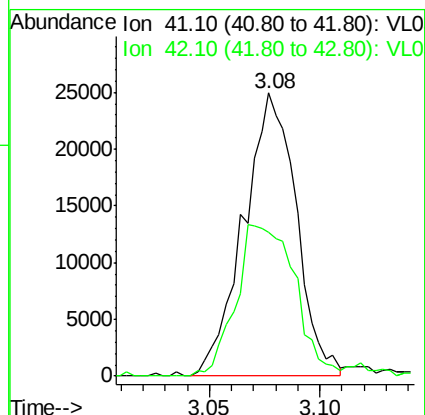
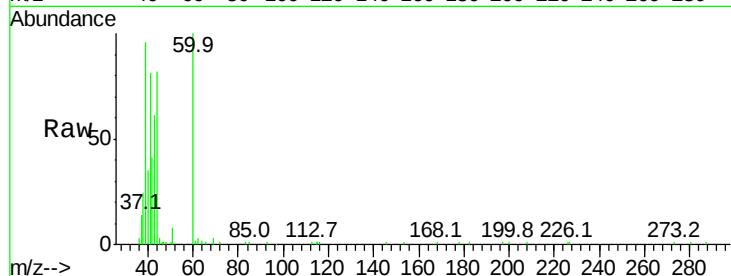
QA1

Tgt Ion: 41 Resp: 41252

Ion Ratio Lower Upper

41 100

42 63.1 55.9 83.9



#11

Trichlorofluoromethane

Concen: 0.265 ppbv

RT: 4.04 min Scan# 920

Delta R.T. -0.00 min

Lab File: VL032416.D

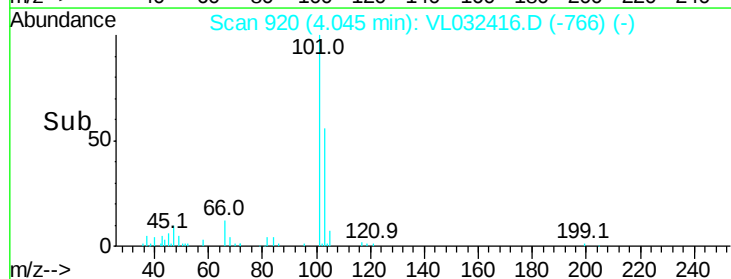
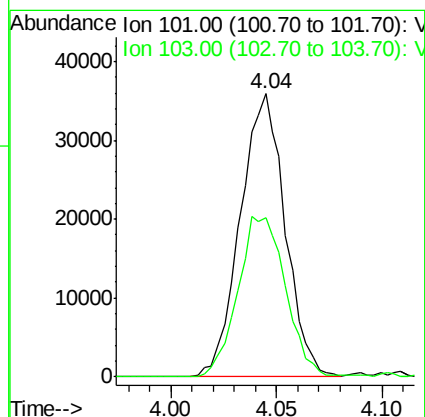
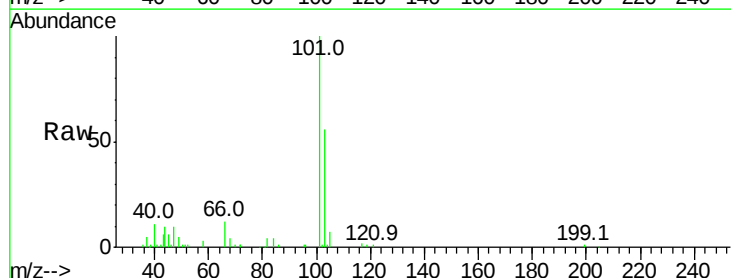
Acq: 21 Aug 2018 9:35

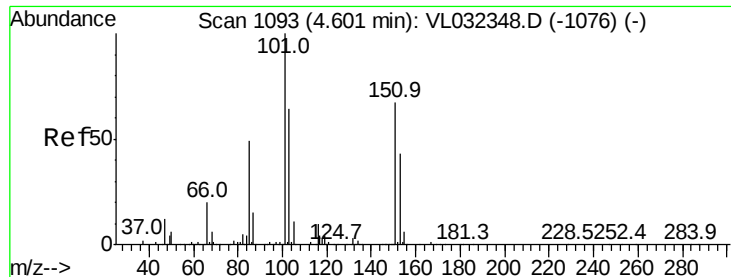
Tgt Ion: 101 Resp: 52955

Ion Ratio Lower Upper

101 100

103 56.4 51.4 77.0





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.046 ppbv

RT: 4.59 min Scan# 1090

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

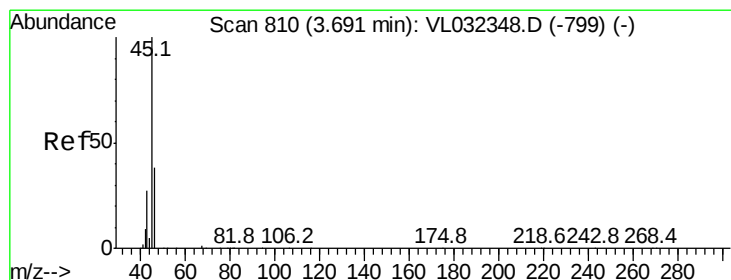
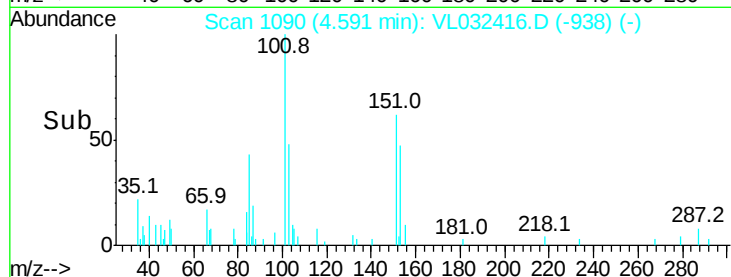
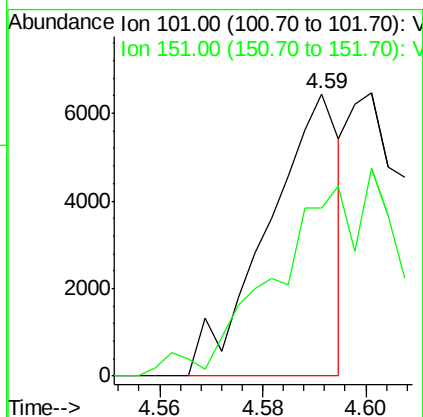
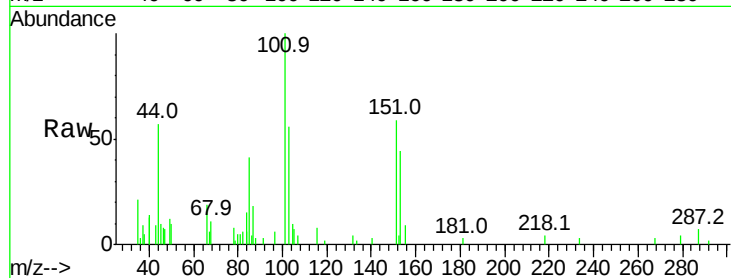
OA1

Tgt Ion:101 Resp: 6207

Ion Ratio Lower Upper

101 100

151 0.0 53.1 79.7#



#13

Ethanol

Concen: 7.373 ppbv

RT: 3.69 min Scan# 810

Delta R.T. -0.00 min

Lab File: VL032416.D

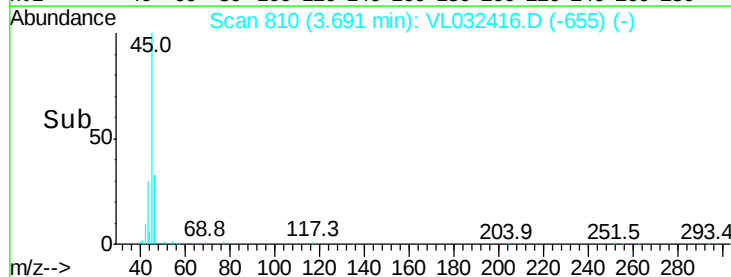
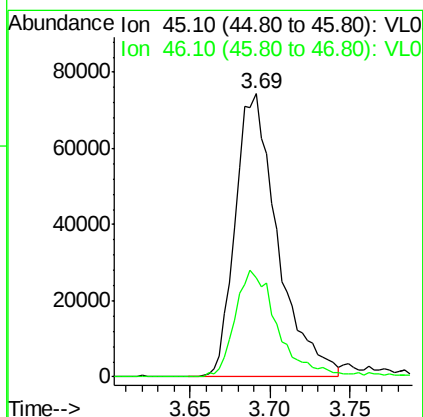
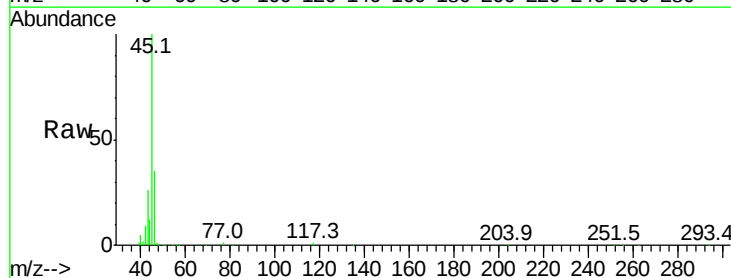
Acq: 21 Aug 2018 9:35

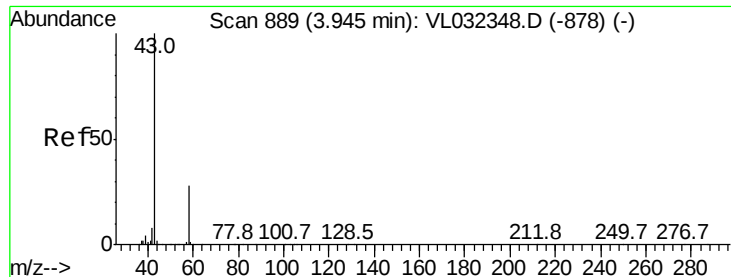
Tgt Ion: 45 Resp: 134362

Ion Ratio Lower Upper

45 100

46 38.5 15.6 62.4





#15

Acetone

Concen: 3.838 ppbv

RT: 3.94 min Scan# 888

Delta R.T. -0.00 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

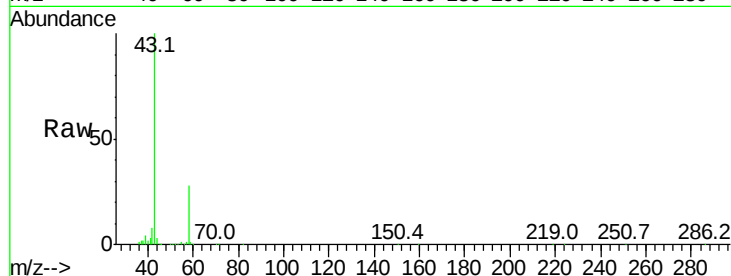
OA1

Tgt Ion: 43 Resp: 652667

Ion Ratio Lower Upper

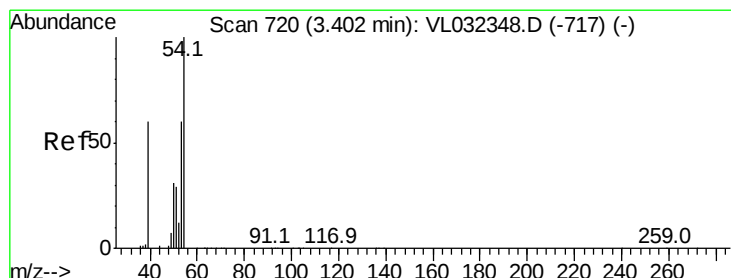
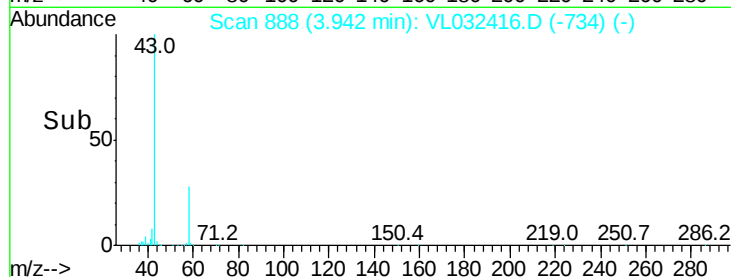
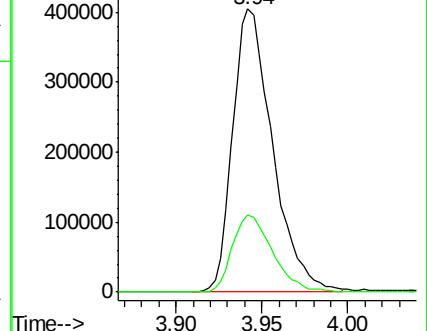
43 100

58 27.7 22.4 33.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.185 ppbv

RT: 3.38 min Scan# 713

Delta R.T. -0.02 min

Lab File: VL032416.D

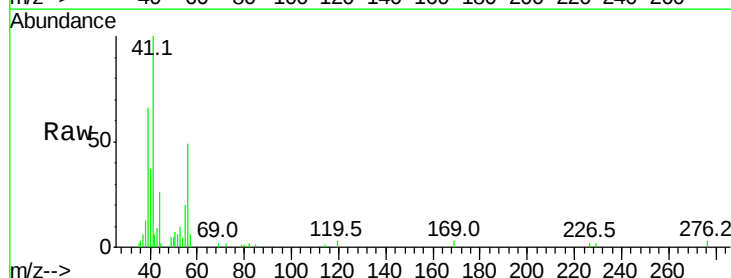
Acq: 21 Aug 2018 9:35

Tgt Ion: 39 Resp: 12967

Ion Ratio Lower Upper

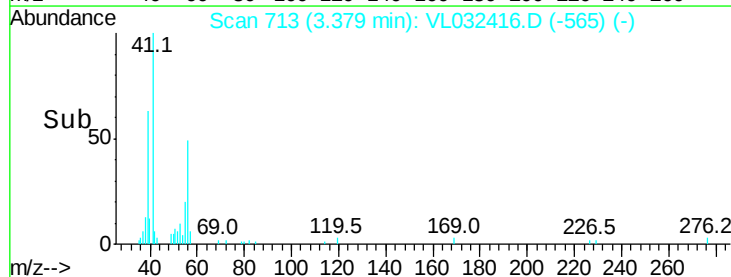
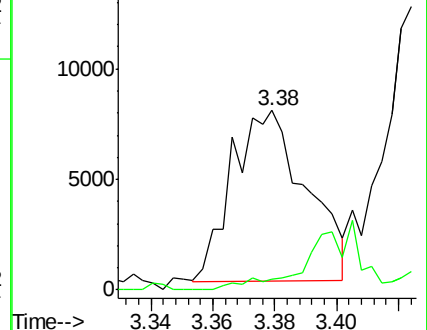
39 100

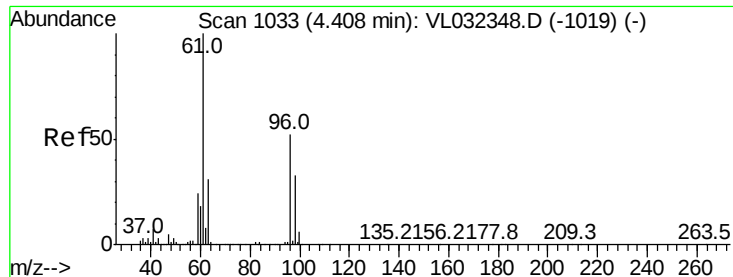
54 27.1 85.5 128.3#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#17

tert-Butyl alcohol

Concen: 0.129 ppbv

RT: 4.40 min Scan# 1032

Delta R.T. -0.00 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

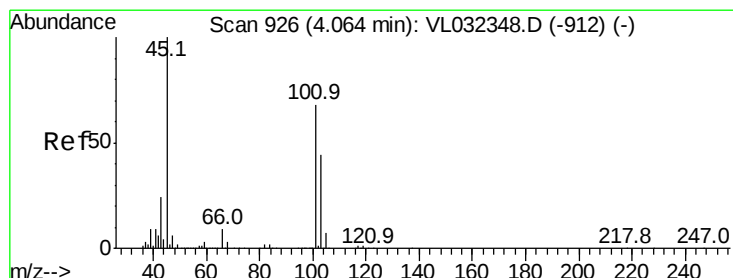
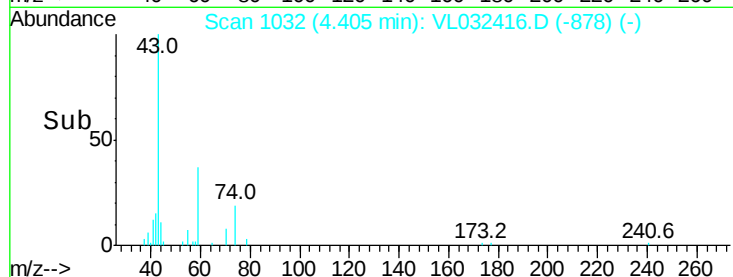
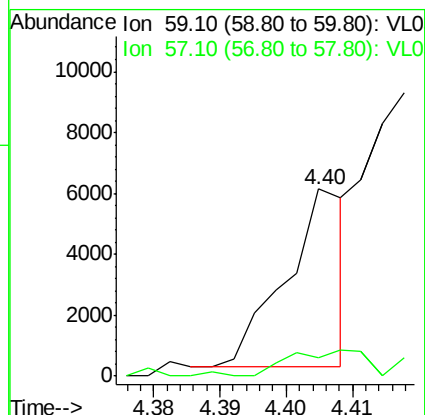
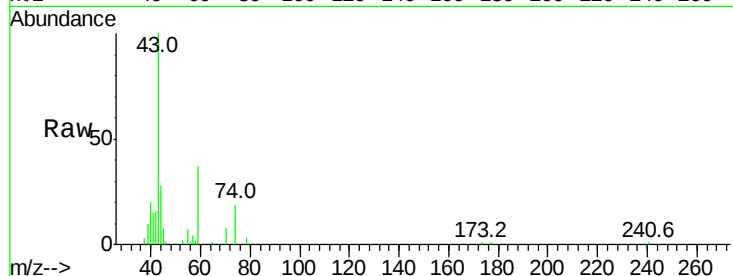
OA1

Tgt Ion: 59 Resp: 3670

Ion Ratio Lower Upper

59 100

57 35.1 7.6 11.4#



#19

Isopropyl Alcohol

Concen: 0.541 ppbv

RT: 4.07 min Scan# 928

Delta R.T. 0.01 min

Lab File: VL032416.D

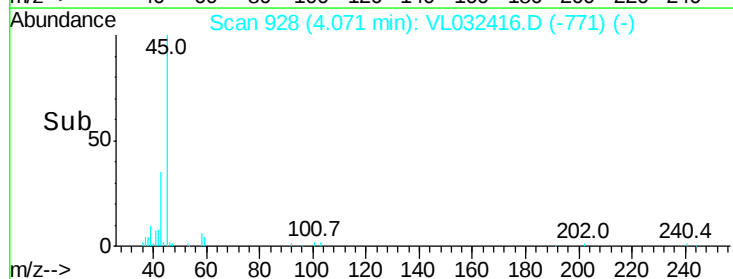
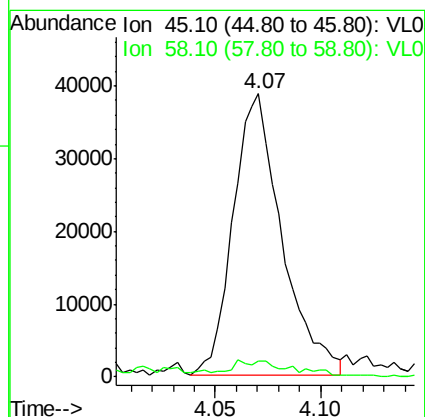
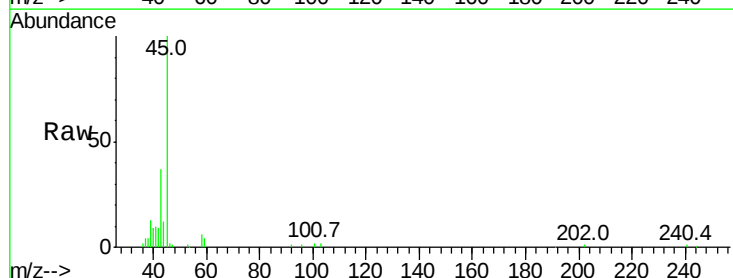
Acq: 21 Aug 2018 9:35

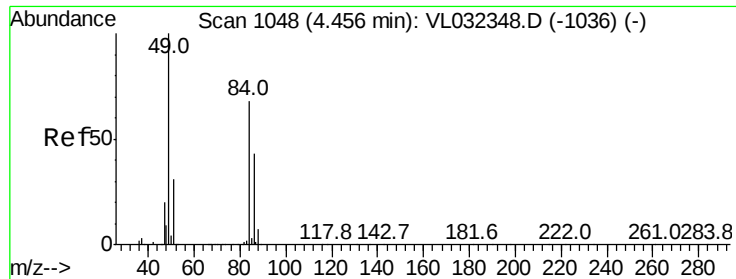
Tgt Ion: 45 Resp: 61901

Ion Ratio Lower Upper

45 100

58 291.6 1.4 2.0#

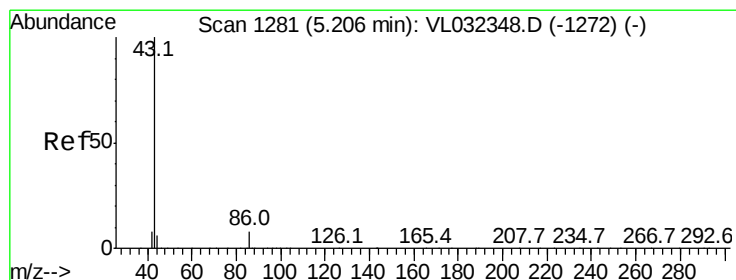
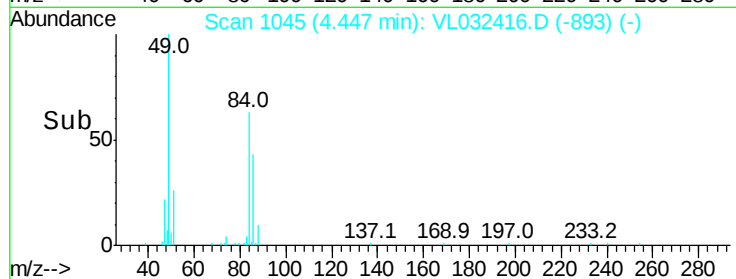
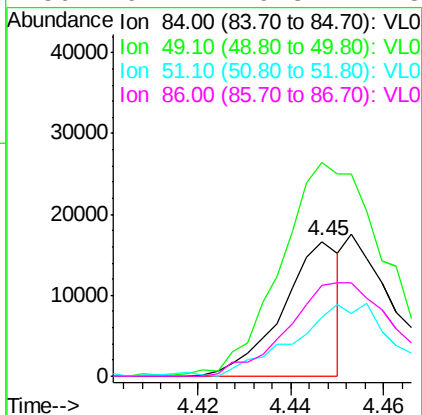
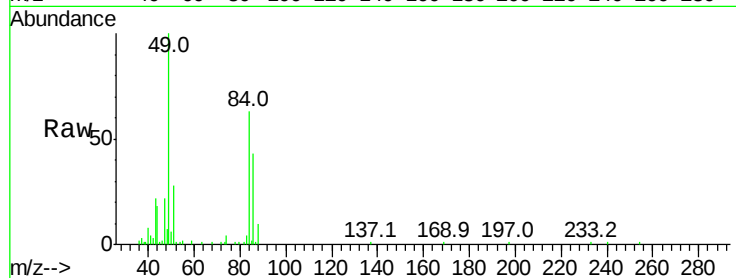




#20
Methylene Chloride
Concen: 0.223 ppbv
RT: 4.45 min Scan# 1045
Delta R.T. -0.01 min
Lab File: VL032416.D
Acq: 21 Aug 2018 9:35

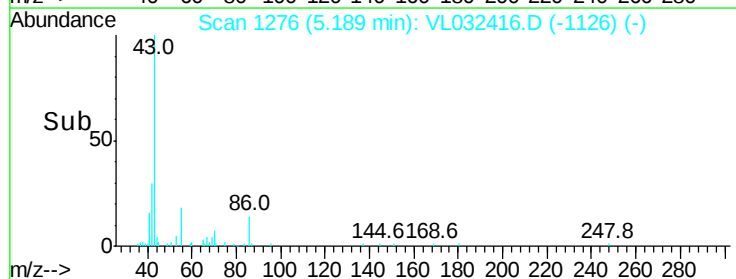
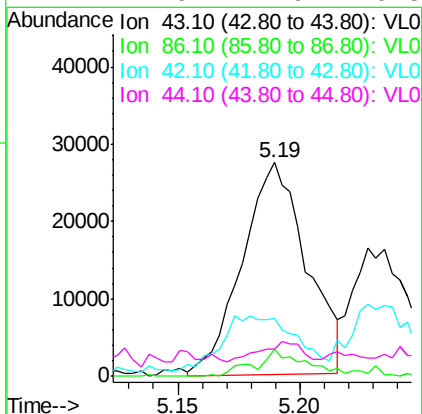
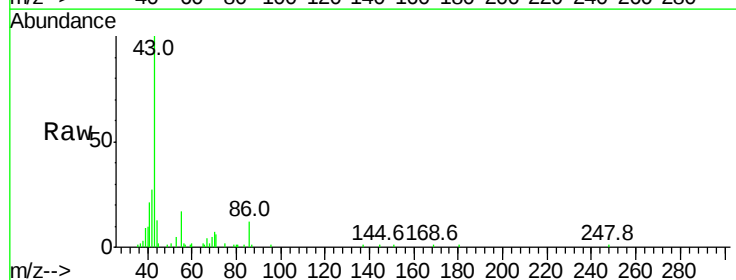
Instrument :
MSVOA_L
ClientSampled :
OA1

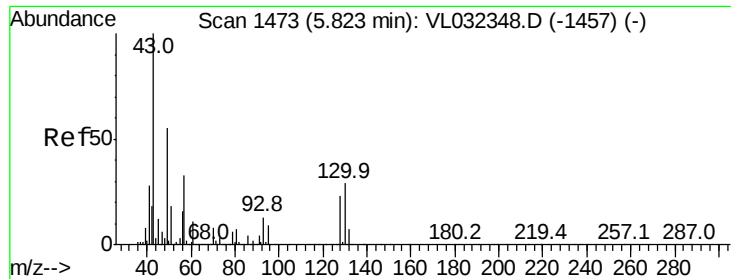
Tgt Ion:	84	Resp:	14311
Ion	Ratio	Lower	Upper
84	100		
49	157.0	117.3	175.9
51	41.4	36.6	55.0
86	67.7	49.8	74.8



#23
Vinyl Acetate
Concen: 0.171 ppbv
RT: 5.19 min Scan# 1276
Delta R.T. -0.02 min
Lab File: VL032416.D
Acq: 21 Aug 2018 9:35

Tgt Ion:	43	Resp:	50273
Ion	Ratio	Lower	Upper
43	100		
86	12.7	5.5	8.3#
42	22.2	7.0	10.6#
44	1.6	4.6	6.8#

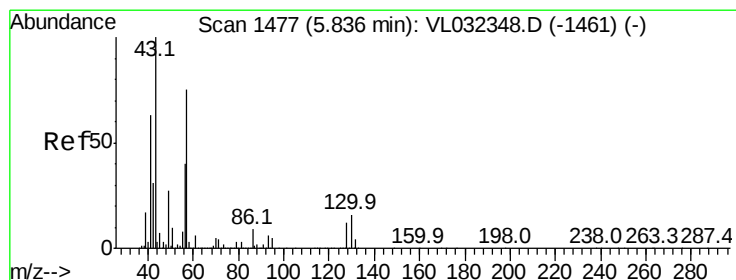
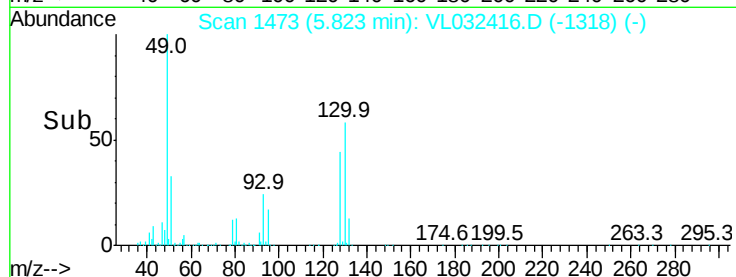
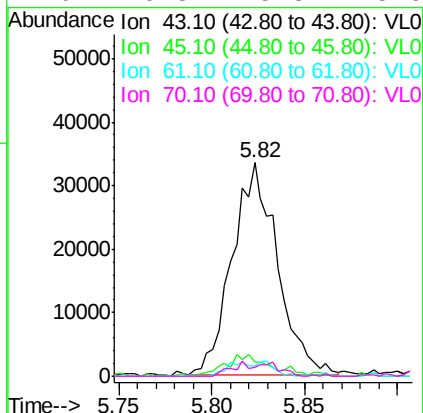
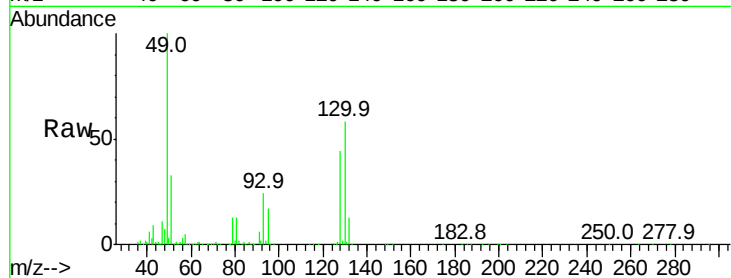




#25
Ethyl Acetate
Concen: 0.155 ppbv
RT: 5.82 min Scan# 1473
Delta R.T. -0.00 min
Lab File: VL032416.D
Acq: 21 Aug 2018 9:35

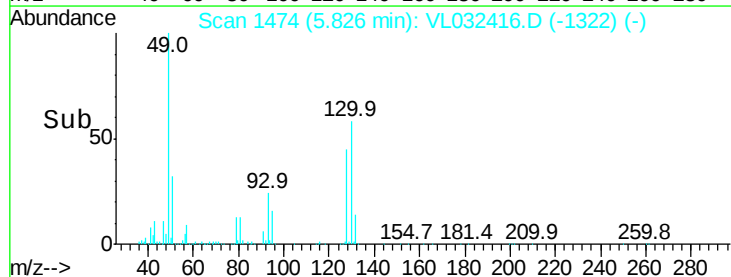
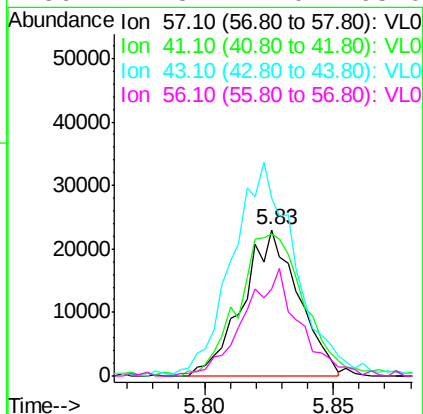
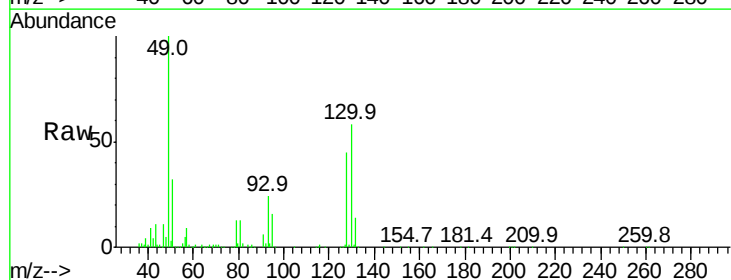
Instrument :
MSVOA_L
ClientSampleId :
OA1

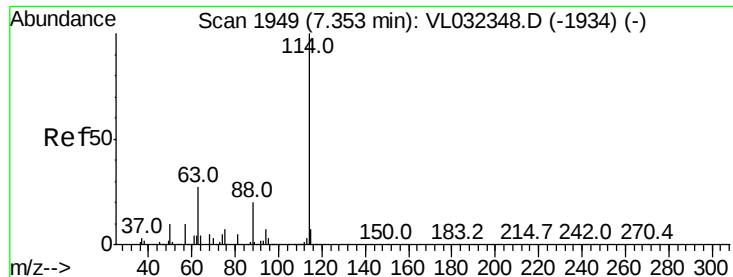
Tgt Ion:	43	Resp:	56437
Ion	Ratio	Lower	Upper
43	100		
45	11.3	7.9	11.9
61	7.0	7.4	11.2#
70	6.8	5.8	8.6



#26
Hexane
Concen: 0.213 ppbv
RT: 5.83 min Scan# 1474
Delta R.T. -0.01 min
Lab File: VL032416.D
Acq: 21 Aug 2018 9:35

Tgt Ion:	57	Resp:	34660
Ion	Ratio	Lower	Upper
57	100		
41	120.3	68.0	102.0#
43	171.6	175.3	262.9#
56	74.3	42.0	63.0#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.34 min Scan# 1945

Delta R.T. -0.01 min

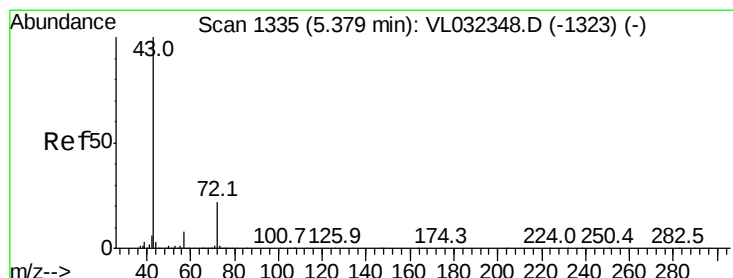
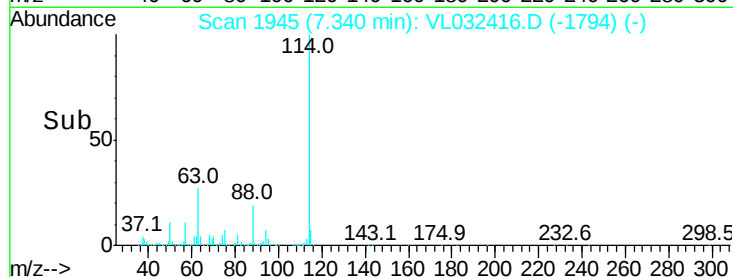
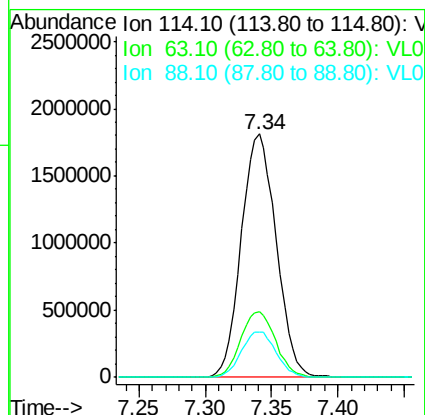
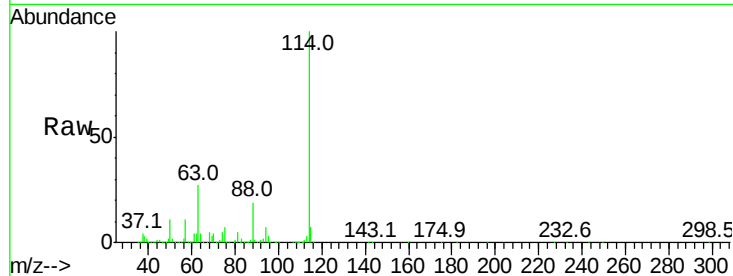
Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :
MSVOA_L
ClientSampleId :
OA1

Tgt Ion:114 Resp: 3318747

Ion	Ratio	Lower	Upper
114	100		
63	27.2	22.0	33.0
88	18.7	15.3	22.9



#34

2-Butanone

Concen: 0.124 ppbv

RT: 5.38 min Scan# 1335

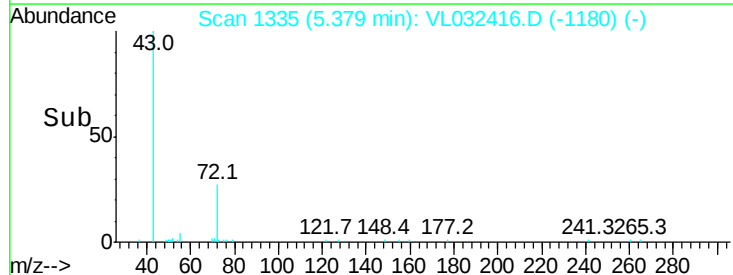
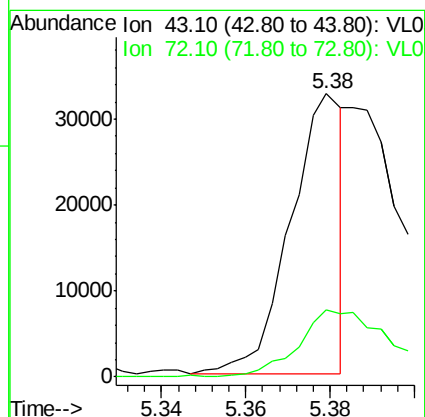
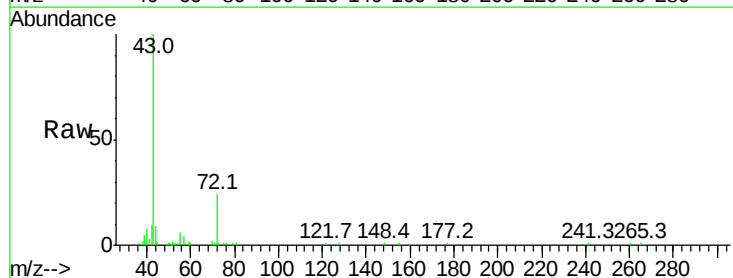
Delta R.T. -0.00 min

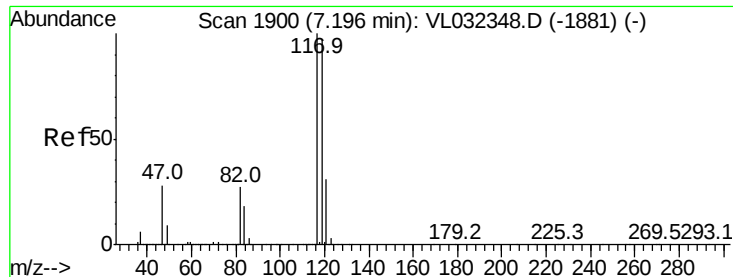
Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Tgt Ion: 43 Resp: 28120

Ion	Ratio	Lower	Upper
43	100		
72	44.2	17.9	26.9





#35

Carbon Tetrachloride

Concen: 0.039 ppbv

RT: 7.19 min Scan# 1897

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

OA1

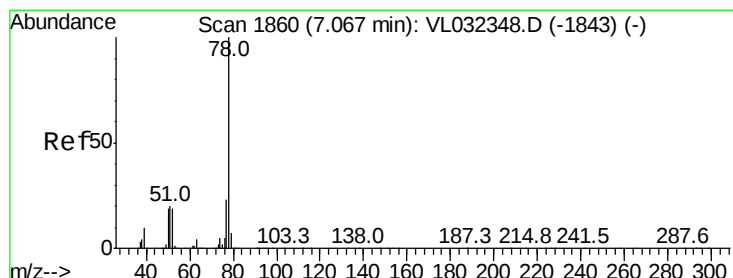
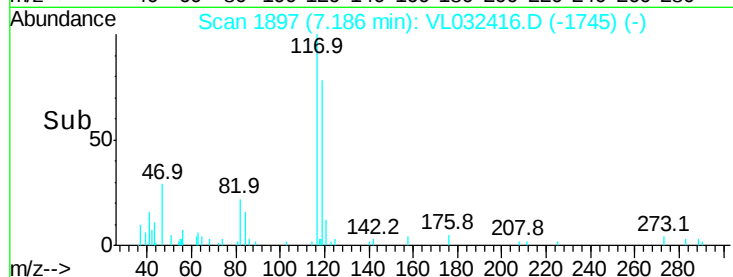
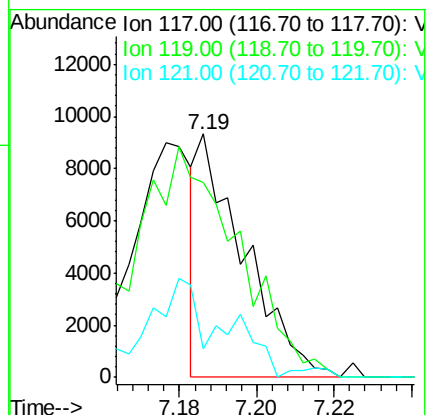
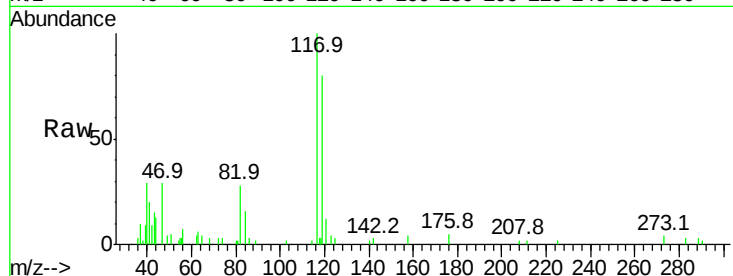
Tgt Ion: 117 Resp: 7718

Ion Ratio Lower Upper

117 100

119 78.1 77.2 115.8

121 11.6 25.1 37.7#



#36

Benzene

Concen: 0.242 ppbv

RT: 7.05 min Scan# 1855

Delta R.T. -0.02 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

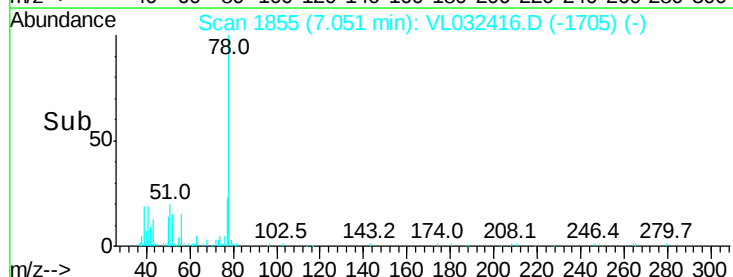
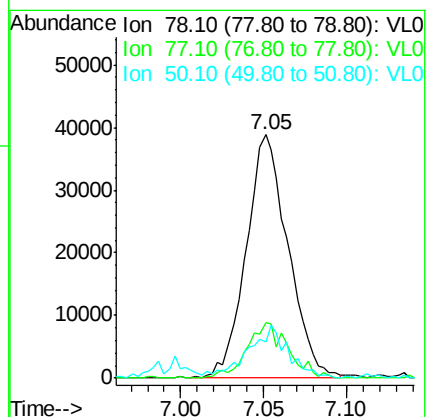
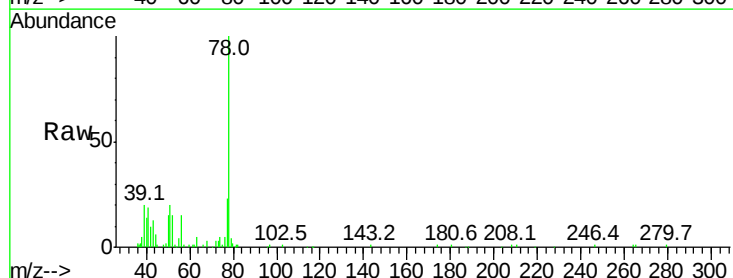
Tgt Ion: 78 Resp: 68110

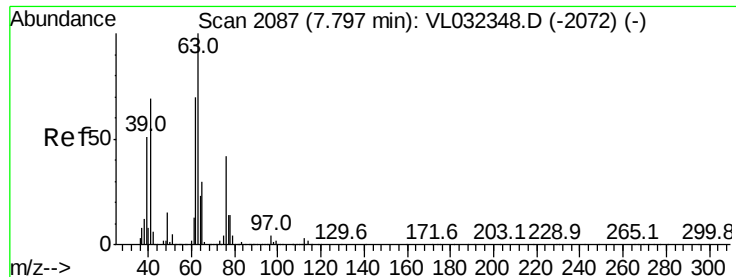
Ion Ratio Lower Upper

78 100

77 22.8 18.0 27.0

50 15.0 15.1 22.7#





#39

1,2-Dichloropropane

Concen: 7.633 ppbv

RT: 7.34 min Scan# 1945

Delta R.T. -0.46 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

OA1

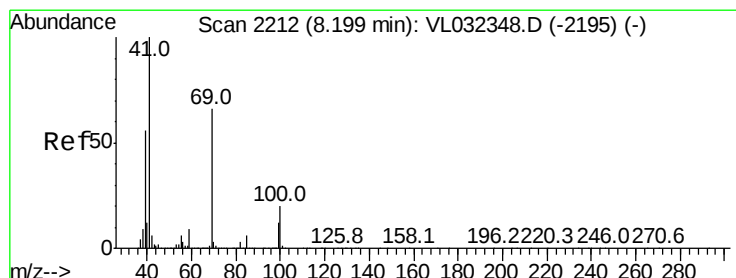
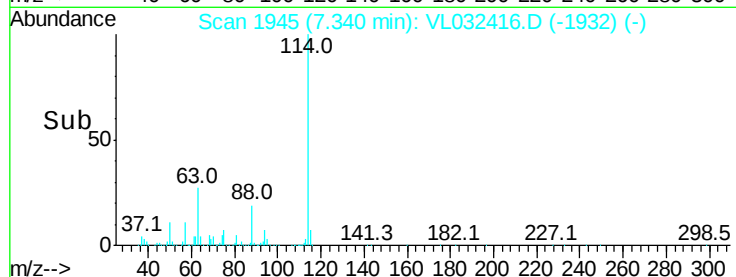
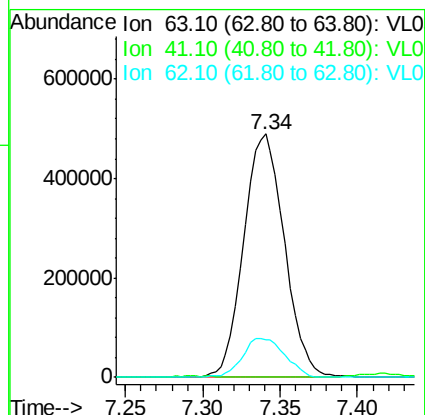
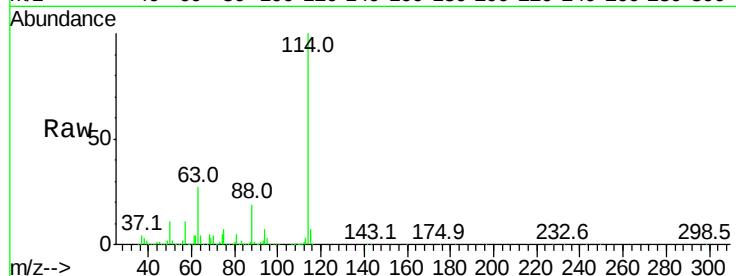
Tgt Ion: 63 Resp: 897108

Ion Ratio Lower Upper

63 100

41 0.0 55.5 83.3#

62 15.1 56.3 84.5#



#43

Methyl Methacrylate

Concen: 0.176 ppbv

RT: 8.19 min Scan# 2209

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

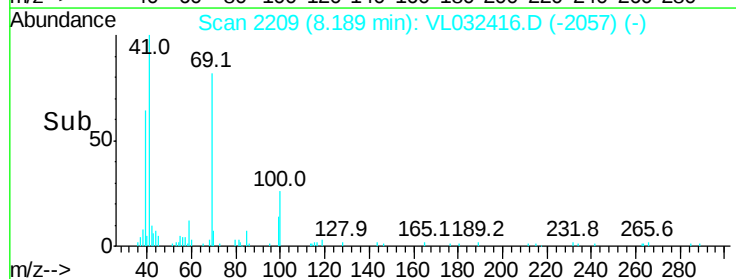
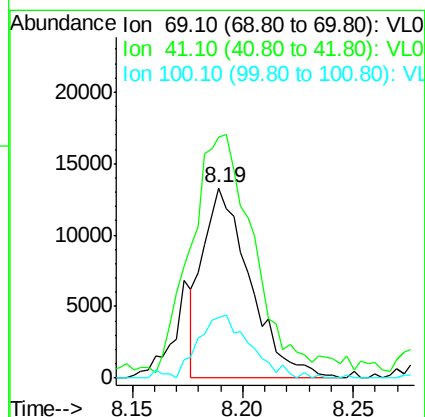
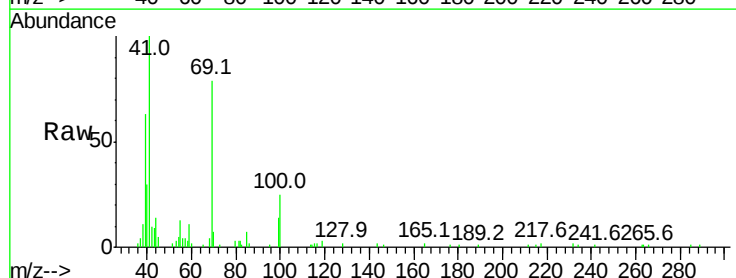
Tgt Ion: 69 Resp: 19708

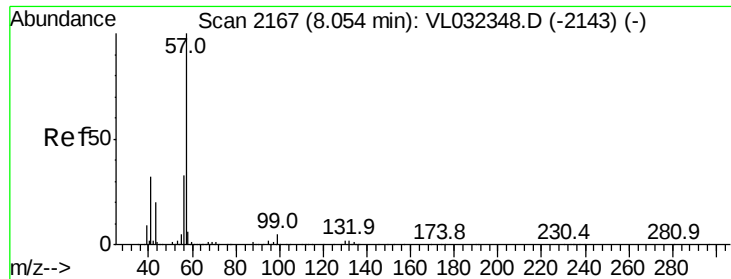
Ion Ratio Lower Upper

69 100

41 182.6 118.6 177.8#

100 37.5 23.4 35.2#





#44

2,2,4-Trimethylpentane

Concen: 0.097 ppbv

RT: 8.04 min Scan# 2162

Delta R.T. -0.02 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

OA1

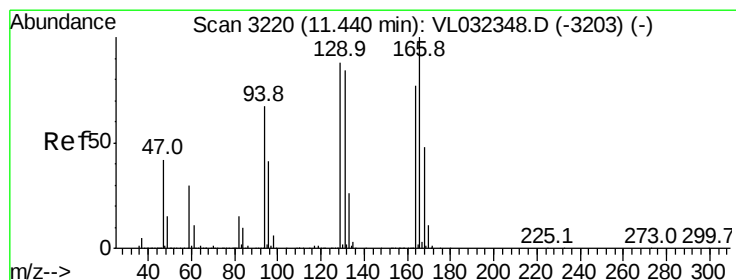
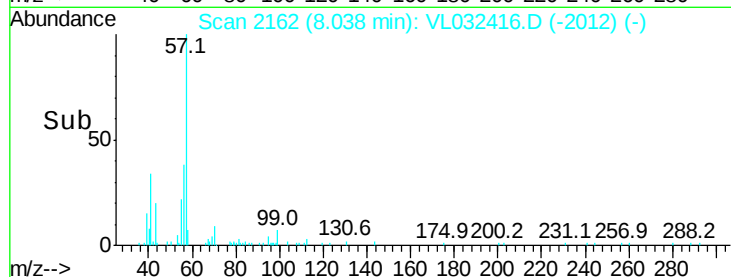
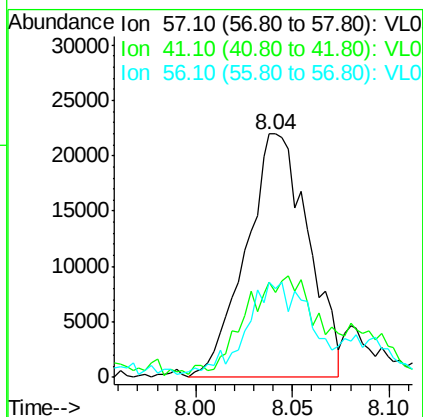
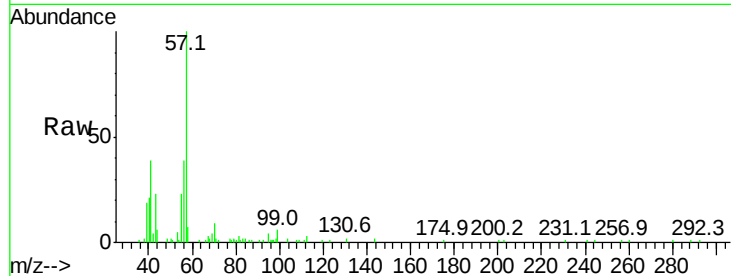
Tgt Ion: 57 Resp: 49291

Ion Ratio Lower Upper

57 100

41 64.3 24.3 36.5#

56 55.2 25.7 38.5#



#52

Tetrachloroethene

Concen: 0.048 ppbv

RT: 11.43 min Scan# 3216

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Tgt Ion: 164 Resp: 3972

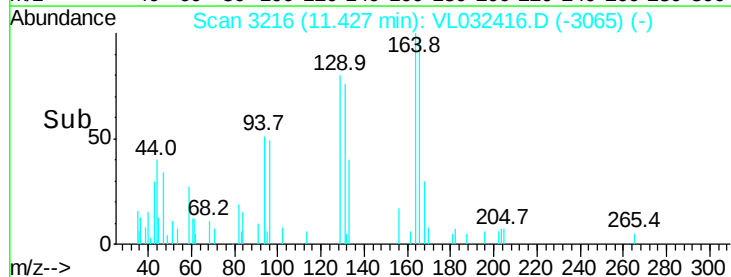
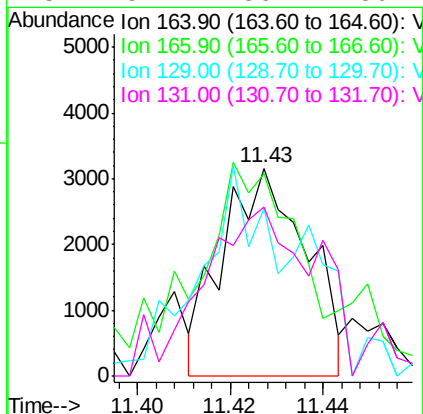
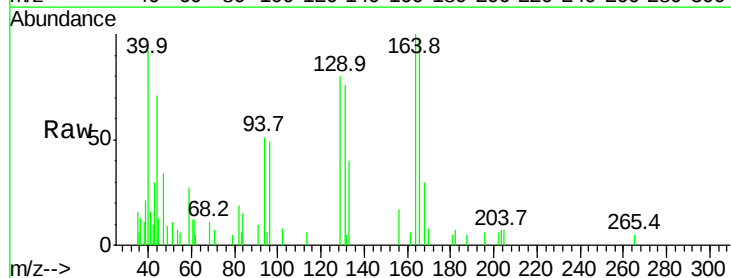
Ion Ratio Lower Upper

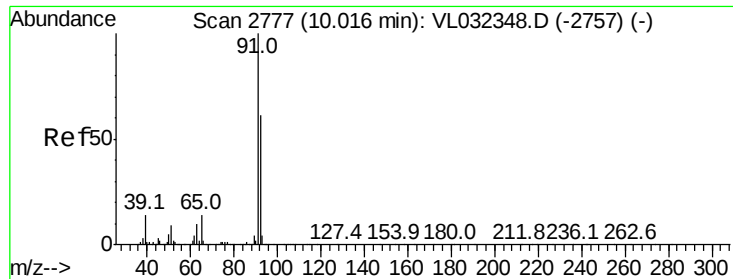
164 100

166 82.6 103.5 155.3#

129 55.0 90.9 136.3#

131 57.1 86.7 130.1#





#53

Toluene

Concen: 0.472 ppbv

RT: 10.00 min Scan# 2773

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampled :

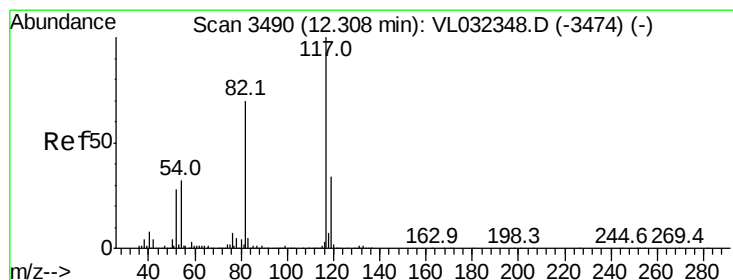
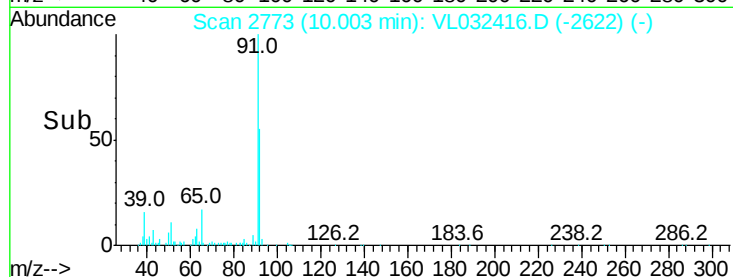
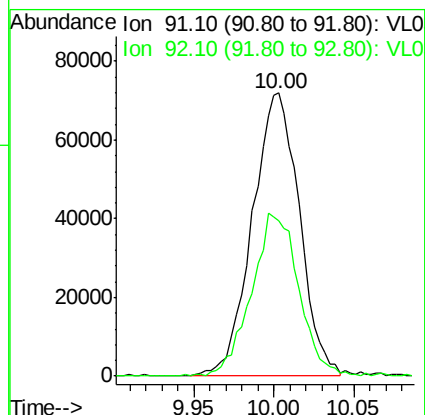
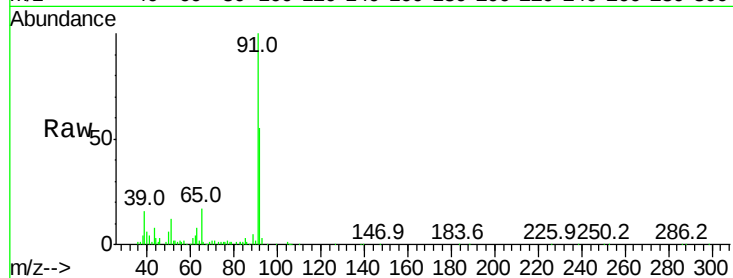
OA1

Tgt Ion: 91 Resp: 145530

Ion Ratio Lower Upper

91 100

92 58.3 48.7 73.1



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.30 min Scan# 3486

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

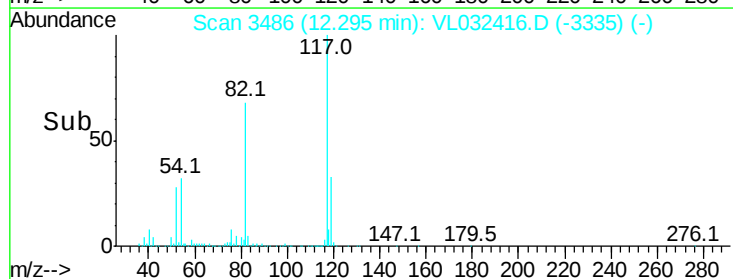
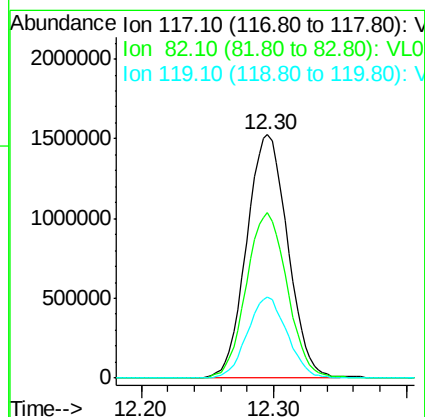
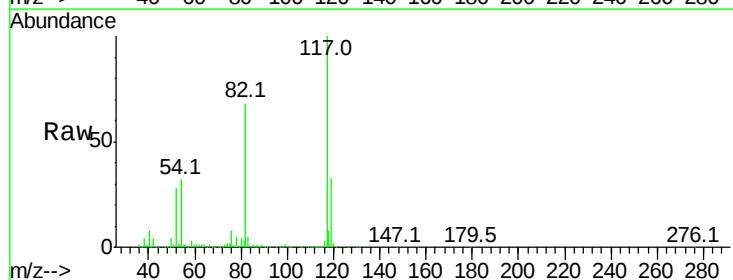
Tgt Ion: 117 Resp: 3282537

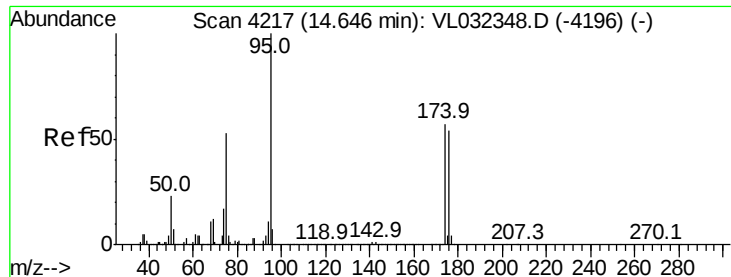
Ion Ratio Lower Upper

117 100

82 68.1 55.1 82.7

119 32.6 46.0 69.0#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.136 ppbv

RT: 14.63 min Scan# 4212

Delta R.T. -0.02 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

OA1

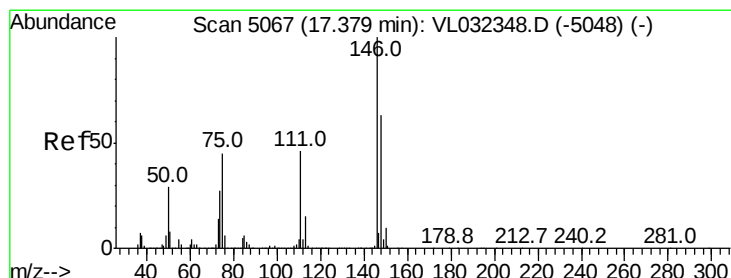
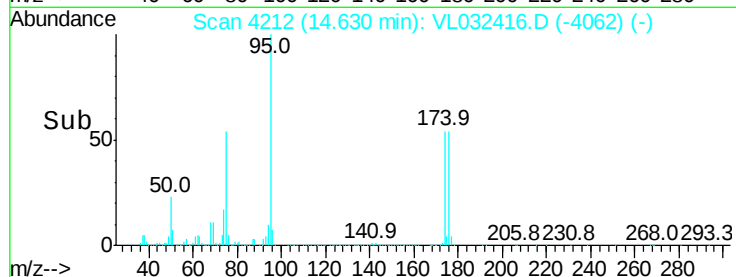
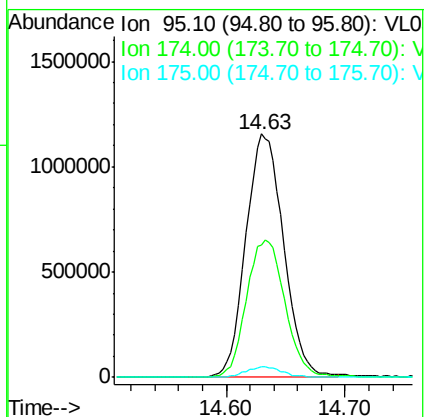
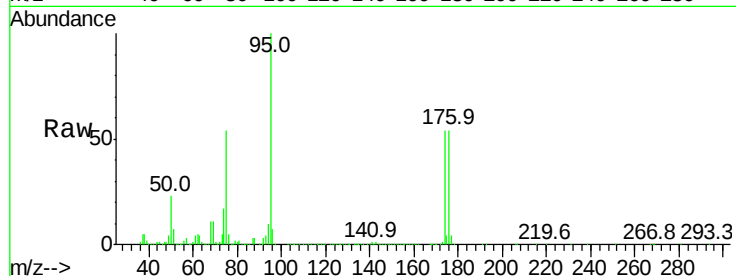
Tgt Ion: 95 Resp: 2538421

Ion Ratio Lower Upper

95 100

174 58.3 46.2 69.4

175 4.1 3.4 5.0



#76

1,4-Dichlorobenzene

Concen: 0.039 ppbv

RT: 17.36 min Scan# 5061

Delta R.T. -0.02 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

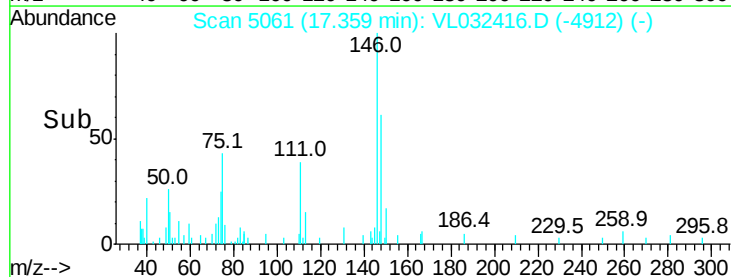
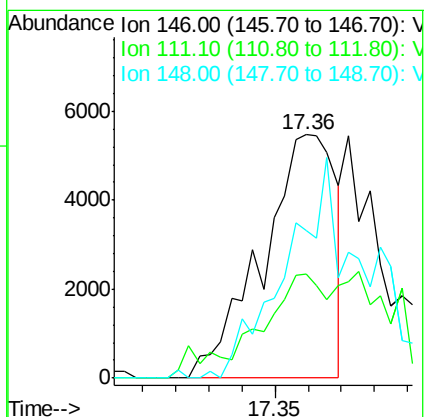
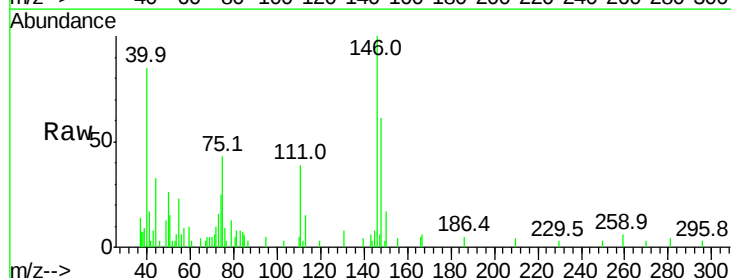
Tgt Ion: 146 Resp: 8422

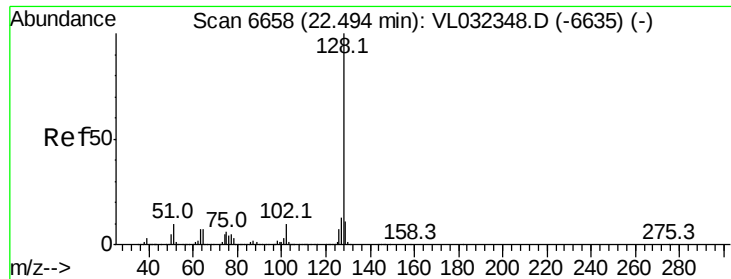
Ion Ratio Lower Upper

146 100

111 0.0 23.8 71.4#

148 0.0 32.2 96.6#





#79

Naphthalene

Concen: 0.332 ppbv

RT: 22.48 min Scan# 6653

Delta R.T. -0.02 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

Instrument :

MSVOA_L

ClientSampleId :

OA1

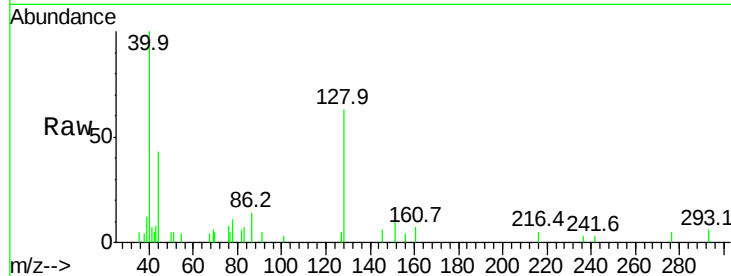
Tgt Ion:128 Resp: 1772

Ion Ratio Lower Upper

128 100

127 19.1 10.3 15.5#

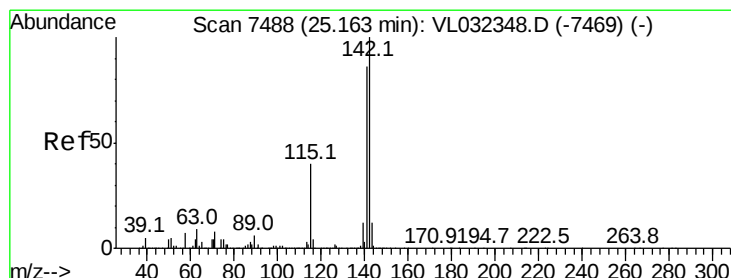
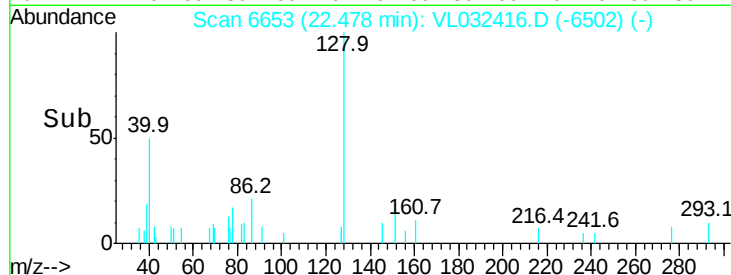
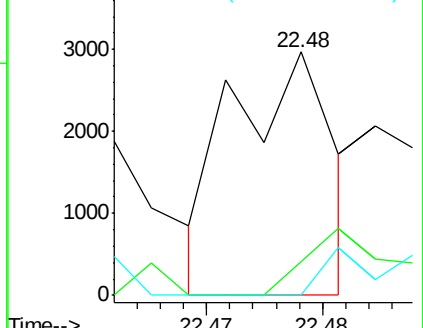
129 0.0 8.6 13.0#



Abundance Ion 128.10 (127.80 to 128.80): V

Ion 127.10 (126.80 to 127.80): V

Ion 129.10 (128.80 to 129.80): V



#80

Naphthalene, 2-methyl-

Concen: 0.031 ppbv

RT: 25.15 min Scan# 7484

Delta R.T. -0.01 min

Lab File: VL032416.D

Acq: 21 Aug 2018 9:35

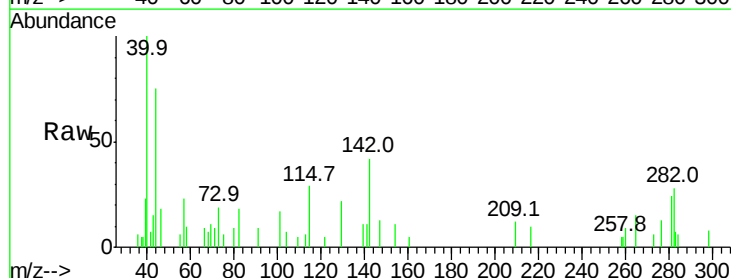
Tgt Ion:142 Resp: 2307

Ion Ratio Lower Upper

142 100

141 71.8 66.7 100.1

115 54.2 31.0 46.6#



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

