

Data File : VL033568.D
Acq On : 10 Apr 2019 17:38
Operator : SY/AP
Sample : K2301-01
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
OA1

Quant Time: Apr 11 03:44:35 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL032519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 26 16:00:50 2019
QLast Update : Tue Mar 26 16:00:50 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	841398	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1987372	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1918253	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.58 95 1519740 10.11 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 101.10%

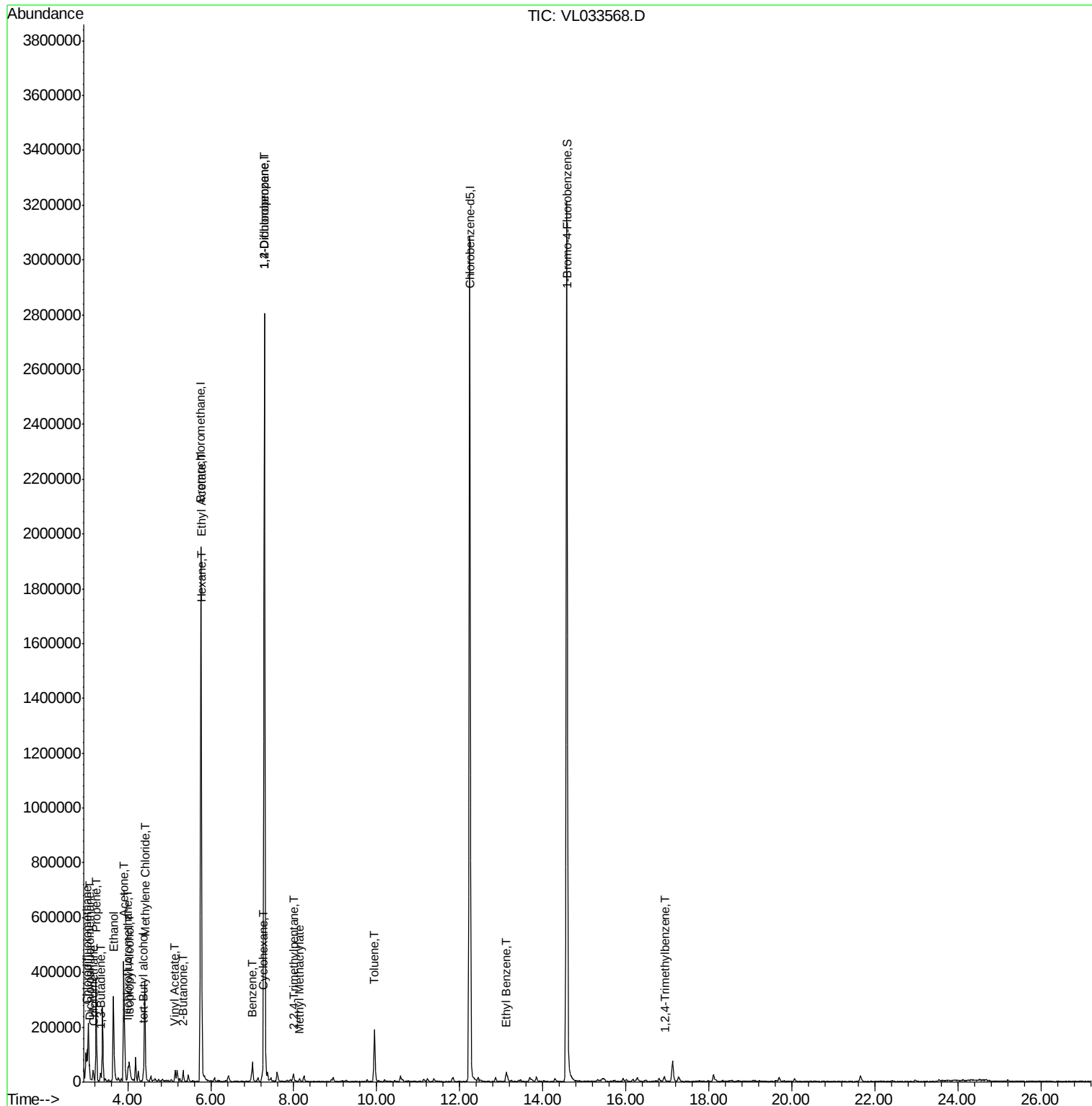
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.08	85	37052	0.302	ppbv	94
3) Chlorodifluoromethane	3.02	51	158016	1.631	ppbv #	84
4) Chloromethane	3.17	50	26762	0.522	ppbv	93
9) Propene	3.24	41	86207	2.119	ppbv	94
11) Trichlorofluoromethane	4.01	101	31586	0.209	ppbv	96
13) Ethanol	3.65	45	331141	31.457	ppbv	65
15) Acetone	3.90	43	441338	4.362	ppbv	98
16) 1,3-Butadiene	3.36	39	2098	0.052	ppbv #	1
17) tert-Butyl alcohol	4.37	59	2645	0.142	ppbv #	73
19) Isopropyl Alcohol	4.04	45	81902	1.280	ppbv #	92
20) Methylene Chloride	4.41	84	126873	2.954	ppbv	95
23) Vinyl Acetate	5.14	43	29792	0.207	ppbv #	64
25) Ethyl Acetate	5.78	43	78241	0.417	ppbv #	86
26) Hexane	5.78	57	93622	1.122	ppbv #	44
30) Cyclohexane	7.25	84	5511	0.083	ppbv #	1
34) 2-Butanone	5.34	43	43466	0.364	ppbv	95
36) Benzene	7.00	78	49434	0.296	ppbv	97
39) 1,2-Dichloropropane	7.29	63	509680	7.803	ppbv #	24
43) Methyl Methacrylate	8.14	69	2913	0.043	ppbv #	54
44) 2,2,4-Trimethylpentane	7.99	57	9039	0.031	ppbv #	1
53) Toluene	9.95	91	132847	0.686	ppbv	100
58) Ethyl Benzene	13.12	91	28971	0.113	ppbv	92
74) 1,2,4-Trimethylbenzene	16.93	105	11878	0.047	ppbv #	72

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

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

QA1

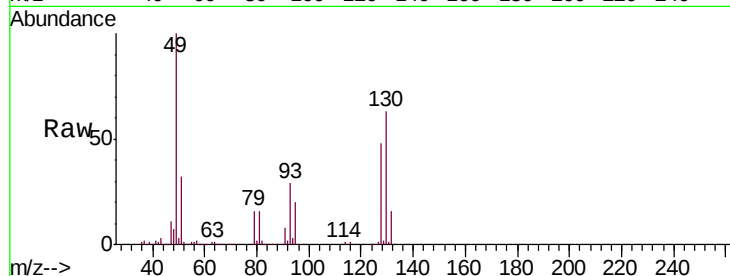
Tgt Ion: 49 Resp: 841398

Ion Ratio Lower Upper

49 100

128 49.3 24.0 72.0

130 63.7 31.2 93.6



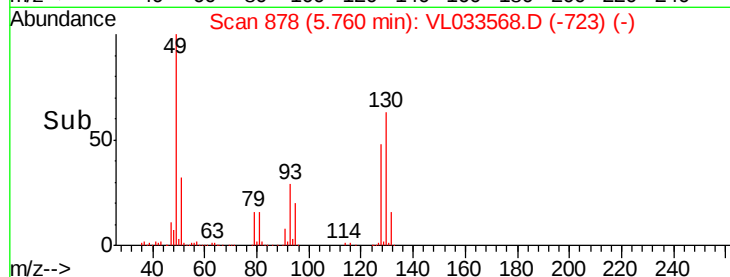
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

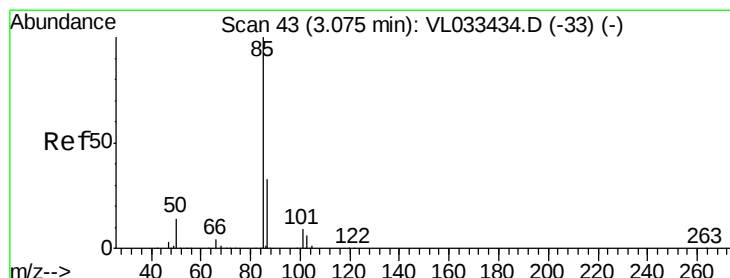
Ion 130.00 (129.70 to 130.70): VL0

5.76

Time-->



Time-->



#2

Dichlorodifluoromethane

Concen: 0.302 ppbv

RT: 3.08 min Scan# 44

Delta R.T. 0.00 min

Lab File: VL033568.D

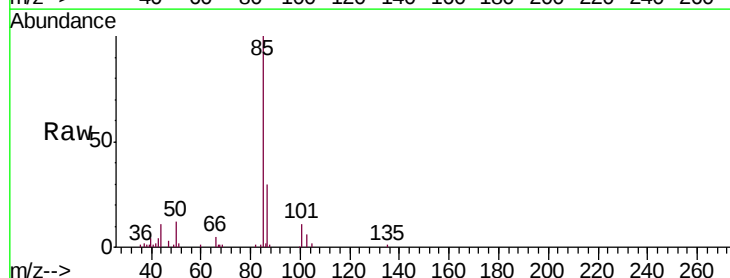
Acq: 10 Apr 2019 17:38

Tgt Ion: 85 Resp: 37052

Ion Ratio Lower Upper

85 100

87 29.8 26.7 40.1

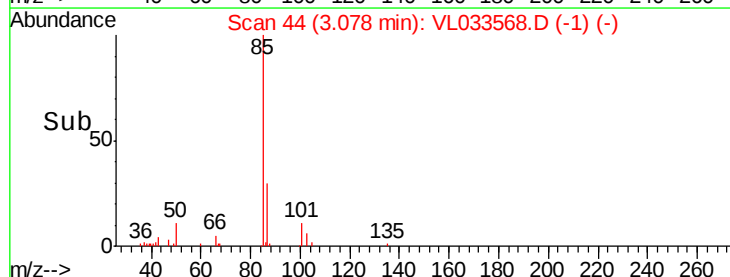


Abundance Ion 85.00 (84.70 to 85.70): VL0

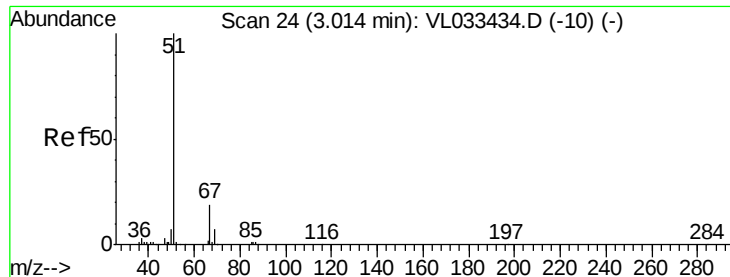
Ion 87.00 (86.70 to 87.70): VL0

3.08

Time-->



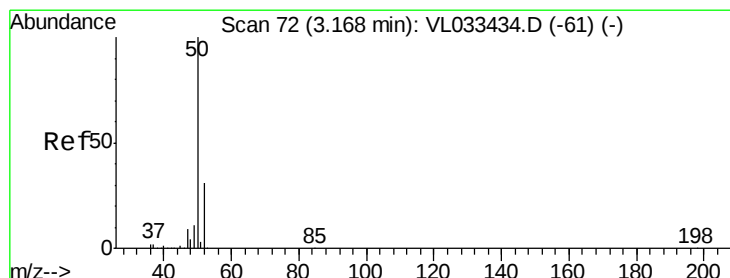
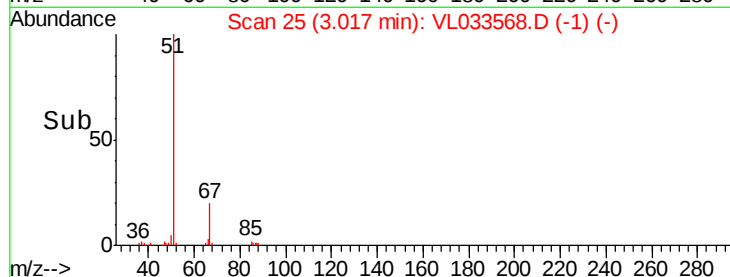
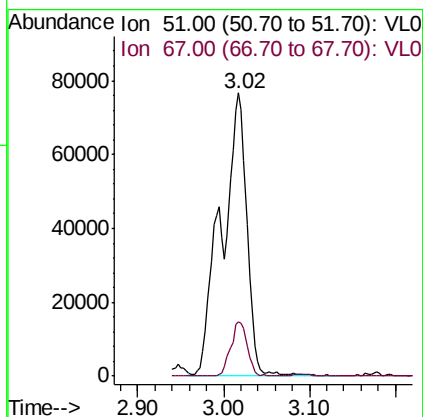
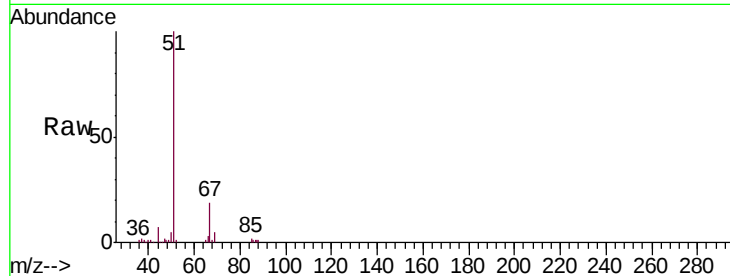
Time-->



#3
 Chlorodifluoromethane
 Concen: 1.631 ppbv
 RT: 3.02 min Scan# 25
 Delta R.T. 0.00 min
 Lab File: VL033568.D
 Acq: 10 Apr 2019 17:38

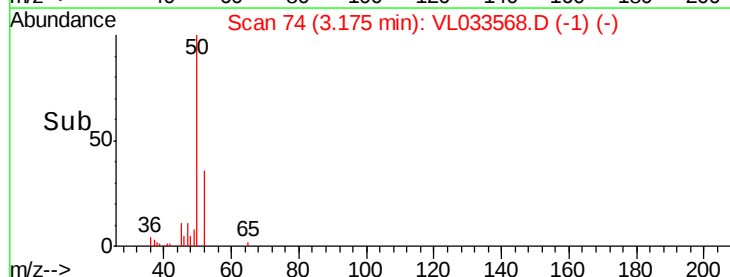
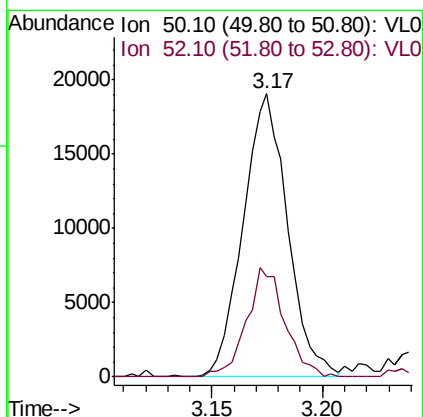
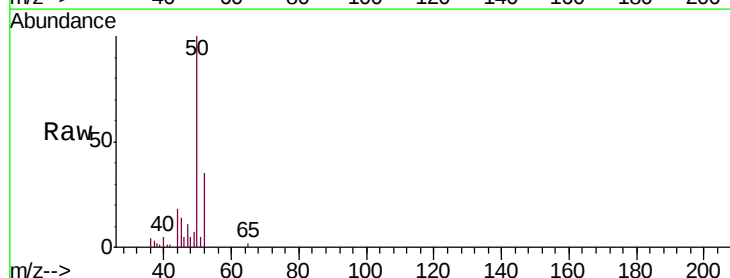
Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

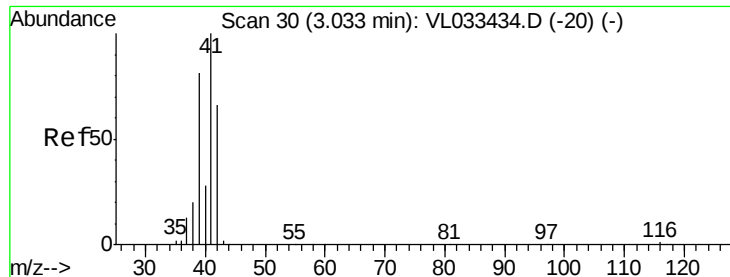
Tgt Ion: 51 Resp: 158016
 Ion Ratio Lower Upper
 51 100
 67 12.3 15.7 23.5#



#4
 Chloromethane
 Concen: 0.522 ppbv
 RT: 3.17 min Scan# 74
 Delta R.T. 0.01 min
 Lab File: VL033568.D
 Acq: 10 Apr 2019 17:38

Tgt Ion: 50 Resp: 26762
 Ion Ratio Lower Upper
 50 100
 52 35.4 25.0 37.6





#9

Propene

Concen: 2.119 ppbv

RT: 3.24 min Scan# 94

Delta R.T. 0.21 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

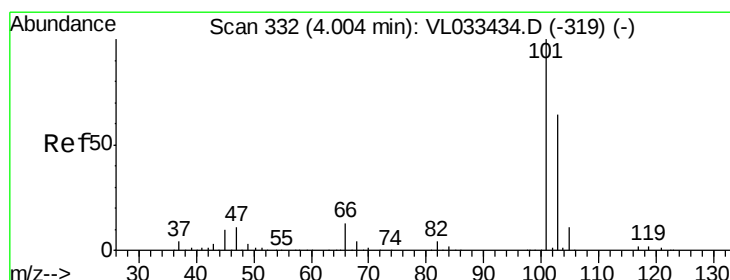
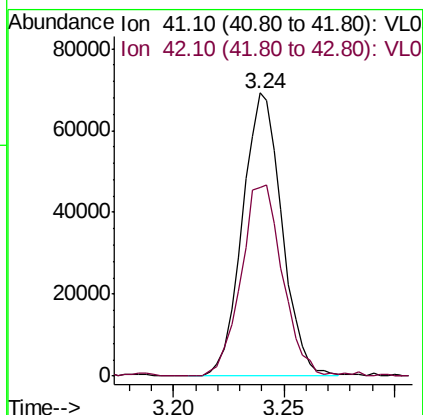
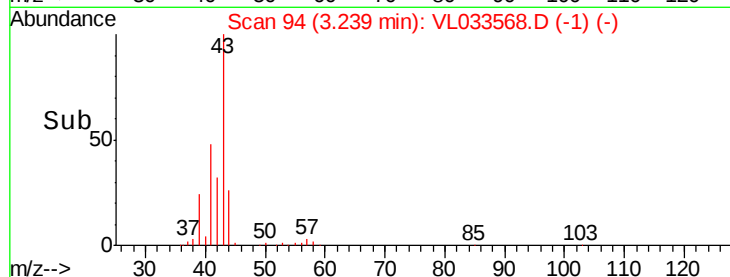
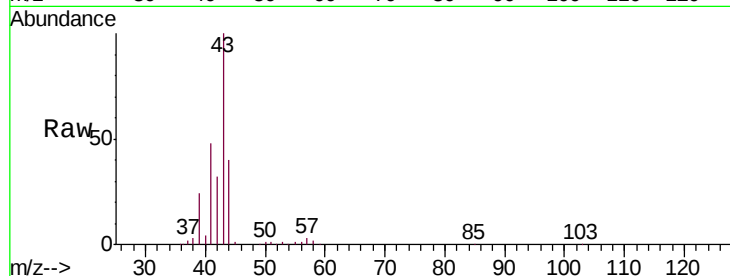
OA1

Tgt Ion: 41 Resp: 86207

Ion Ratio Lower Upper

41 100

42 71.8 53.9 80.9



#11

Trichlorofluoromethane

Concen: 0.209 ppbv

RT: 4.01 min Scan# 333

Delta R.T. 0.00 min

Lab File: VL033568.D

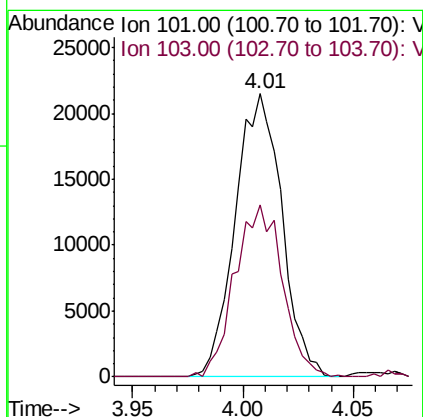
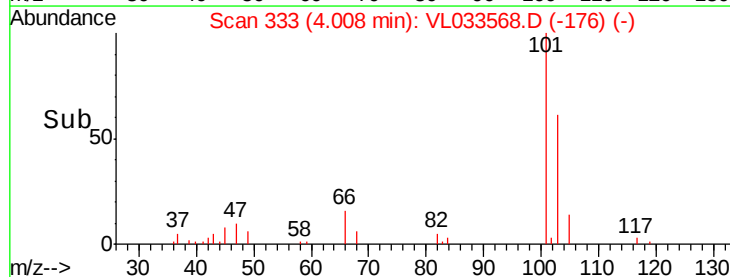
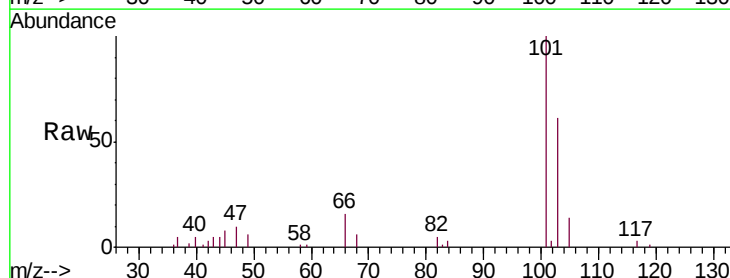
Acq: 10 Apr 2019 17:38

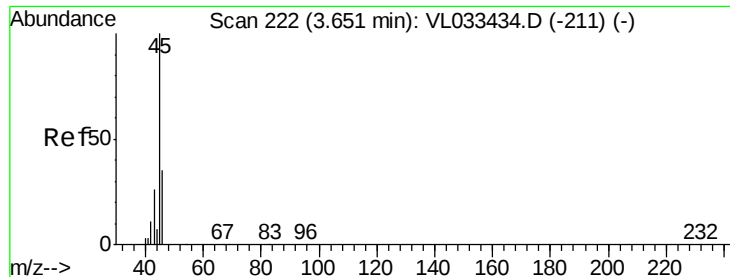
Tgt Ion: 101 Resp: 31586

Ion Ratio Lower Upper

101 100

103 60.8 51.3 76.9





#13

Ethanol

Concen: 31.457 ppbv

RT: 3.65 min Scan# 223

Delta R.T. 0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

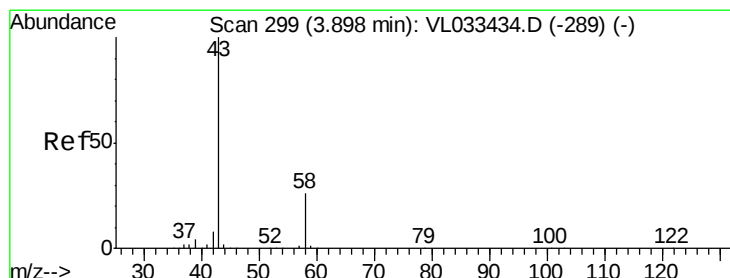
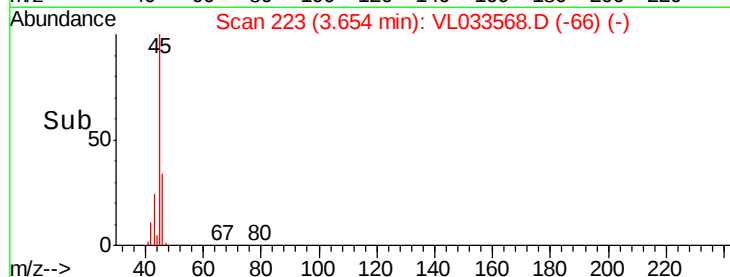
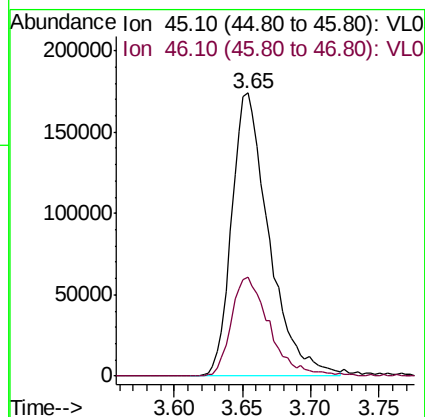
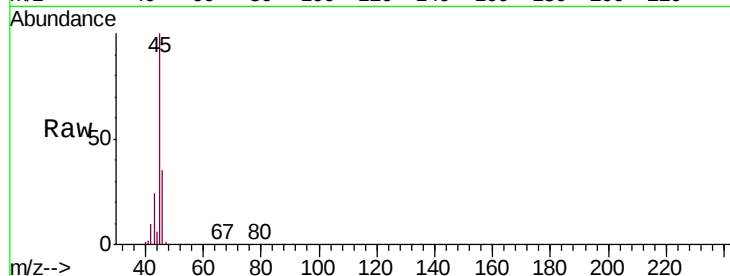
QA1

Tgt Ion: 45 Resp: 331141

Ion Ratio Lower Upper

45 100

46 36.2 25.4 101.8



#15

Acetone

Concen: 4.362 ppbv

RT: 3.90 min Scan# 301

Delta R.T. 0.01 min

Lab File: VL033568.D

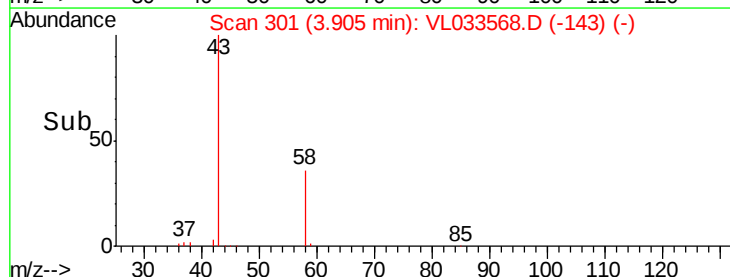
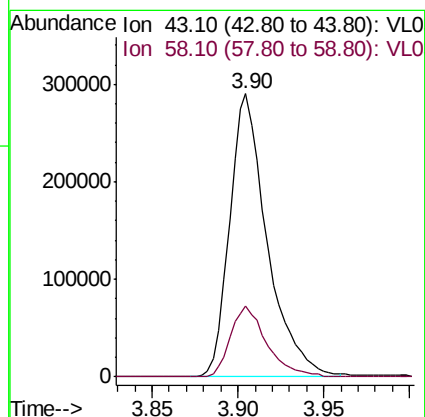
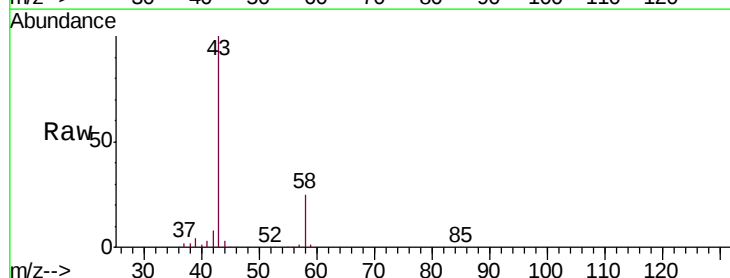
Acq: 10 Apr 2019 17:38

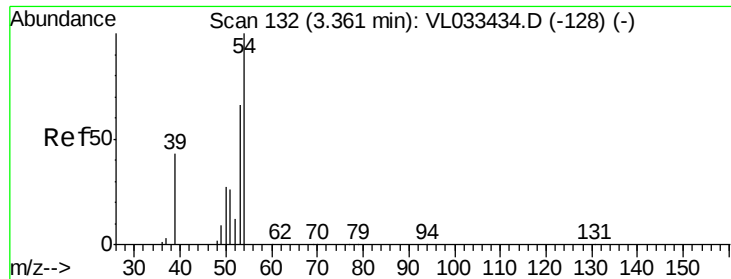
Tgt Ion: 43 Resp: 441338

Ion Ratio Lower Upper

43 100

58 24.4 20.5 30.7





#16

1,3-Butadiene

Concen: 0.052 ppbv

RT: 3.36 min Scan# 131

Delta R.T. -0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

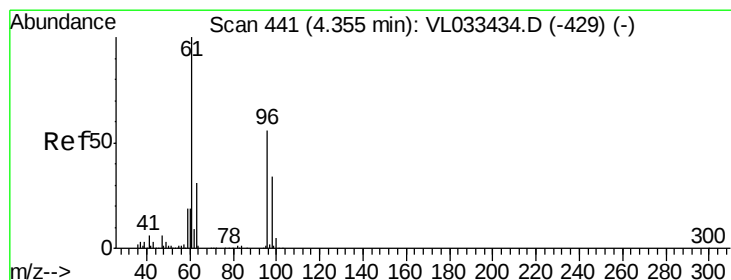
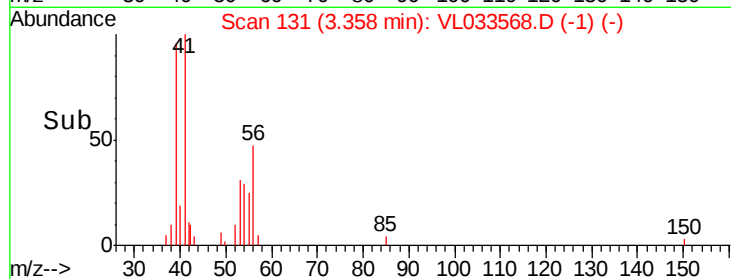
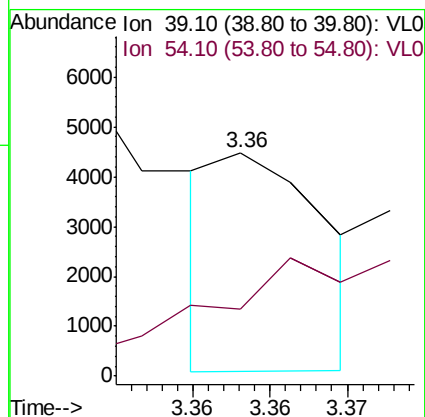
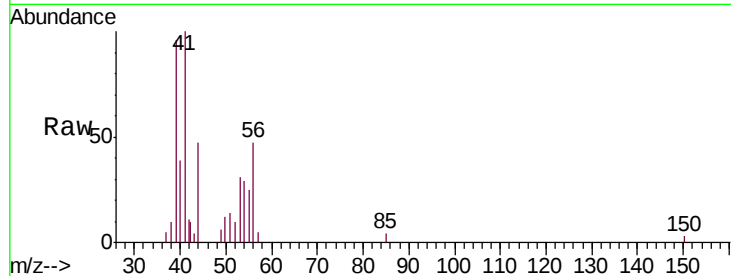
OA1

Tgt Ion: 39 Resp: 2098

Ion Ratio Lower Upper

39 100

54 212.9 69.4 104.2#



#17

tert-Butyl alcohol

Concen: 0.142 ppbv

RT: 4.37 min Scan# 447

Delta R.T. 0.02 min

Lab File: VL033568.D

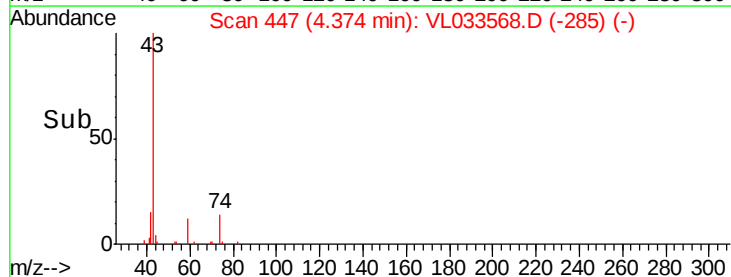
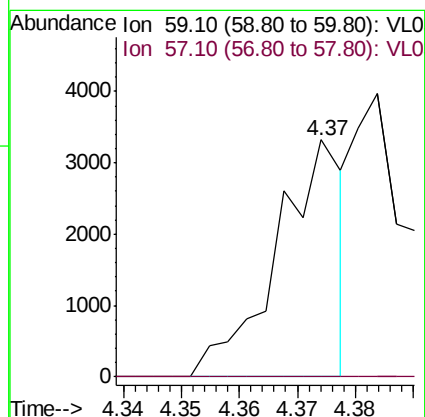
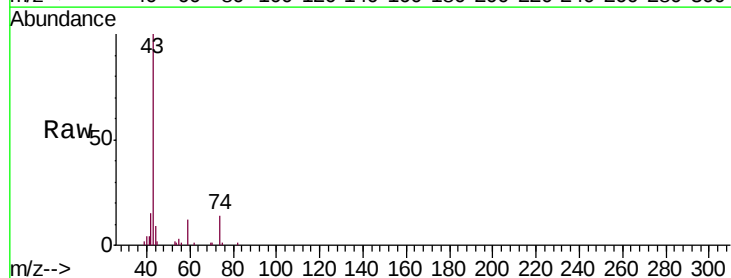
Acq: 10 Apr 2019 17:38

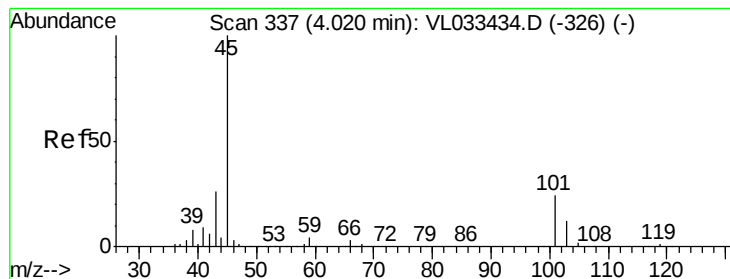
Tgt Ion: 59 Resp: 2645

Ion Ratio Lower Upper

59 100

57 0.0 7.8 11.8#





#19

Isopropyl Alcohol

Concen: 1.280 ppbv

RT: 4.04 min Scan# 342

Delta R.T. 0.02 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

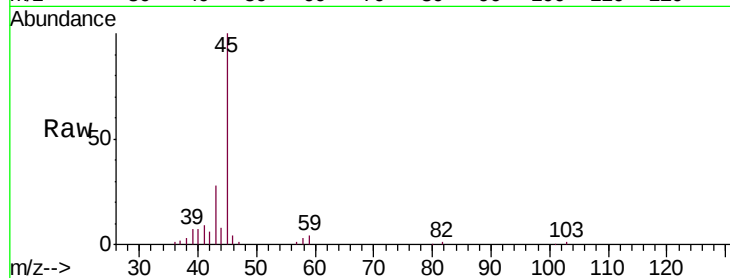
QA1

Tgt Ion: 45 Resp: 81902

Ion Ratio Lower Upper

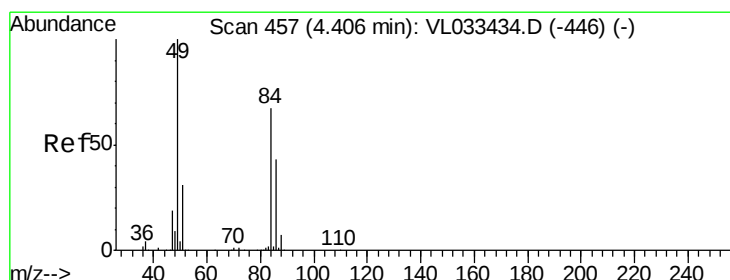
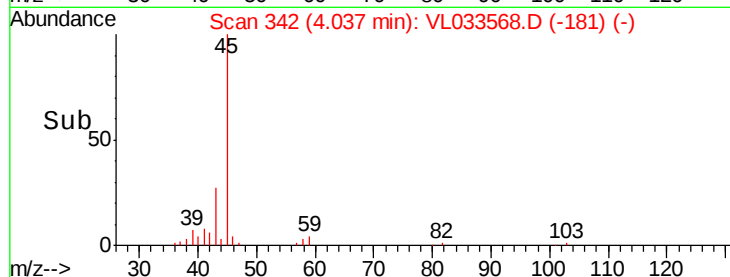
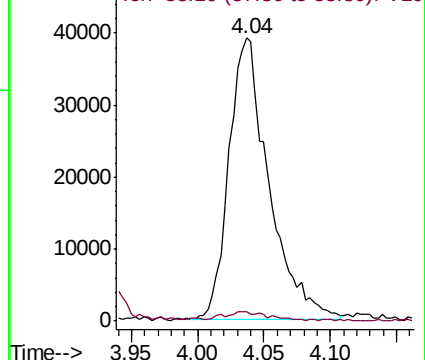
45 100

58 4.6 1.4 2.2#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 2.954 ppbv

RT: 4.41 min Scan# 458

Delta R.T. 0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Tgt Ion: 84 Resp: 126873

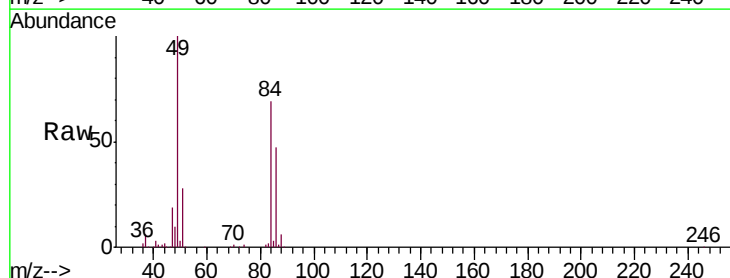
Ion Ratio Lower Upper

84 100

49 144.7 120.0 180.0

51 40.4 36.7 55.1

86 67.6 51.9 77.9

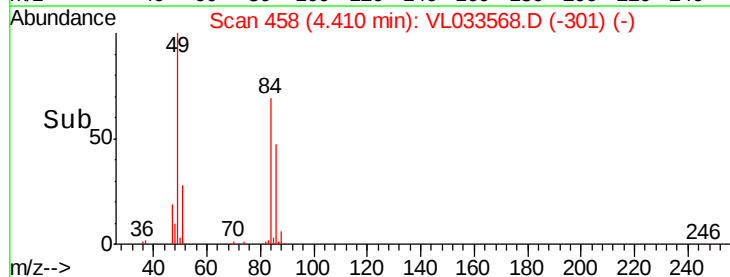
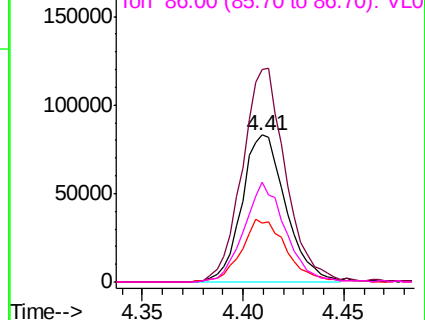


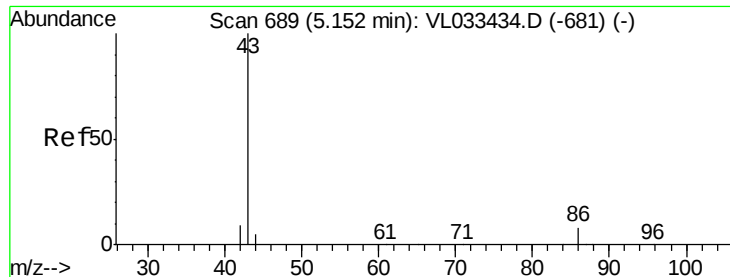
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0





#23

Vinyl Acetate

Concen: 0.207 ppbv

RT: 5.14 min Scan# 686

Delta R.T. -0.01 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

OA1

Tgt Ion: 43 Resp: 29792

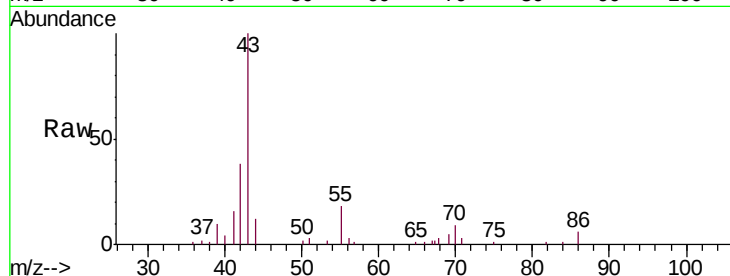
Ion Ratio Lower Upper

43 100

86 6.4 5.6 8.4

42 38.1 8.0 12.0#

44 6.1 3.9 5.9#

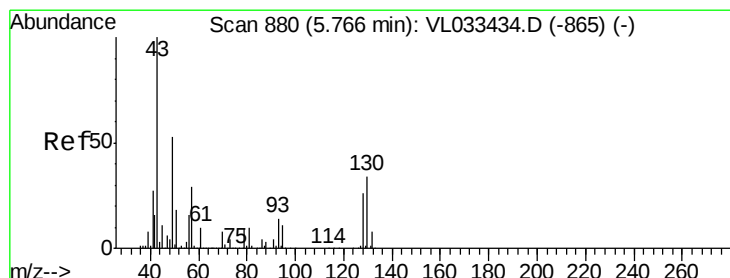
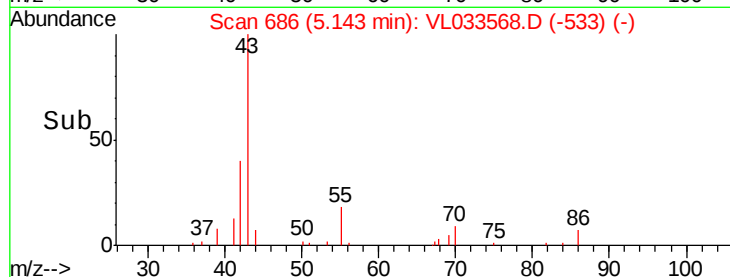
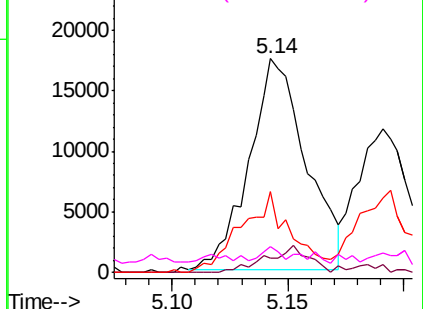


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.417 ppbv

RT: 5.78 min Scan# 883

Delta R.T. 0.01 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Tgt Ion: 43 Resp: 78241

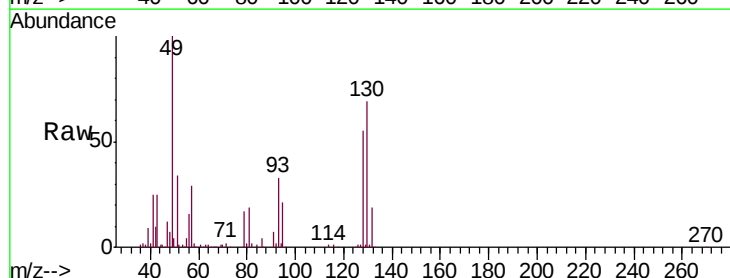
Ion Ratio Lower Upper

43 100

45 5.4 7.8 11.6#

61 2.7 7.3 10.9#

70 3.1 5.6 8.4#

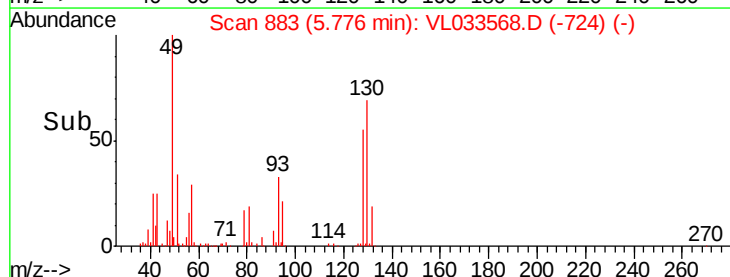
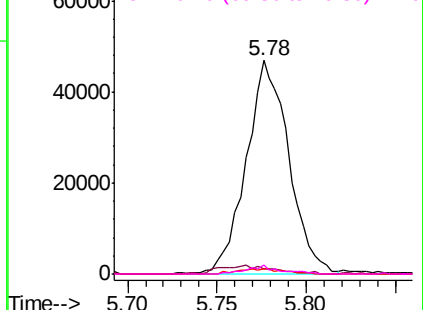


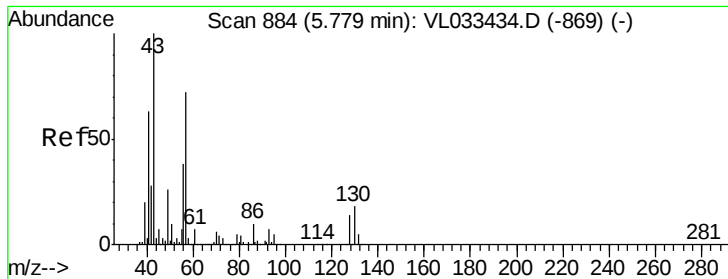
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 1.122 ppbv

RT: 5.78 min Scan# 884

Delta R.T. 0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

OA1

Tgt Ion: 57 Resp: 93622

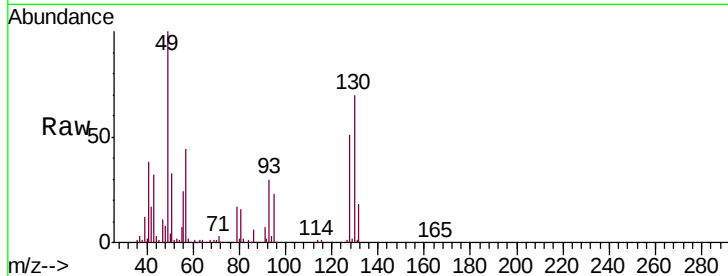
Ion Ratio Lower Upper

57 100

41 92.3 70.7 106.1

43 84.7 182.6 274.0#

56 56.4 42.0 63.0

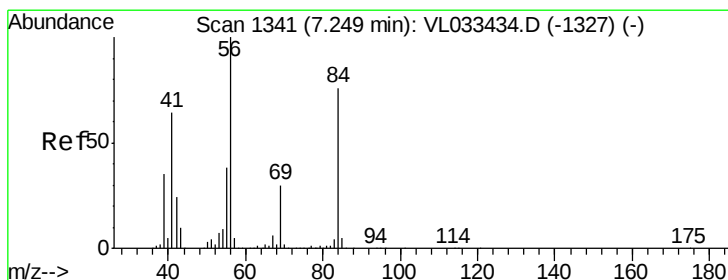
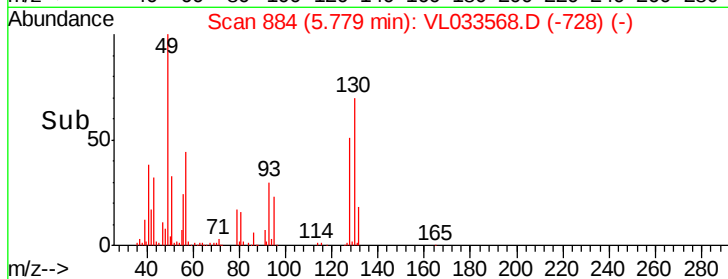
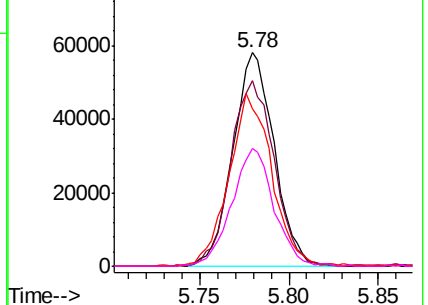


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#30

Cyclohexane

Concen: 0.083 ppbv

RT: 7.25 min Scan# 1342

Delta R.T. 0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

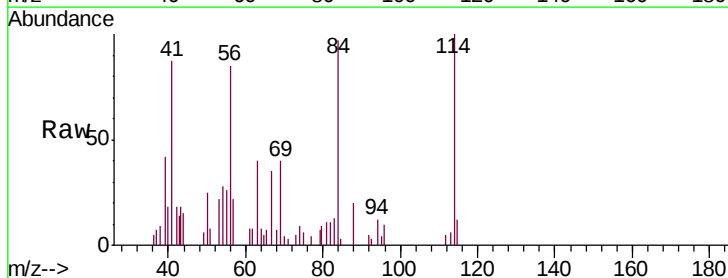
Tgt Ion: 84 Resp: 5511

Ion Ratio Lower Upper

84 100

56 0.0 109.7 164.5#

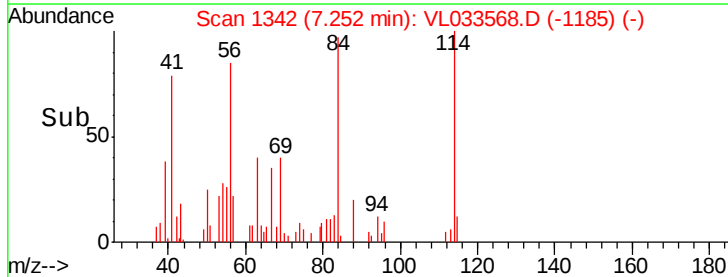
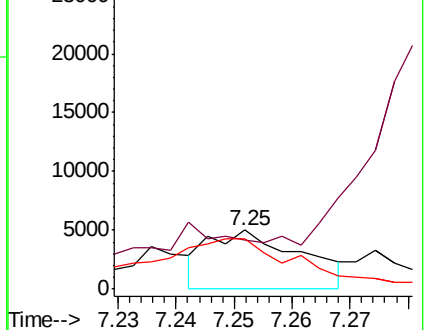
41 164.0 68.2 102.2#

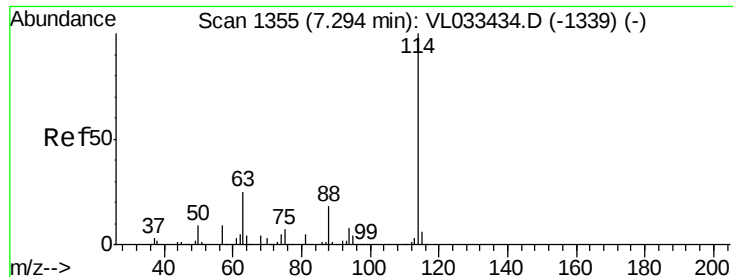


Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

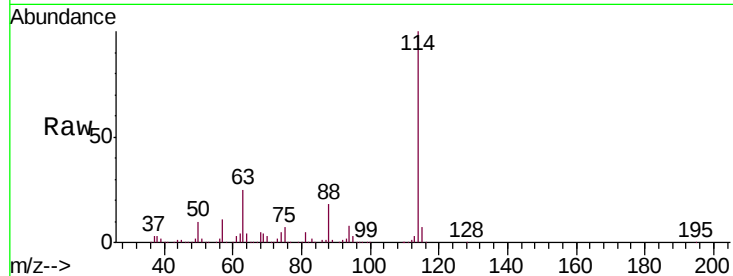




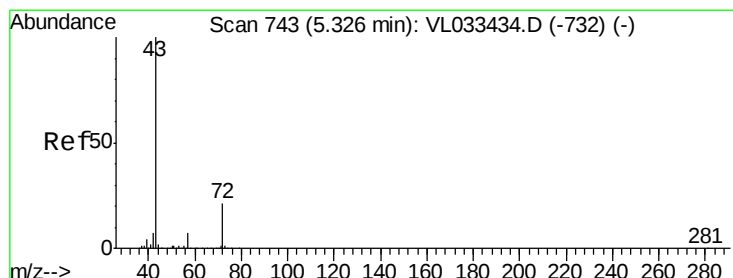
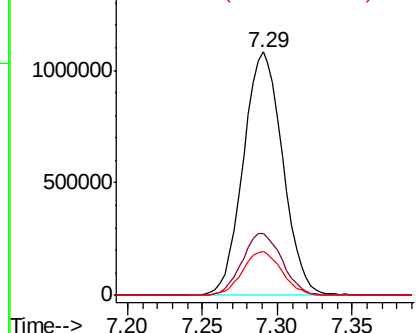
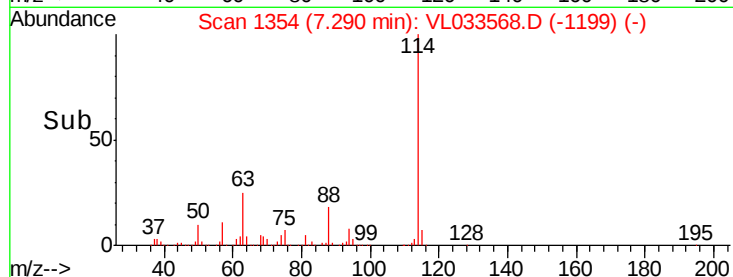
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.29 min Scan# 1354
 Delta R.T. -0.00 min
 Lab File: VL033568.D
 Acq: 10 Apr 2019 17:38

Instrument :
 MSVOA_L
 ClientSampleID :
 OA1

Tgt Ion:114 Resp: 1987372
 Ion Ratio Lower Upper
 114 100
 63 25.8 21.5 32.3
 88 17.9 14.5 21.7

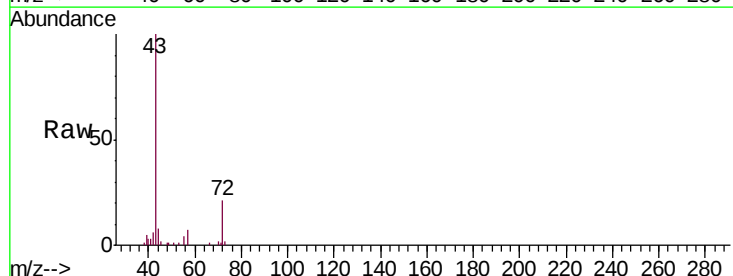


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

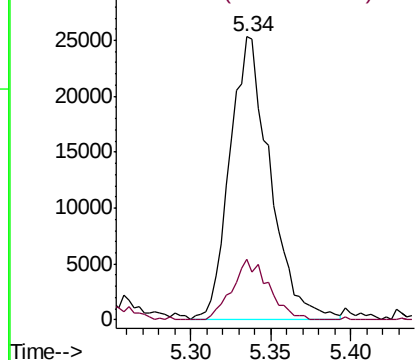
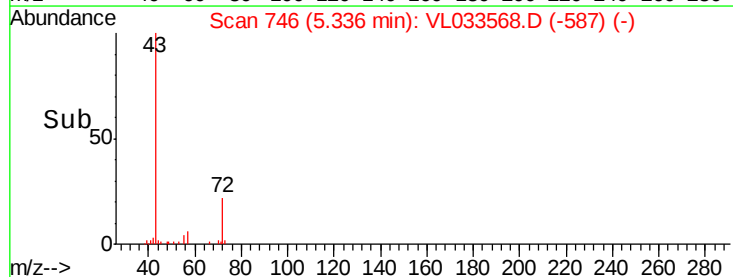


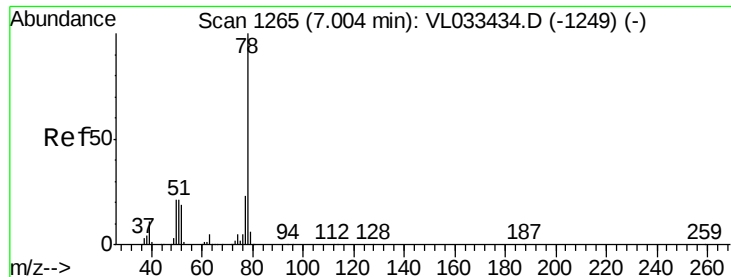
#34
 2-Butanone
 Concen: 0.364 ppbv
 RT: 5.34 min Scan# 746
 Delta R.T. 0.01 min
 Lab File: VL033568.D
 Acq: 10 Apr 2019 17:38

Tgt Ion: 43 Resp: 43466
 Ion Ratio Lower Upper
 43 100
 72 19.3 17.4 26.2



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





#36

Benzene

Concen: 0.296 ppbv

RT: 7.00 min Scan# 1264

Delta R.T. -0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

OA1

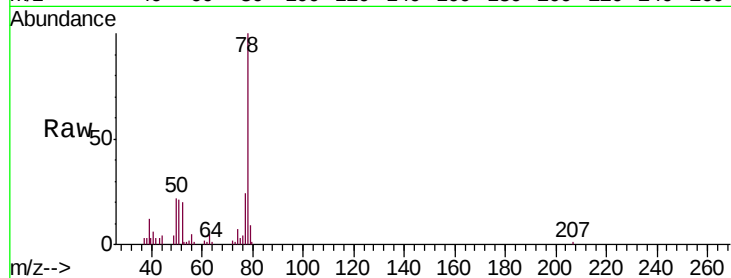
Tgt Ion: 78 Resp: 49434

Ion Ratio Lower Upper

78 100

77 23.9 18.1 27.1

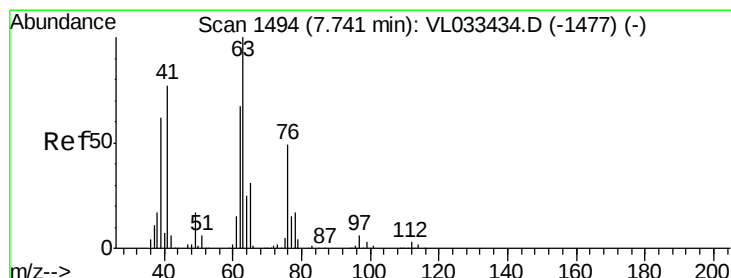
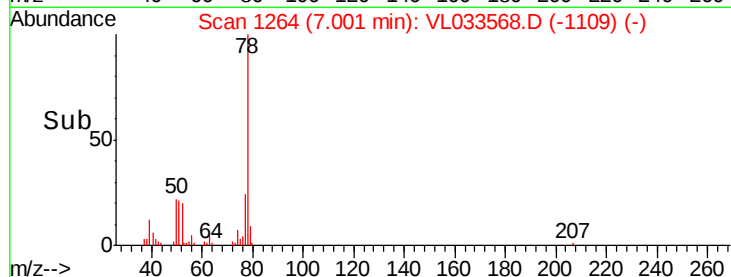
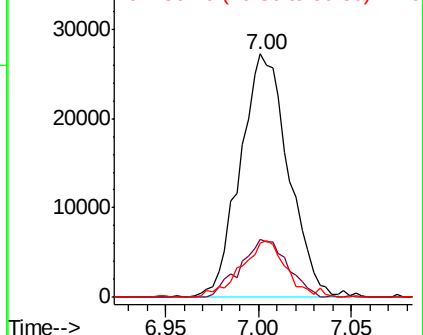
50 22.1 16.7 25.1



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: 7.803 ppbv

RT: 7.29 min Scan# 1354

Delta R.T. -0.45 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

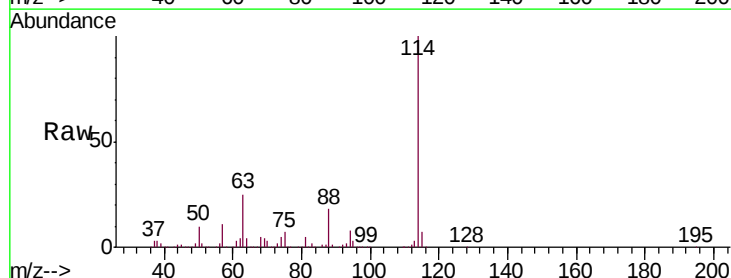
Tgt Ion: 63 Resp: 509680

Ion Ratio Lower Upper

63 100

41 0.0 61.2 91.8#

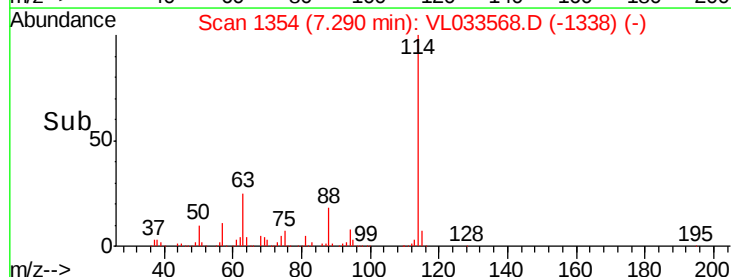
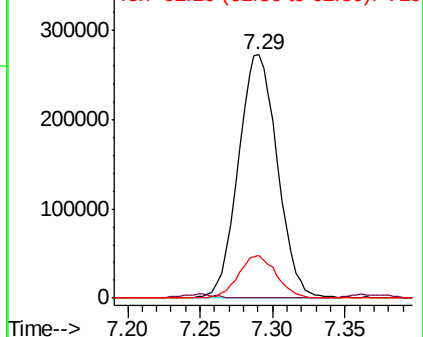
62 17.8 54.0 81.0#

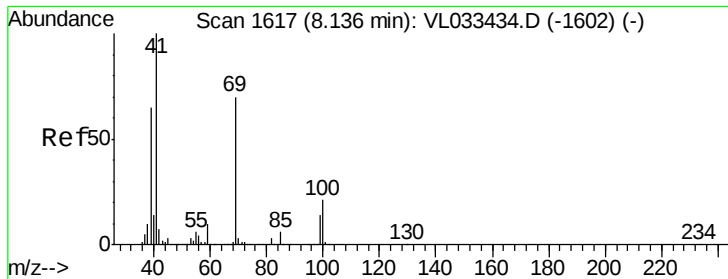


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

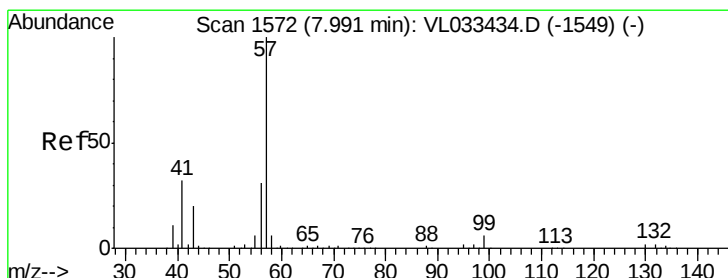
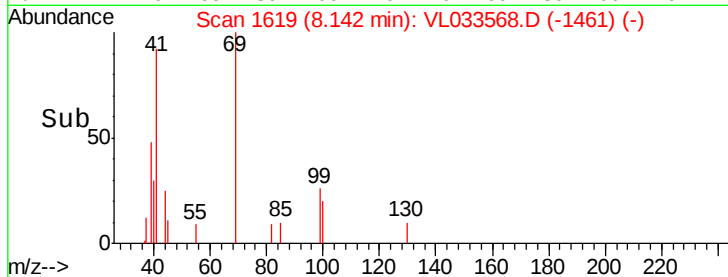
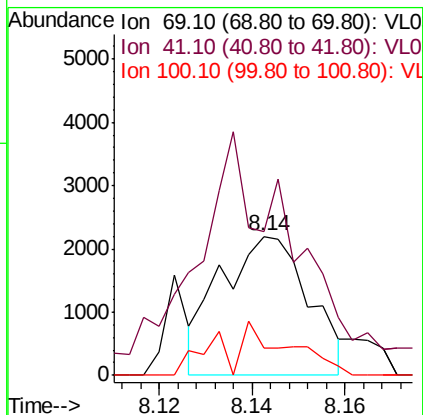
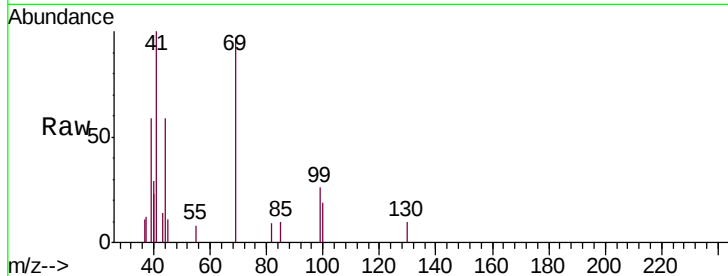




#43
Methyl Methacrylate
Concen: 0.043 ppbv
RT: 8.14 min Scan# 1619
Delta R.T. 0.01 min
Lab File: VL033568.D
Acq: 10 Apr 2019 17:38

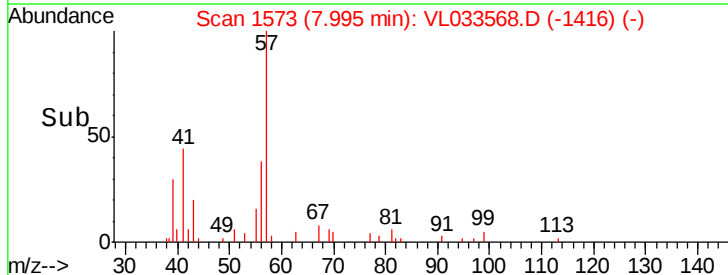
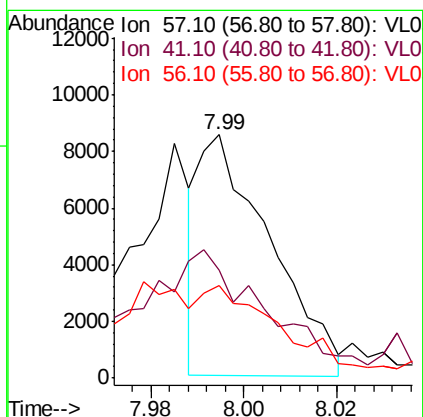
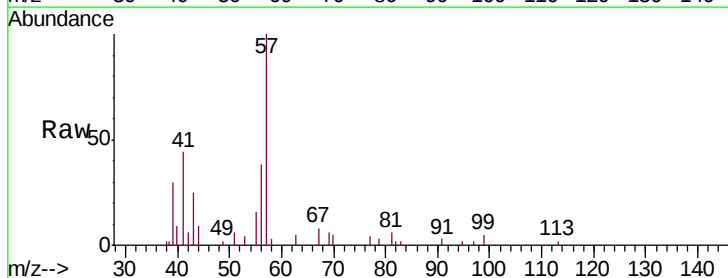
Instrument :
MSVOA_L
ClientSampleId :
OA1

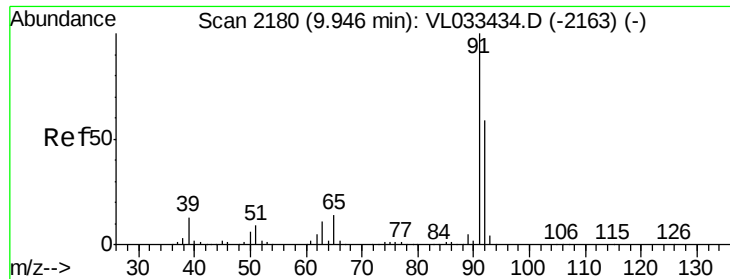
Tgt Ion: 69 Resp: 2913
Ion Ratio Lower Upper
69 100
41 214.2 116.6 174.8#
100 29.4 24.4 36.6



#44
2,2,4-Trimethylpentane
Concen: 0.031 ppbv
RT: 7.99 min Scan# 1573
Delta R.T. 0.00 min
Lab File: VL033568.D
Acq: 10 Apr 2019 17:38

Tgt Ion: 57 Resp: 9039
Ion Ratio Lower Upper
57 100
41 119.4 26.0 39.0#
56 0.0 24.6 37.0#





#53

Toluene

Concen: 0.686 ppbv

RT: 9.95 min Scan# 2180

Delta R.T. 0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

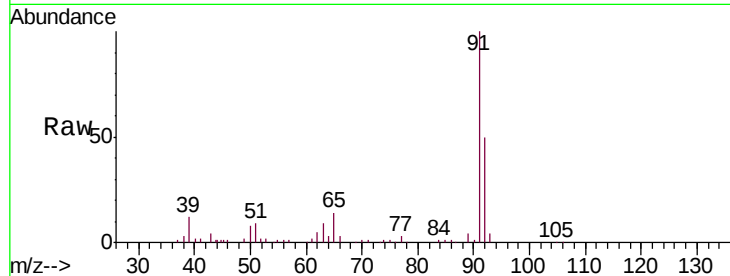
QA1

Tgt Ion: 91 Resp: 132847

Ion Ratio Lower Upper

91 100

92 58.9 47.4 71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.95

80000

60000

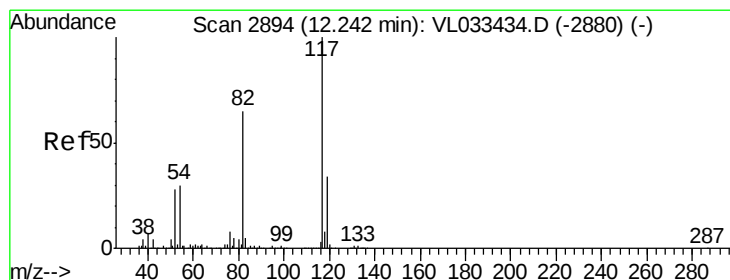
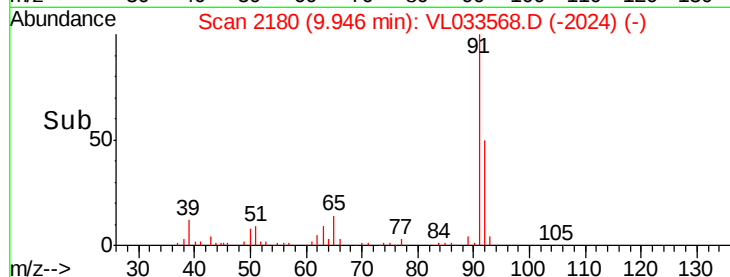
40000

20000

0

9.90 9.95 10.00

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

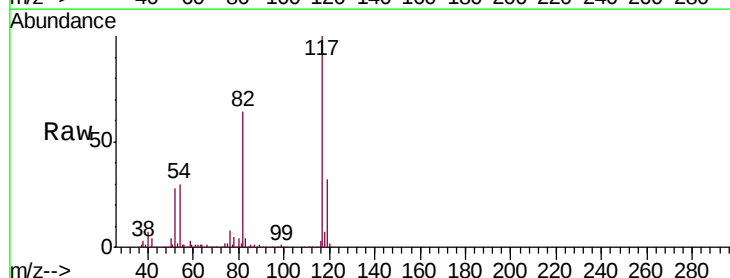
Tgt Ion: 117 Resp: 1918253

Ion Ratio Lower Upper

117 100

82 65.9 51.5 77.3

119 32.2 25.5 38.3



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

1200000

1000000

800000

600000

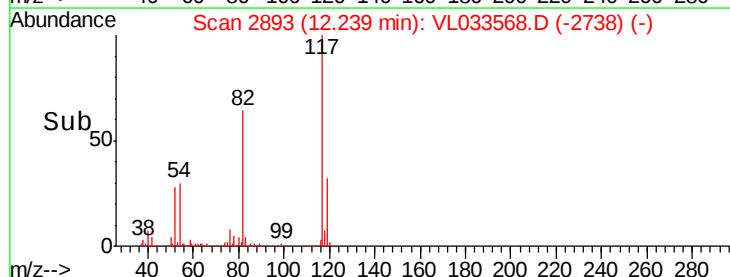
400000

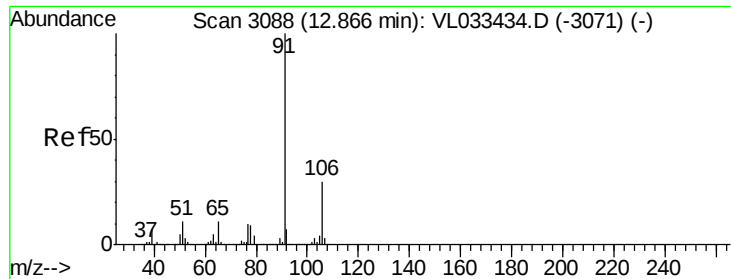
200000

0

12.20 12.24 12.30

Time-->





#58

Ethyl Benzene

Concen: 0.113 ppbv

RT: 13.12 min Scan# 3168

Delta R.T. 0.26 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

Instrument :

MSVOA_L

ClientSampleId :

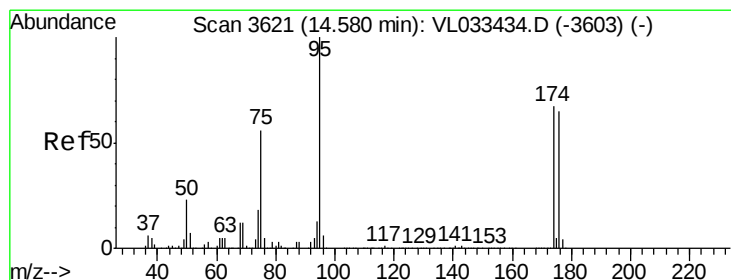
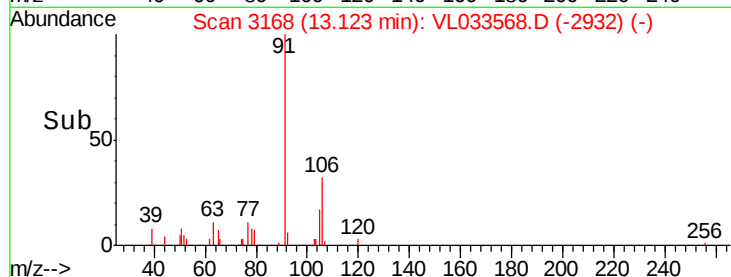
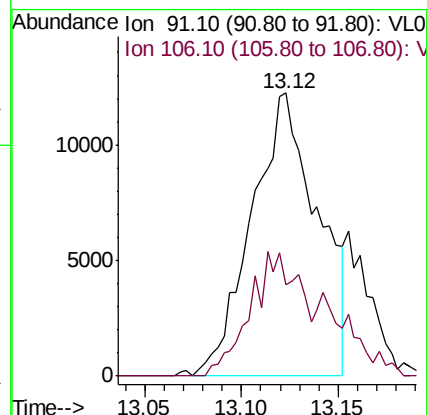
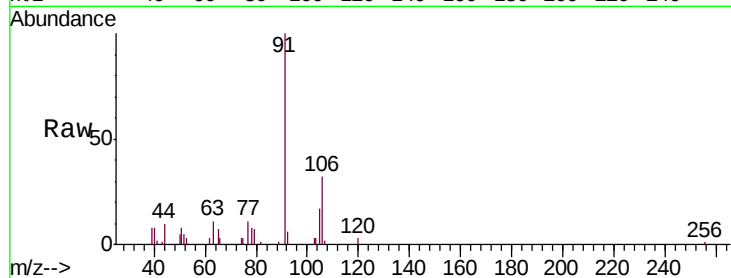
QA1

Tgt Ion: 91 Resp: 28971

Ion Ratio Lower Upper

91 100

106 33.9 23.8 35.6



#68

1-Bromo-4-Fluorobenzene

Concen: 10.106 ppbv

RT: 14.58 min Scan# 3620

Delta R.T. -0.00 min

Lab File: VL033568.D

Acq: 10 Apr 2019 17:38

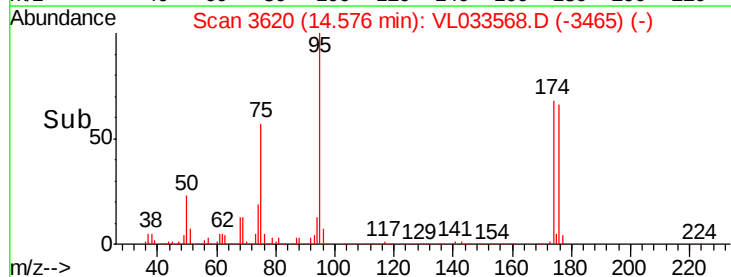
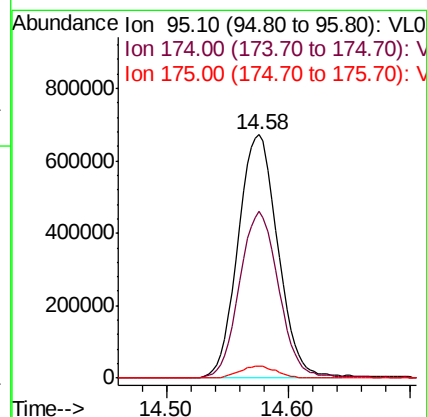
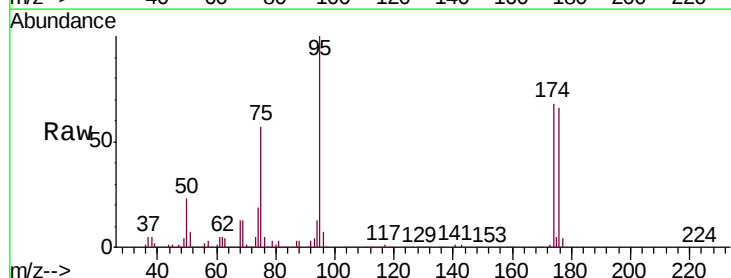
Tgt Ion: 95 Resp: 1519740

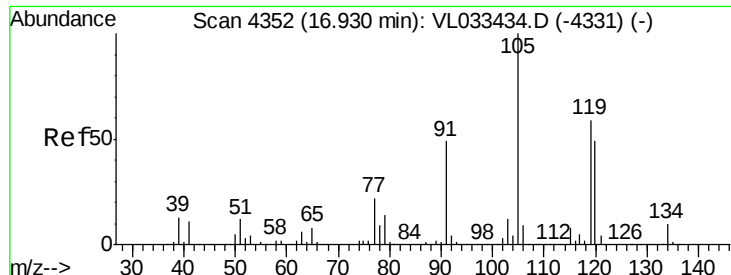
Ion Ratio Lower Upper

95 100

174 67.9 52.9 79.3

175 4.8 3.8 5.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.047 ppbv
 RT: 16.93 min Scan# 4351
 Delta R.T. -0.00 min
 Lab File: VL033568.D
 Acq: 10 Apr 2019 17:38

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Tgt Ion:	105	Resp:	11878
Ion	Ratio	Lower	Upper
105	100		
120	44.7	39.0	58.6
91	14.4	40.0	60.0#
77	12.0	17.5	26.3#

