

Data Path : W:\HPCHEM1\MSVOA_L\DATA\VL020916\
 Data File : VL026847.D
 Acq On : 10 Feb 2016 9:33
 Operator : SY/AP
 Sample : H1404-03
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA-1

Quant Time: Feb 10 10:36:41 2016
 Quant Method : W:\HPCHEM1\MSVOA_L\METHODS\VL020916AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Feb 10 03:14:04 2016
 QLast Update : Wed Feb 10 03:14:04 2016
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	49	1494260	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	8.36	114	4512824	10.00	ppbv	-0.02
55) Chlorobenzene-d5	13.79	117	2966800	10.00	ppbv	-0.01

System Monitoring Compounds

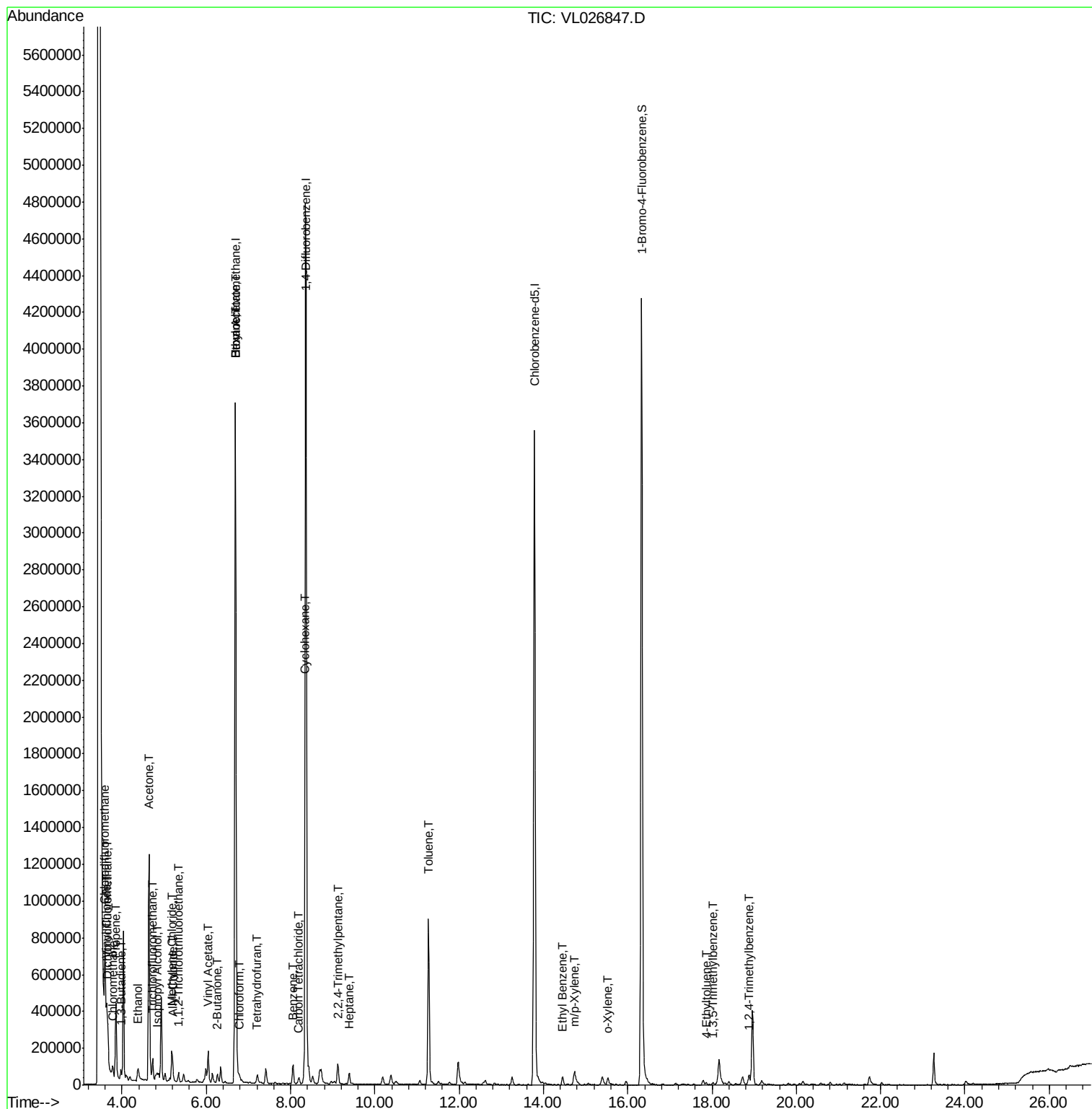
68) 1-Bromo-4-Fluorobenzene	16.33	95	2447653	11.49	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	114.90%

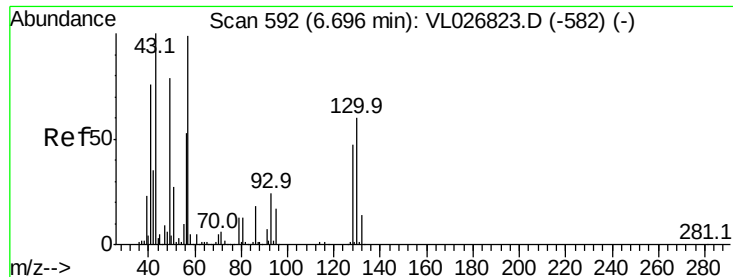
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.67	85	210606	0.65	ppbv	97
3) Chlorodifluoromethane	3.60	51	610943	2.52	ppbv	96
4) Chloromethane	3.78	50	63026	0.66	ppbv	96
5) Vinyl Chloride	3.63	62	3872	0.04	ppbv #	42
9) Propene	3.85	41	153233	2.34	ppbv	93
10) Heptane	9.40	43	25312	0.12	ppbv	98
11) Trichlorofluoromethane	4.73	101	105098	0.27	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	5.34	101	22960	0.08	ppbv	95
13) Ethanol	4.38	45	110658	9.82	ppbv	93
15) Acetone	4.64	43	1052487	5.13	ppbv	89
16) 1,3-Butadiene	3.98	39	18010	0.22	ppbv #	3
19) Isopropyl Alcohol	4.83	45	76749	1.05	ppbv #	92
20) Methylene Chloride	5.18	84	84690	0.80	ppbv	95
21) Allyl Chloride	5.21	41	11765	0.09	ppbv #	71
23) Vinyl Acetate	6.04	43	105164	0.38	ppbv #	51
25) Ethyl Acetate	6.70	43	279121	0.91	ppbv #	79
26) Hexane	6.70	57	426758	2.46	ppbv #	49
29) Chloroform	6.78	83	8760	0.03	ppbv	96
30) Cyclohexane	8.34	84	32455	0.23	ppbv #	1
34) 2-Butanone	6.26	43	65380	0.30	ppbv	93
35) Carbon Tetrachloride	8.20	117	24766	0.08	ppbv	87
36) Benzene	8.06	78	106475	0.30	ppbv	97
41) Tetrahydrofuran	7.21	42	35933	0.33	ppbv	97
44) 2,2,4-Trimethylpentane	9.12	57	90596	0.15	ppbv #	67
53) Toluene	11.27	91	851279	2.11	ppbv	100
58) Ethyl Benzene	14.46	91	48090	0.13	ppbv	91
59) m/p-Xylene	14.73	91	93919	0.31	ppbv	98
60) o-Xylene	15.53	91	36467	0.11	ppbv	99
72) 4-Ethyltoluene	17.86	105	14546	0.05	ppbv	96
73) 1,3,5-Trimethylbenzene	18.03	105	12474	0.04	ppbv	95
74) 1,2,4-Trimethylbenzene	18.88	105	50622	0.15	ppbv #	65

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

```
Data Path : W:\HPCHEM1\MSVOA_L\DATA\VL020916\  
Data File : VL026847.D  
Acq On    : 10 Feb 2016    9:33  
Operator  : SY/AP  
Sample    : H1404-03  
Misc      : 400mL/MSVOA_L  
ALS Vial  : 1    Sample Multiplier: 1
```

Quant Time: Feb 10 10:36:41 2016
Quant Method : W:\HPCHEM1\MSVOA_L\METHODS\VL020916AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 10 03:14:04 2016
QLast Update : Wed Feb 10 03:14:04 2016
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.69 min Scan# 591

Delta R.T. -0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampled :

OA-1

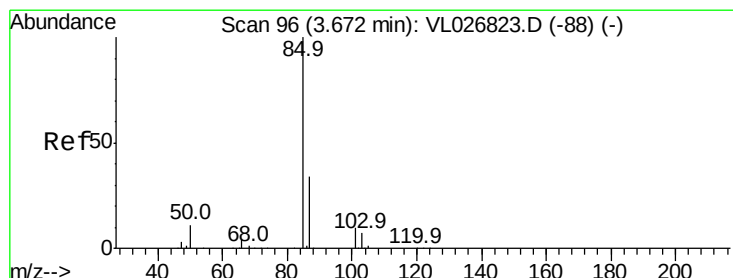
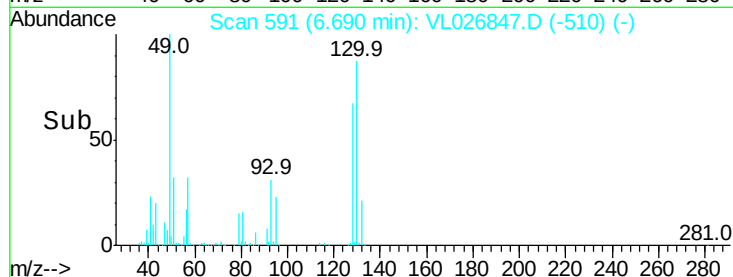
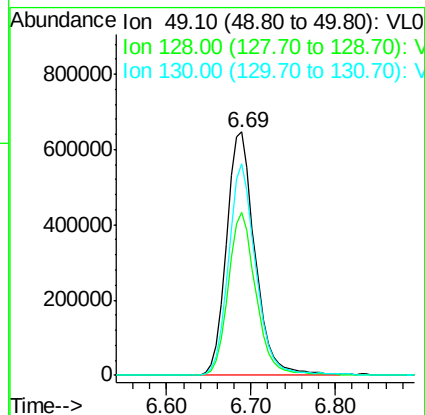
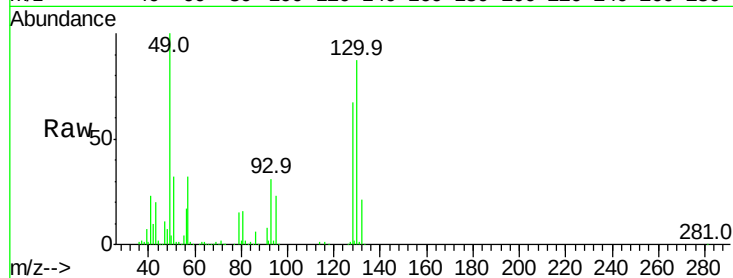
Tgt Ion: 49 Resp: 1494260

Ion Ratio Lower Upper

49 100

128 65.2 29.7 89.1

130 84.5 38.3 114.8



#2

Dichlorodifluoromethane

Concen: 0.65 ppbv

RT: 3.67 min Scan# 95

Delta R.T. -0.01 min

Lab File: VL026847.D

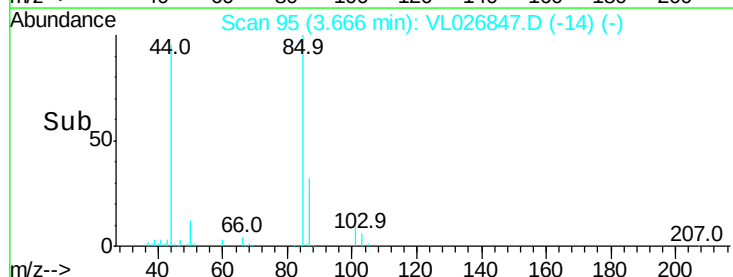
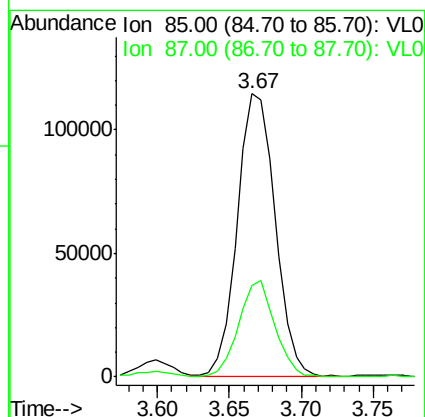
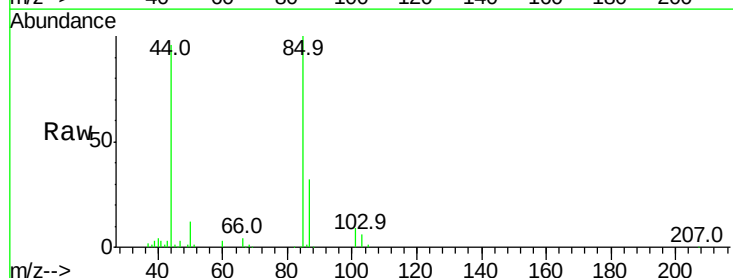
Acq: 10 Feb 2016 9:33

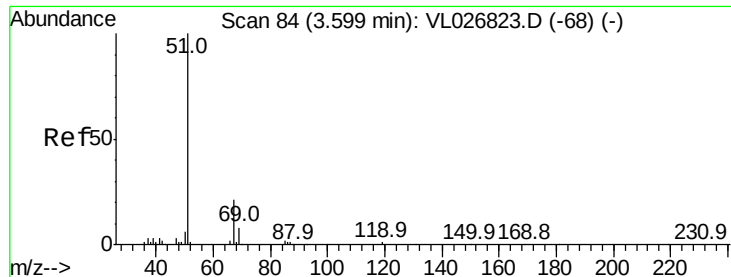
Tgt Ion: 85 Resp: 210606

Ion Ratio Lower Upper

85 100

87 32.5 27.3 40.9





#3

Chlorodifluoromethane

Concen: 2.52 ppbv

RT: 3.60 min Scan# 84

Delta R.T. -0.00 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

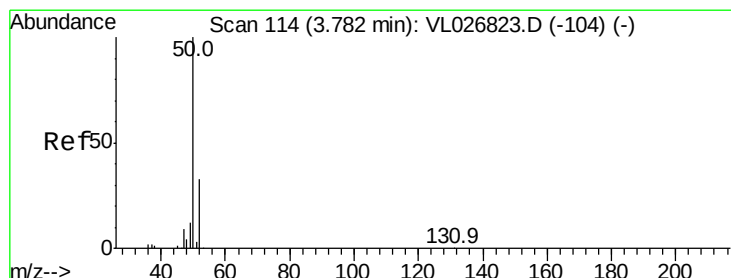
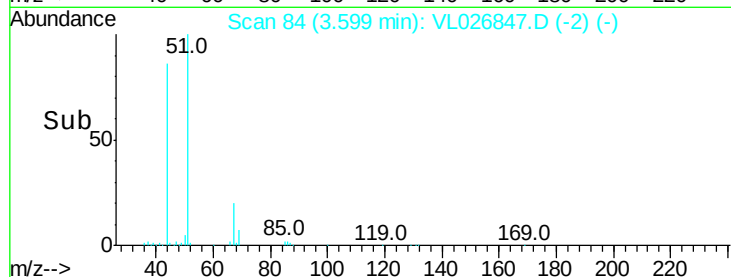
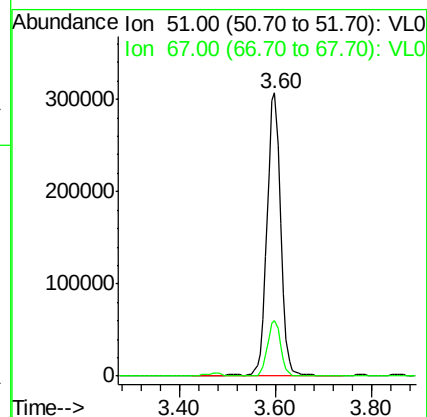
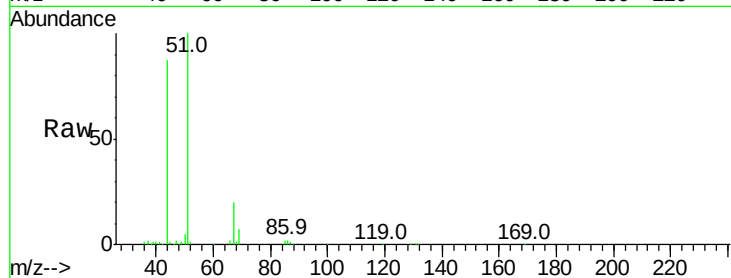
QA-1

Tgt Ion: 51 Resp: 610943

Ion Ratio Lower Upper

51 100

67 18.8 16.4 24.6



#4

Chloromethane

Concen: 0.66 ppbv

RT: 3.78 min Scan# 114

Delta R.T. -0.00 min

Lab File: VL026847.D

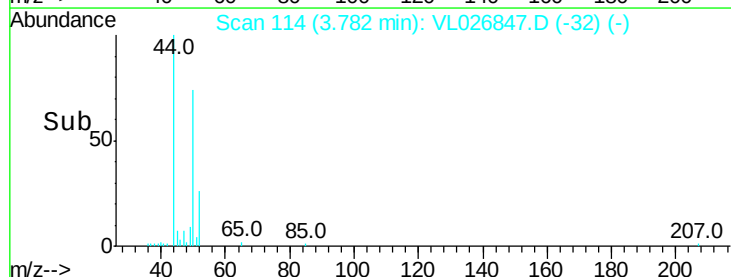
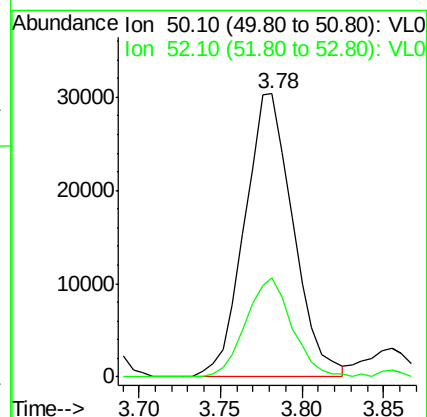
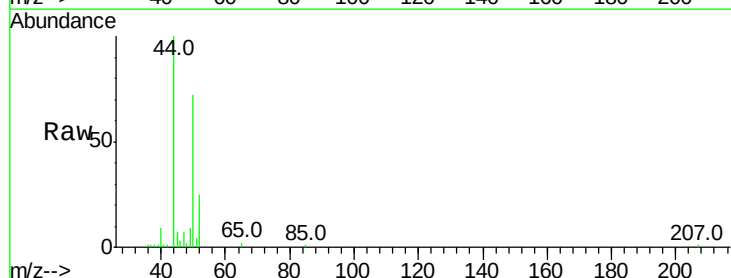
Acq: 10 Feb 2016 9:33

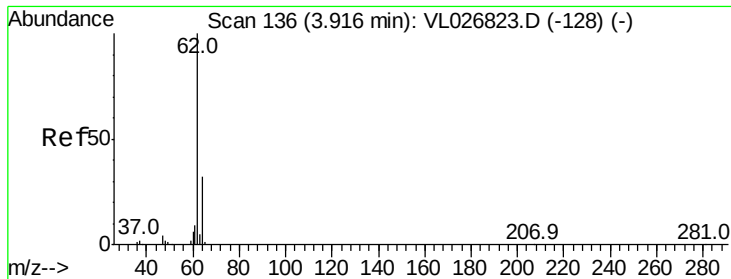
Tgt Ion: 50 Resp: 63026

Ion Ratio Lower Upper

50 100

52 35.1 26.3 39.5





#5

Vinyl Chloride

Concen: 0.04 ppbv

RT: 3.63 min Scan# 89

Delta R.T. -0.29 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

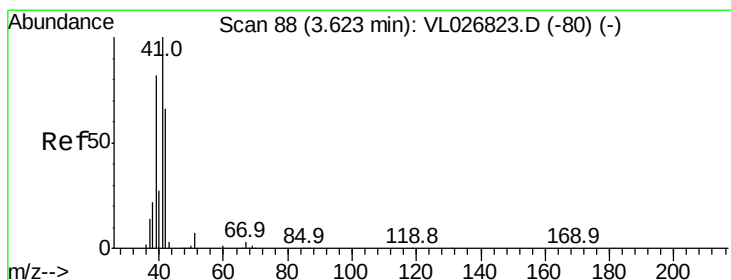
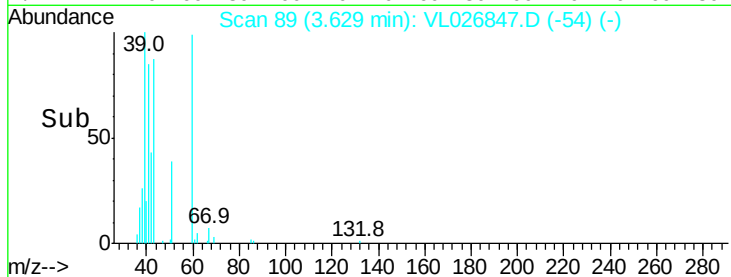
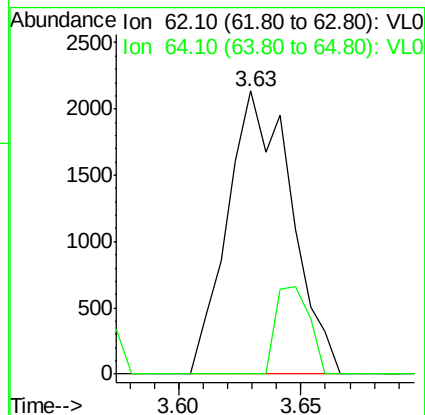
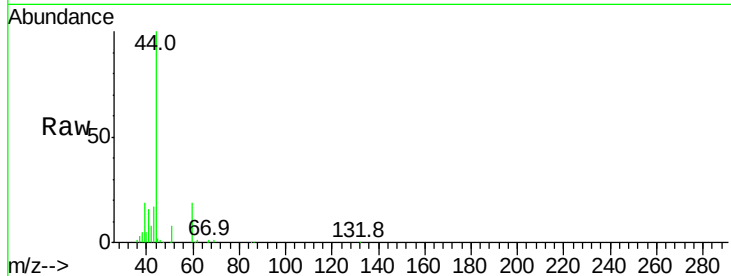
OA-1

Tgt Ion: 62 Resp: 3872

Ion Ratio Lower Upper

62 100

64 0.0 25.8 38.6#



#9

Propene

Concen: 2.34 ppbv

RT: 3.85 min Scan# 126

Delta R.T. 0.23 min

Lab File: VL026847.D

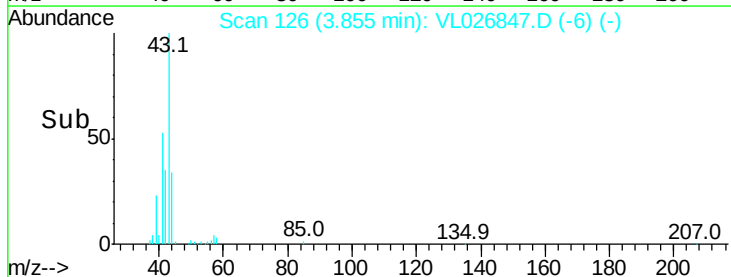
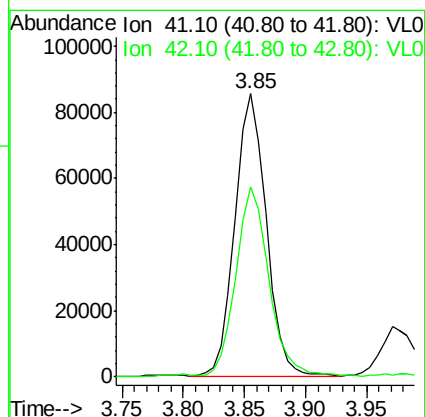
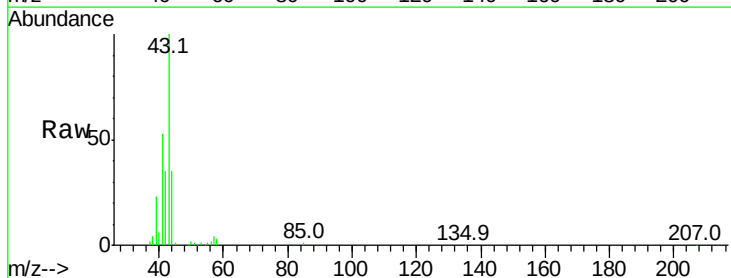
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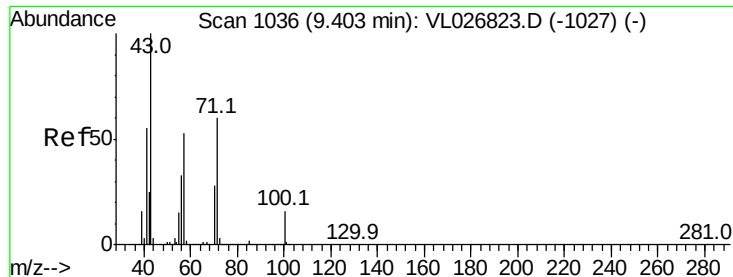
Tgt Ion: 41 Resp: 153233

Ion Ratio Lower Upper

41 100

42 71.9 52.8 79.2





#10

Heptane

Concen: 0.12 ppbv

RT: 9.40 min Scan# 1035

Delta R.T. -0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

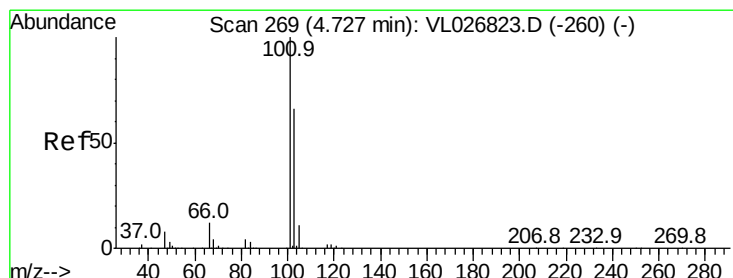
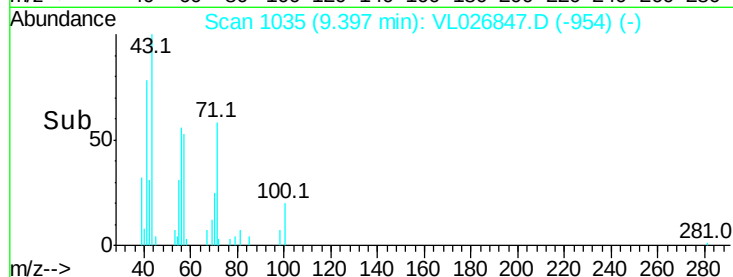
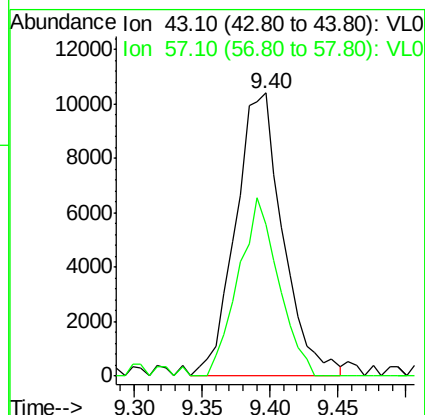
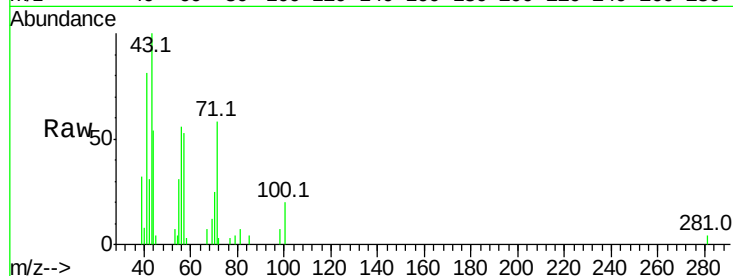
QA-1

Tgt Ion: 43 Resp: 25312

Ion Ratio Lower Upper

43 100

57 56.5 44.0 66.0



#11

Trichlorofluoromethane

Concen: 0.27 ppbv

RT: 4.73 min Scan# 269

Delta R.T. -0.00 min

Lab File: VL026847.D

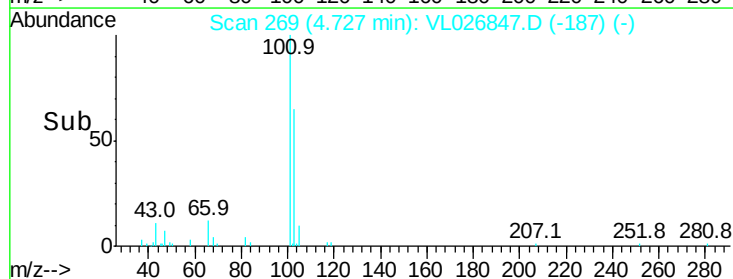
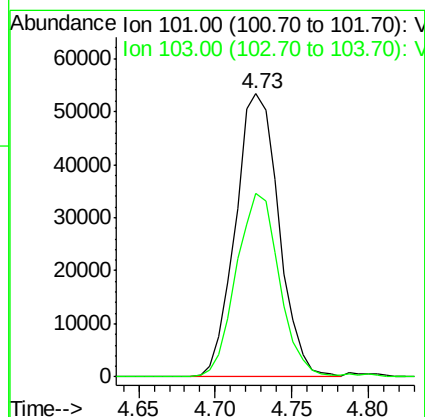
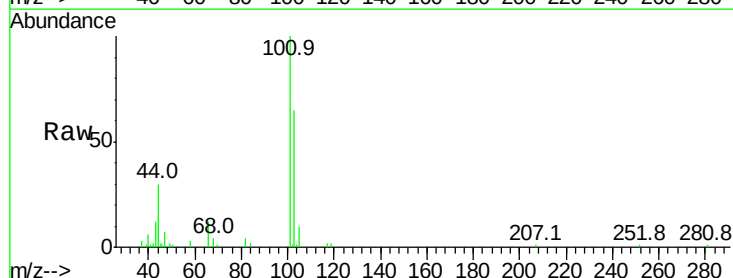
Acq: 10 Feb 2016 9:33

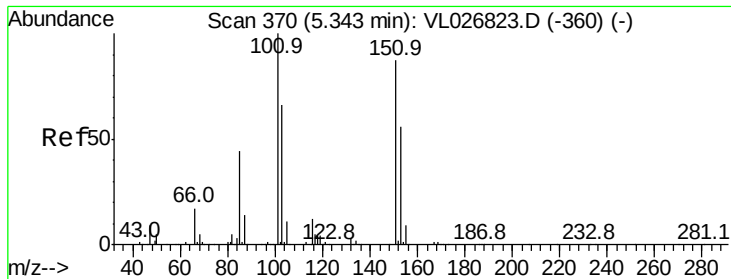
Tgt Ion: 101 Resp: 105098

Ion Ratio Lower Upper

101 100

103 64.9 52.7 79.1

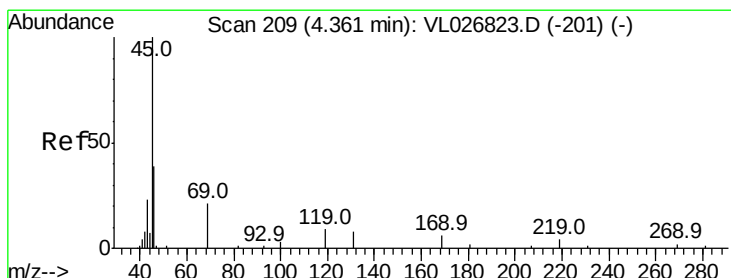
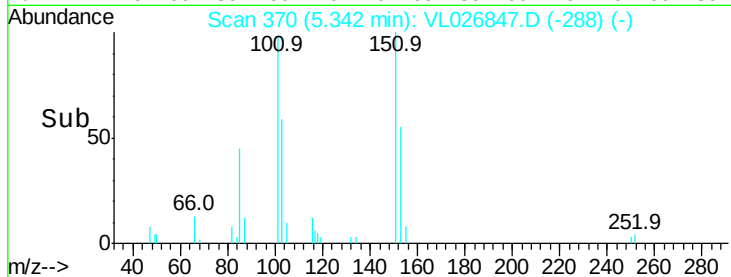
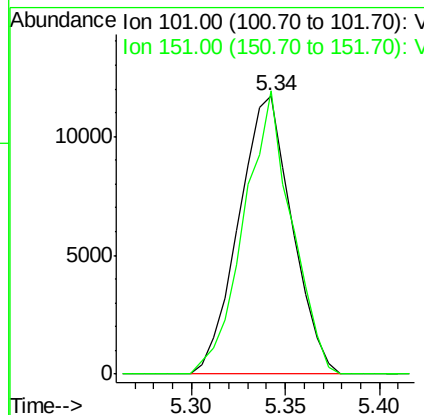
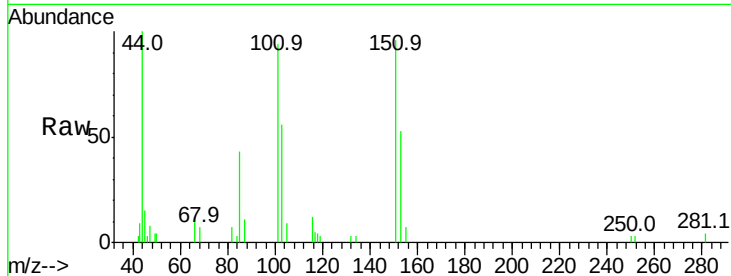




#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.08 ppbv
 RT: 5.34 min Scan# 370
 Delta R.T. -0.00 min
 Lab File: VL026847.D
 Acq: 10 Feb 2016 9:33

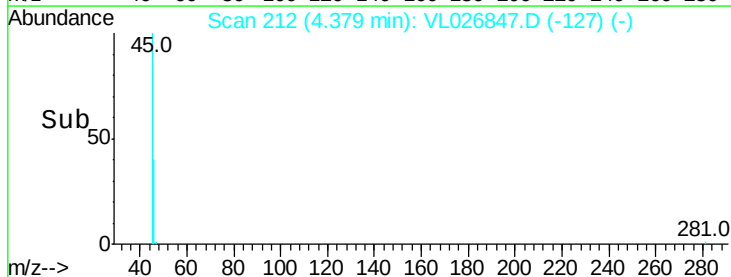
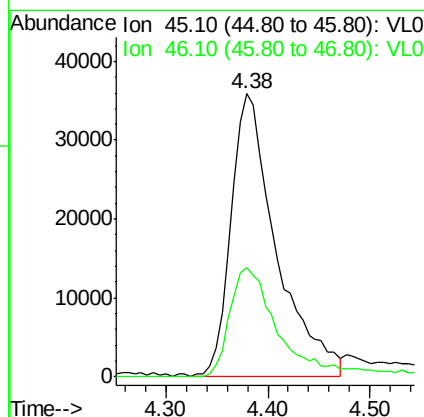
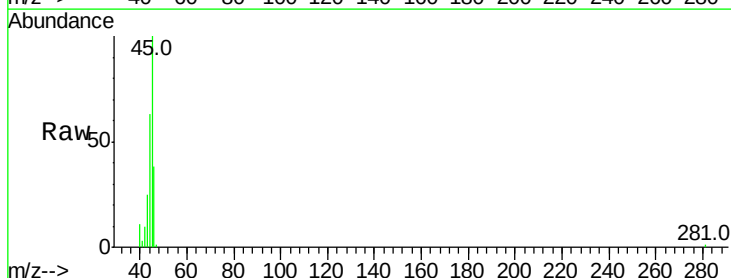
Instrument :
 MSVOA_L
 ClientSampleId :
 OA-1

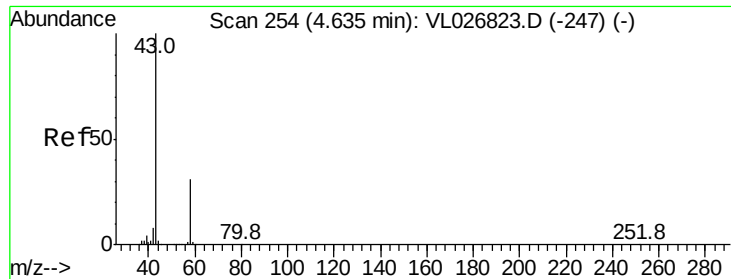
Tgt Ion: 101 Resp: 22960
 Ion Ratio Lower Upper
 101 100
 151 91.4 69.4 104.0



#13
 Ethanol
 Concen: 9.82 ppbv
 RT: 4.38 min Scan# 212
 Delta R.T. 0.02 min
 Lab File: VL026847.D
 Acq: 10 Feb 2016 9:33

Tgt Ion: 45 Resp: 110658
 Ion Ratio Lower Upper
 45 100
 46 44.0 15.8 63.4





#15

Acetone

Concen: 5.13 ppbv

RT: 4.64 min Scan# 255

Delta R.T. 0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

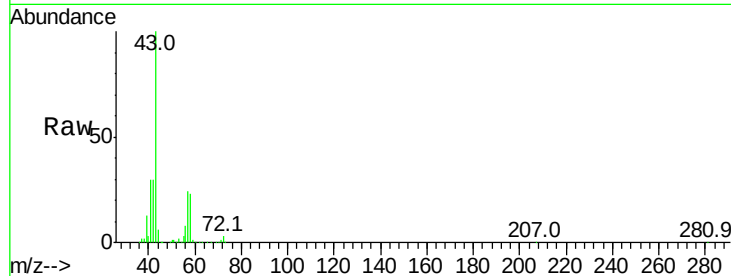
OA-1

Tgt Ion: 43 Resp: 1052487

Ion Ratio Lower Upper

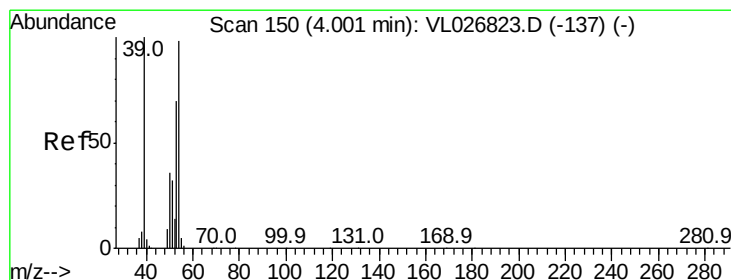
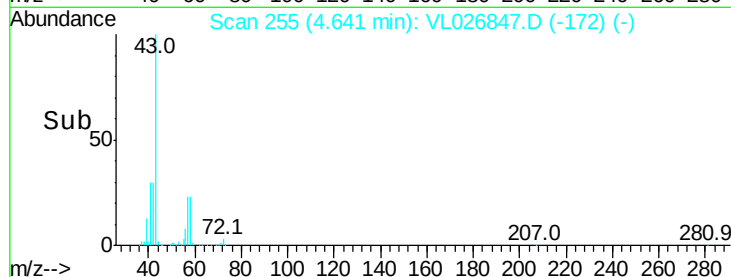
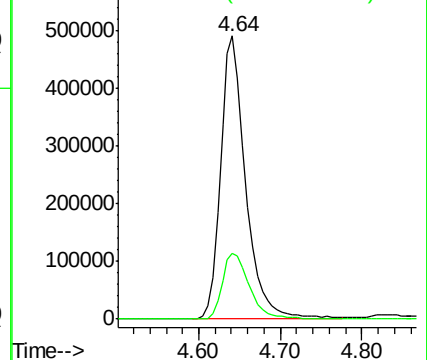
43 100

58 25.4 25.2 37.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.22 ppbv

RT: 3.98 min Scan# 146

Delta R.T. -0.02 min

Lab File: VL026847.D

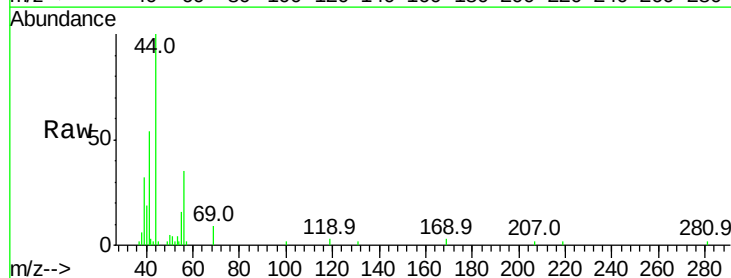
Acq: 10 Feb 2016 9:33

Tgt Ion: 39 Resp: 18010

Ion Ratio Lower Upper

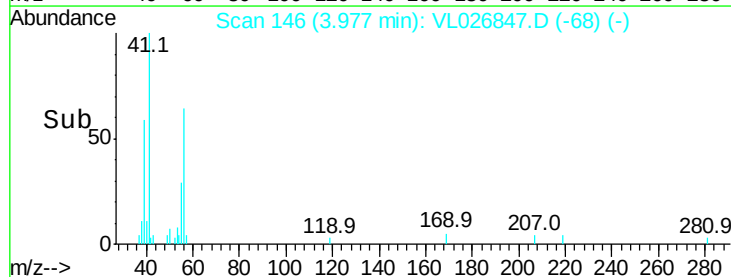
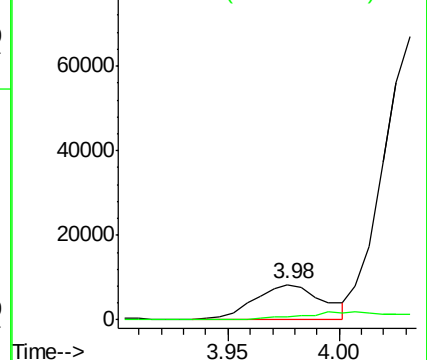
39 100

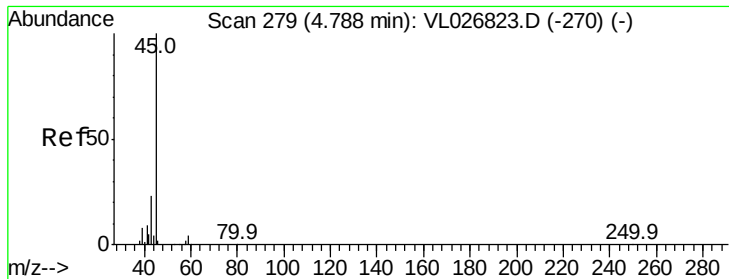
54 0.0 74.7 112.1#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#19

Isopropyl Alcohol

Concen: 1.05 ppbv

RT: 4.83 min Scan# 286

Delta R.T. 0.04 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

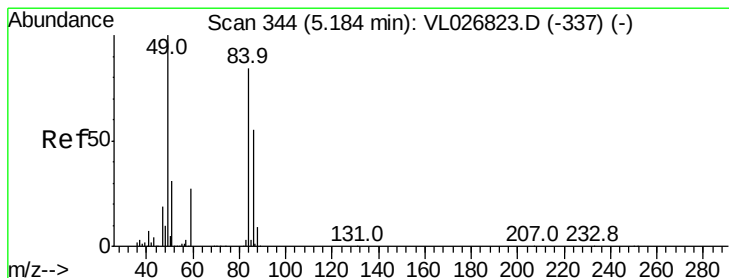
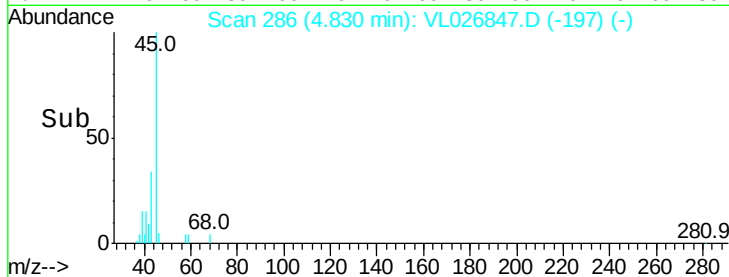
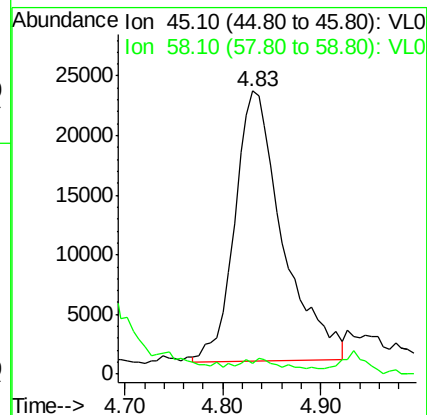
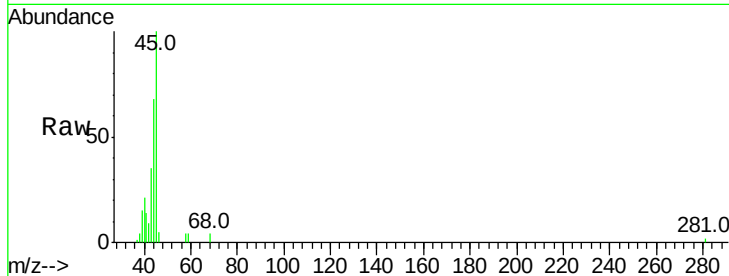
OA-1

Tgt Ion: 45 Resp: 76749

Ion Ratio Lower Upper

45 100

58 0.0 2.2 3.2#



#20

Methylene Chloride

Concen: 0.80 ppbv

RT: 5.18 min Scan# 344

Delta R.T. -0.00 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Tgt Ion: 84 Resp: 84690

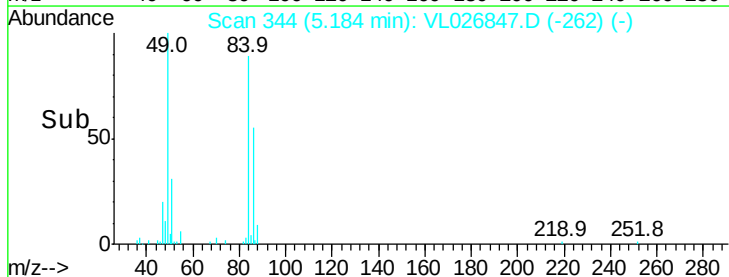
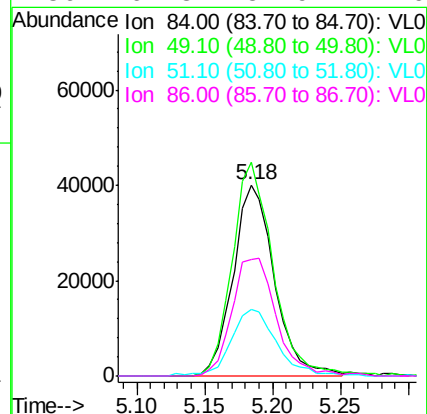
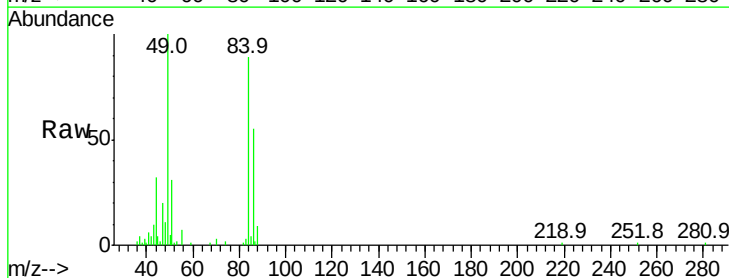
Ion Ratio Lower Upper

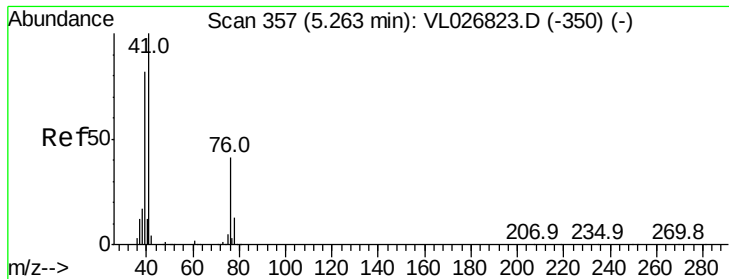
84 100

49 111.9 94.9 142.3

51 34.3 29.5 44.3

86 61.3 51.9 77.9

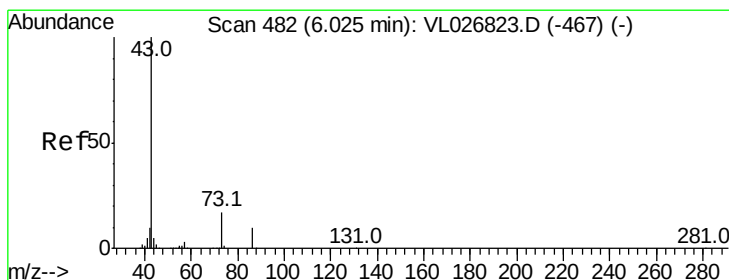
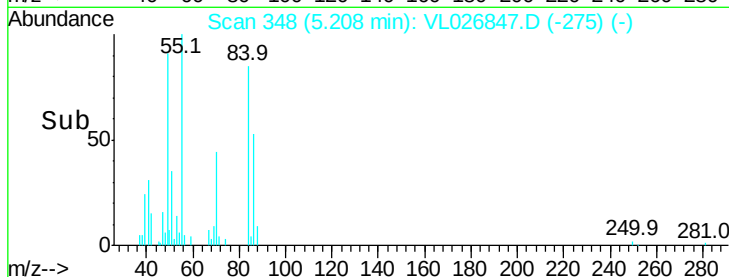
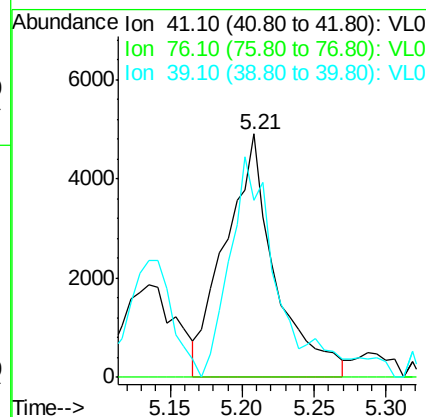
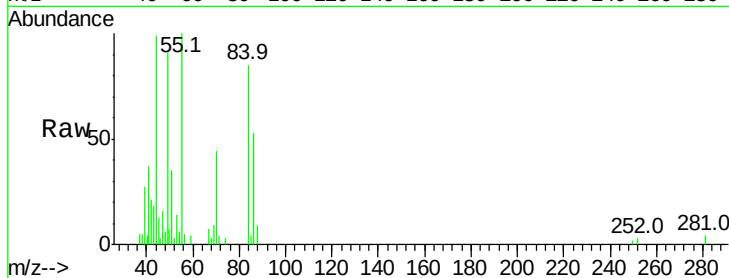




#21
 Allyl Chloride
 Concen: 0.09 ppbv
 RT: 5.21 min Scan# 348
 Delta R.T. -0.05 min
 Lab File: VL026847.D
 Acq: 10 Feb 2016 9:33

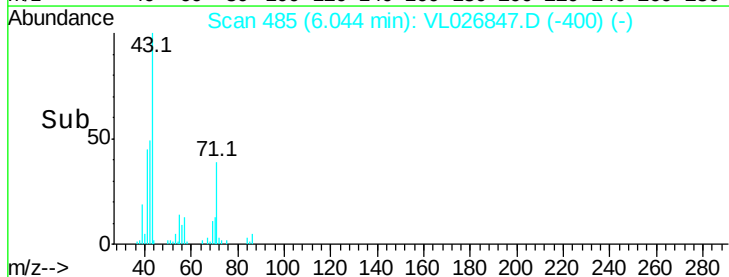
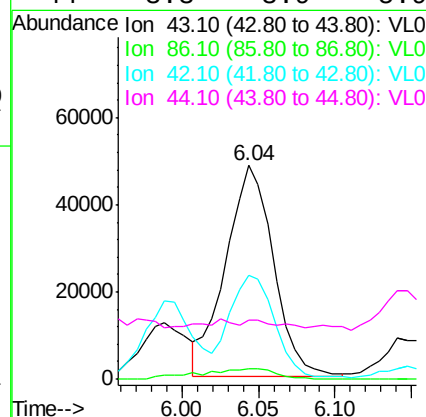
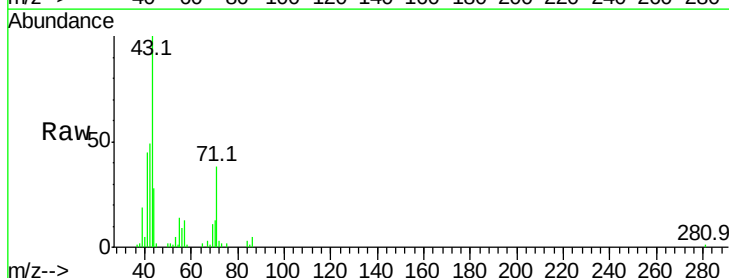
Instrument :
 MSVOA_L
 ClientSampleId :
 OA-1

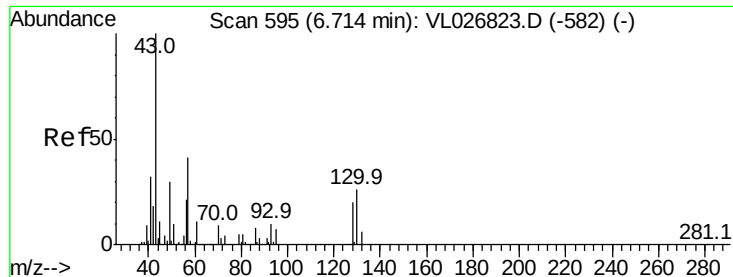
Tgt Ion: 41 Resp: 11765
 Ion Ratio Lower Upper
 41 100
 76 0.0 32.0 48.0#
 39 91.1 64.6 96.8



#23
 Vinyl Acetate
 Concen: 0.38 ppbv
 RT: 6.04 min Scan# 485
 Delta R.T. 0.02 min
 Lab File: VL026847.D
 Acq: 10 Feb 2016 9:33

Tgt Ion: 43 Resp: 105164
 Ion Ratio Lower Upper
 43 100
 86 4.8 7.7 11.5#
 42 48.6 7.8 11.8#
 44 3.3 3.9 5.9#

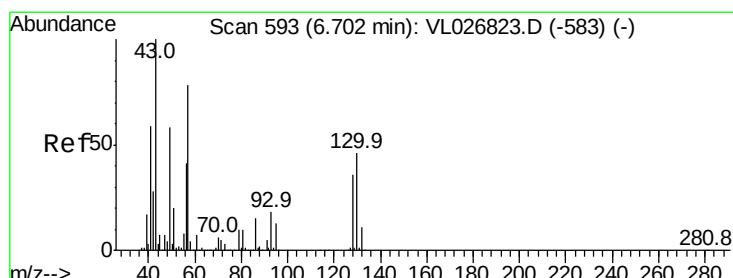
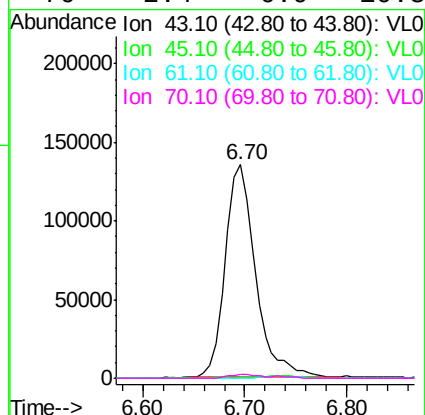
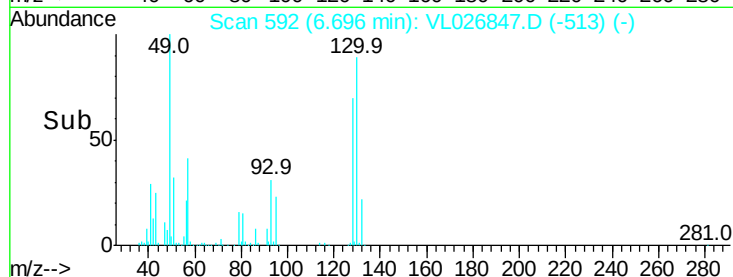
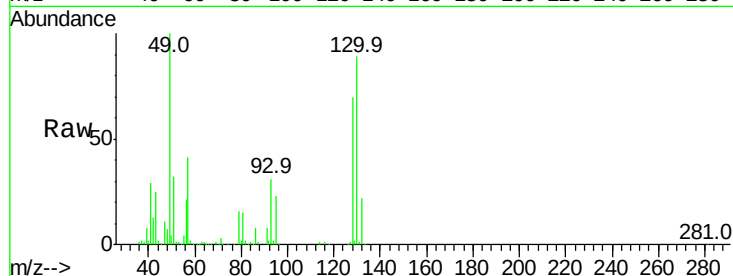




#25
Ethyl Acetate
Concen: 0.91 ppbv
RT: 6.70 min Scan# 592
Delta R.T. -0.02 min
Lab File: VL026847.D
Acq: 10 Feb 2016 9:33

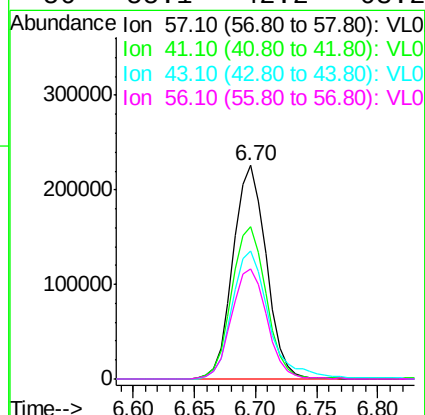
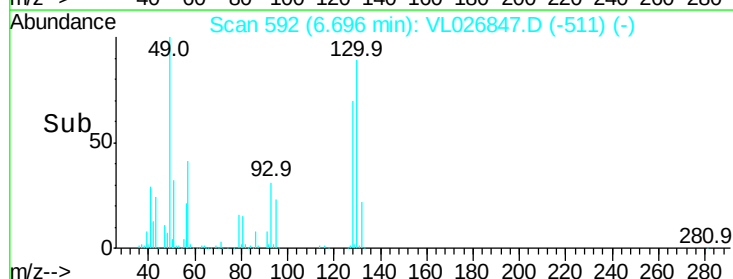
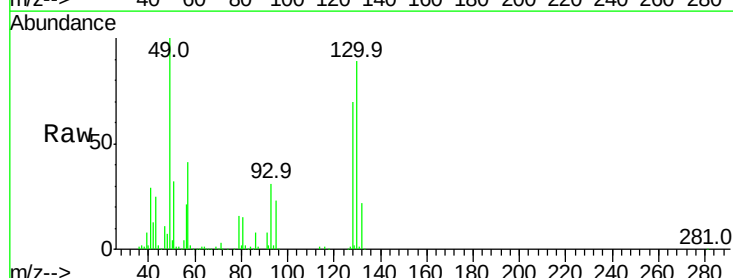
Instrument :
MSVOA_L
ClientSampleId :
OA-1

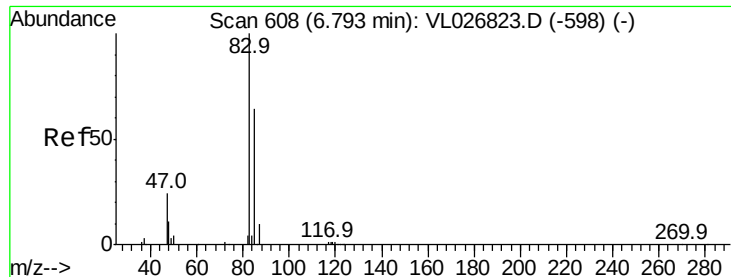
Tgt Ion	Ratio	Lower	Upper
43	100		
45	2.3	7.8	11.8#
61	1.1	7.9	11.9#
70	2.4	6.9	10.3#



#26
Hexane
Concen: 2.46 ppbv
RT: 6.70 min Scan# 592
Delta R.T. -0.01 min
Lab File: VL026847.D
Acq: 10 Feb 2016 9:33

Tgt Ion	Ratio	Lower	Upper
57	100		
41	74.7	63.3	94.9
43	67.7	151.4	227.2#
56	55.1	42.2	63.2

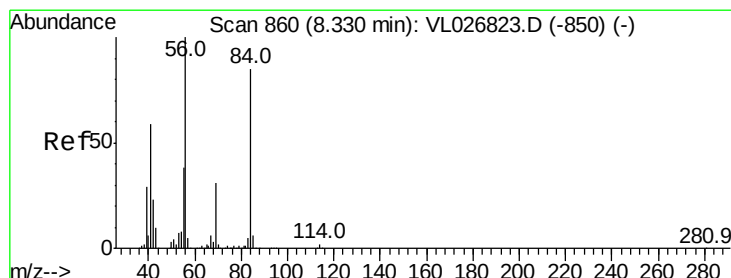
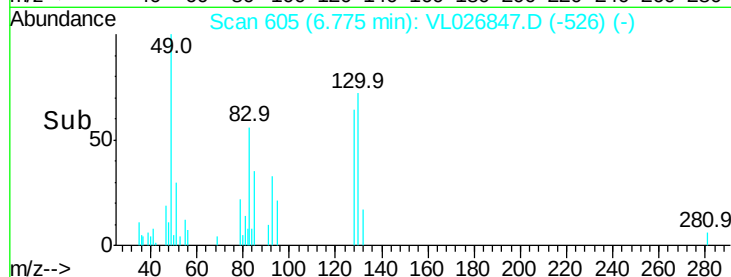
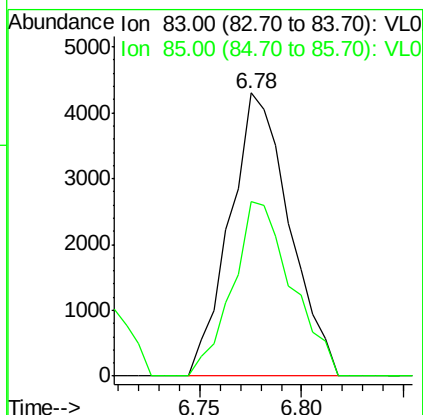
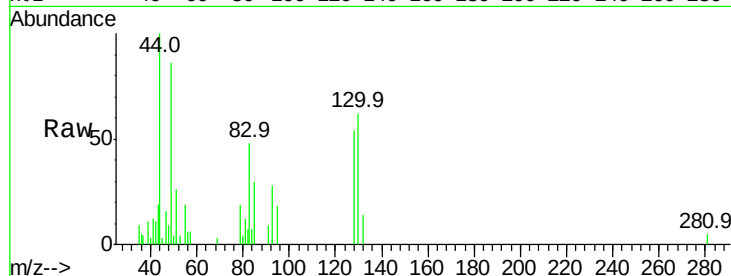




#29
Chloroform
Concen: 0.03 ppbv
RT: 6.78 min Scan# 605
Delta R.T. -0.02 min
Lab File: VL026847.D
Acq: 10 Feb 2016 9:33

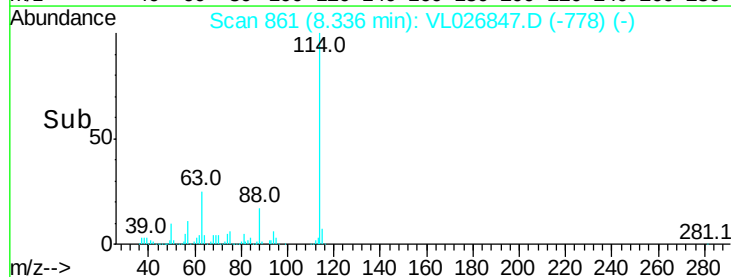
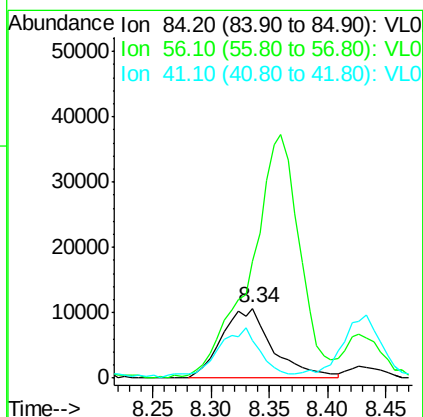
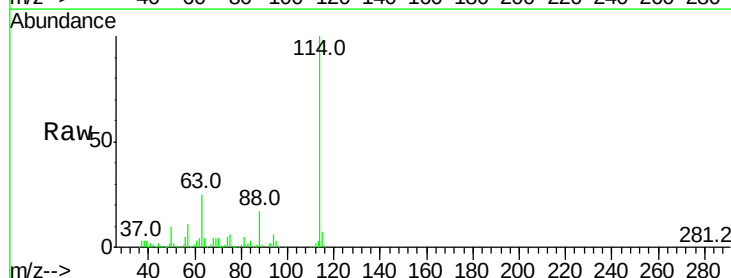
Instrument :
MSVOA_L
ClientSampleId :
OA-1

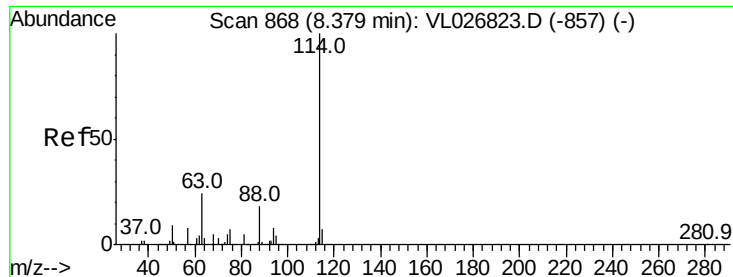
Tgt Ion: 83 Resp: 8760
Ion Ratio Lower Upper
83 100
85 61.6 51.5 77.3



#30
Cyclohexane
Concen: 0.23 ppbv
RT: 8.34 min Scan# 861
Delta R.T. 0.01 min
Lab File: VL026847.D
Acq: 10 Feb 2016 9:33

Tgt Ion: 84 Resp: 32455
Ion Ratio Lower Upper
84 100
56 340.5 99.4 149.2#
41 59.5 56.7 85.1

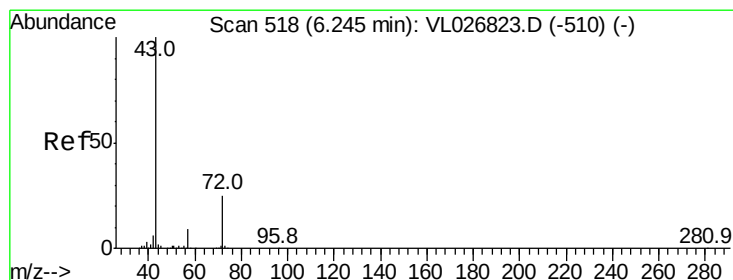
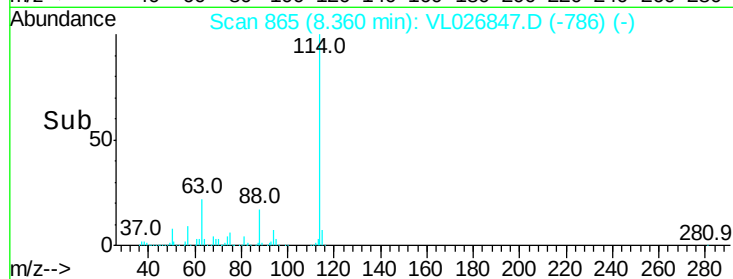
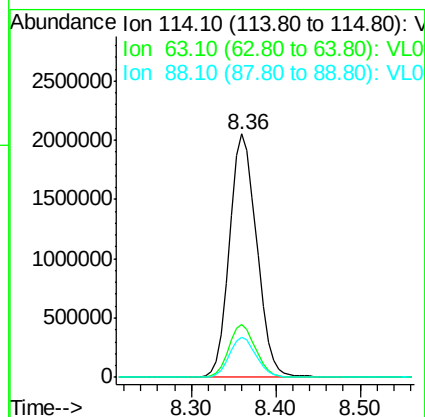
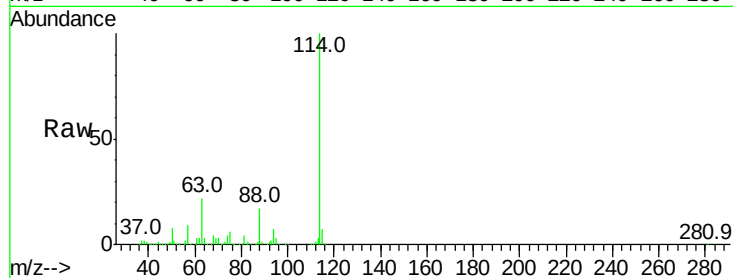




#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 8.36 min Scan# 865
 Delta R.T. -0.02 min
 Lab File: VL026847.D
 Acq: 10 Feb 2016 9:33

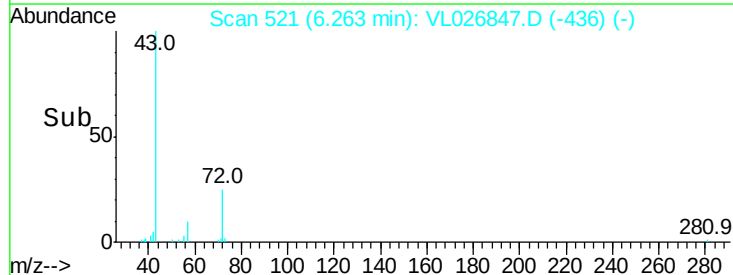
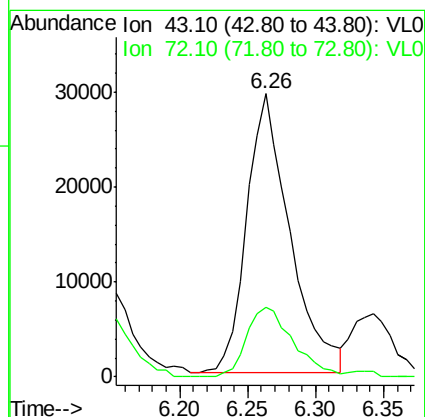
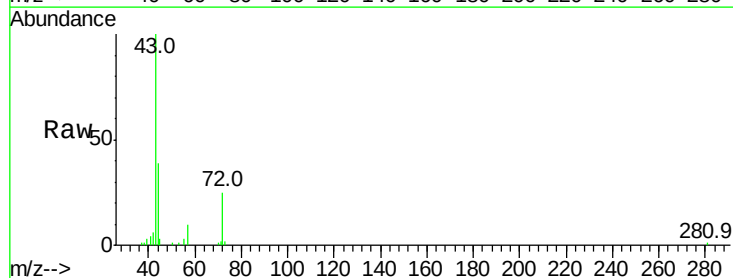
Instrument :
 MSVOA_L
 ClientSampleId :
 OA-1

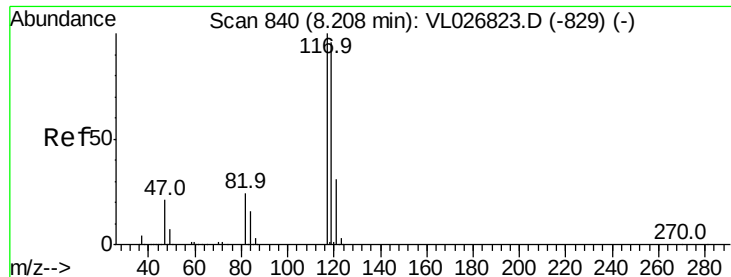
Tgt Ion:114 Resp: 4512824
 Ion Ratio Lower Upper
 114 100
 63 21.7 19.7 29.5
 88 16.4 13.8 20.6



#34
 2-Butanone
 Concen: 0.30 ppbv
 RT: 6.26 min Scan# 521
 Delta R.T. 0.02 min
 Lab File: VL026847.D
 Acq: 10 Feb 2016 9:33

Tgt Ion: 43 Resp: 65380
 Ion Ratio Lower Upper
 43 100
 72 28.1 19.8 29.8





#35

Carbon Tetrachloride

Concen: 0.08 ppbv

RT: 8.20 min Scan# 839

Delta R.T. -0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

OA-1

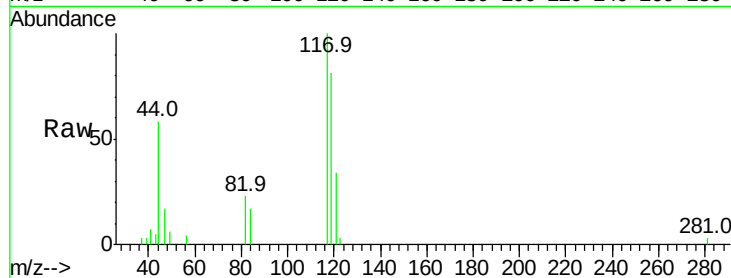
Tgt Ion: 117 Resp: 24766

Ion Ratio Lower Upper

117 100

119 80.8 76.6 115.0

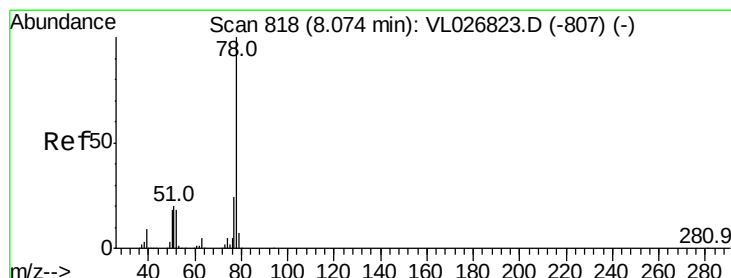
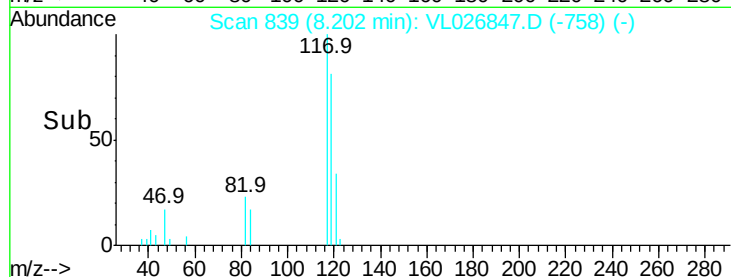
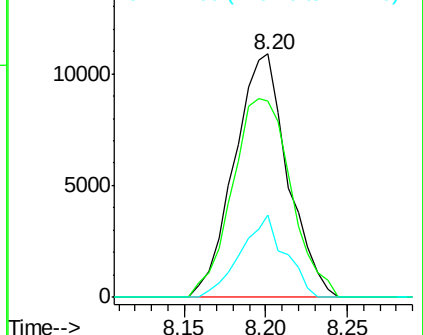
121 33.8 25.0 37.4



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: 0.30 ppbv

RT: 8.06 min Scan# 815

Delta R.T. -0.02 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

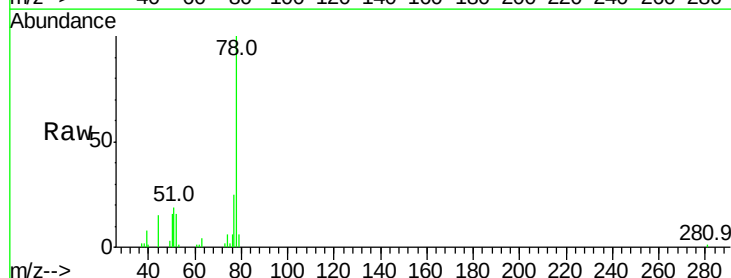
Tgt Ion: 78 Resp: 106475

Ion Ratio Lower Upper

78 100

77 25.1 19.0 28.6

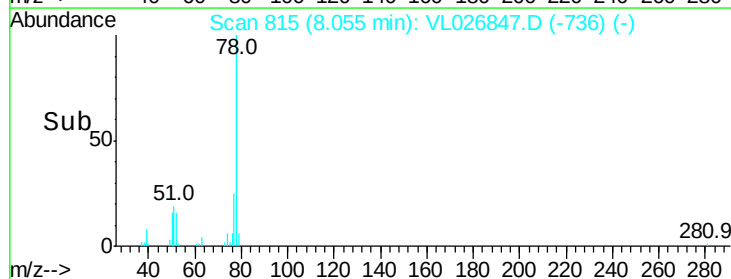
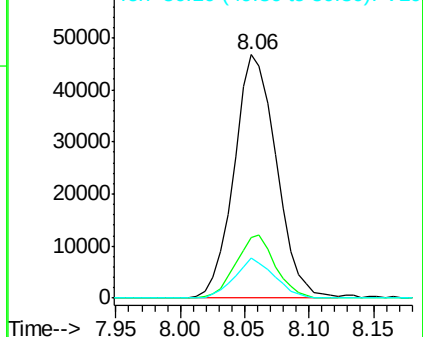
50 16.4 14.2 21.4

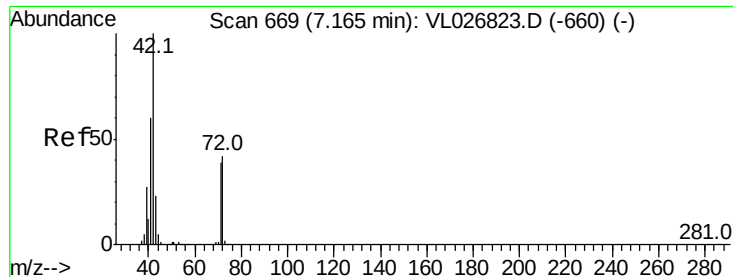


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#41

Tetrahydrofuran

Concen: 0.33 ppbv

RT: 7.21 min Scan# 676

Delta R.T. 0.04 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

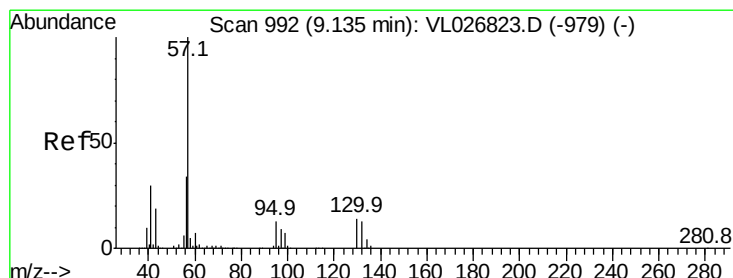
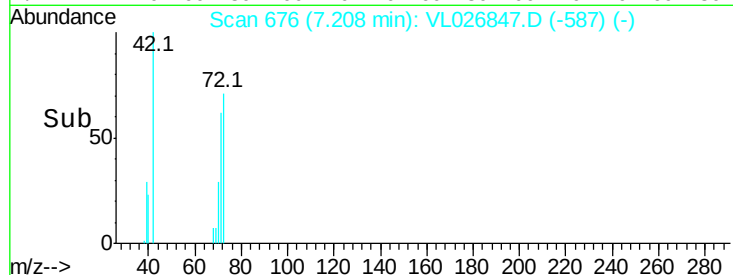
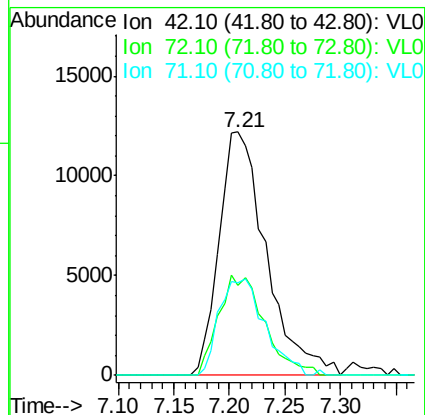
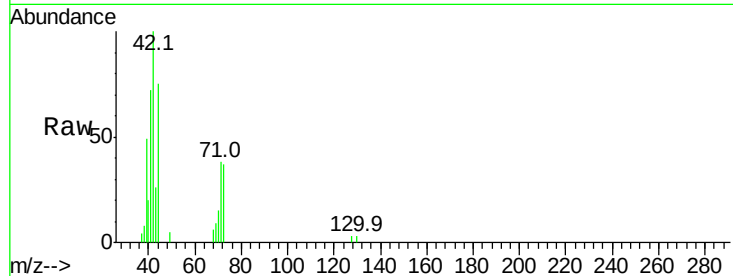
Instrument :

MSVOA_L

ClientSampleId :

QA-1

Tgt Ion:	42	Resp:	35933
Ion	Ratio	Lower	Upper
42	100		
72	40.0	33.4	50.0
71	38.6	32.1	48.1



#44

2,2,4-Trimethylpentane

Concen: 0.15 ppbv

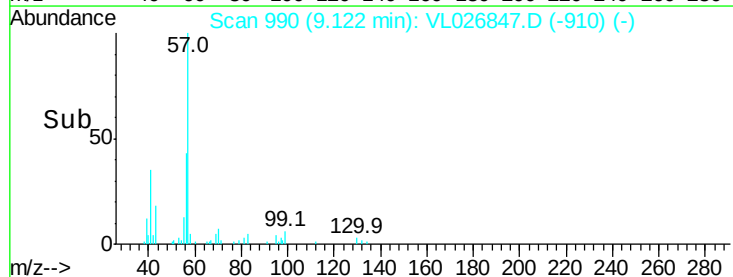
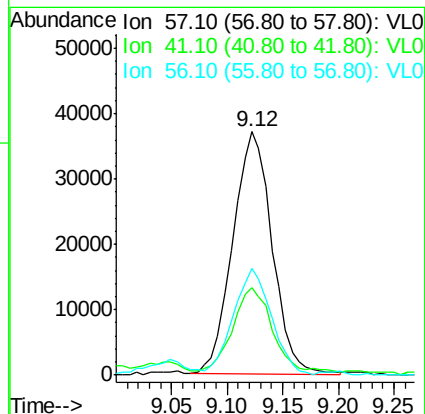
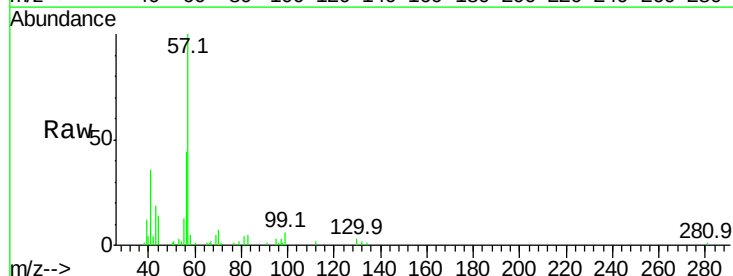
RT: 9.12 min Scan# 990

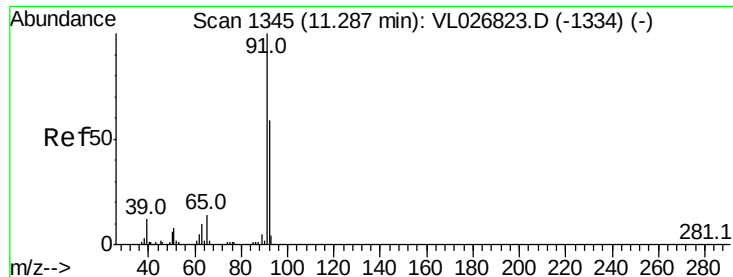
Delta R.T. -0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Tgt Ion:	57	Resp:	90596
Ion	Ratio	Lower	Upper
57	100		
41	48.3	23.2	34.8#
56	50.3	26.2	39.4#





#53

Toluene

Concen: 2.11 ppbv

RT: 11.27 min Scan# 1343

Delta R.T. -0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

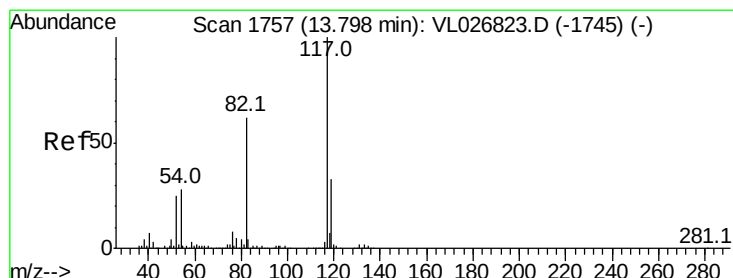
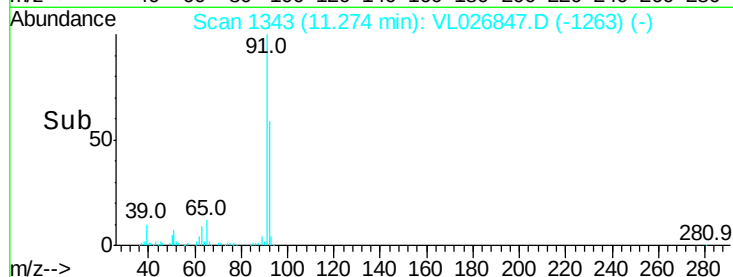
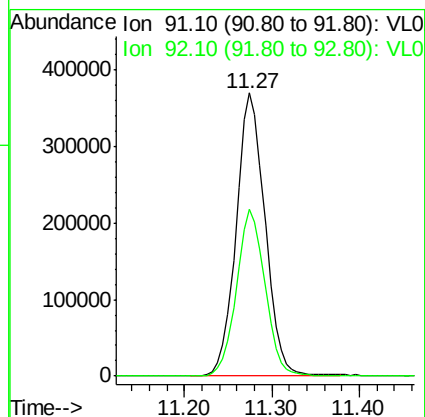
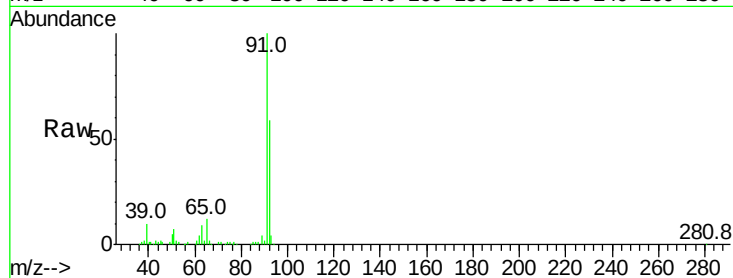
OA-1

Tgt Ion: 91 Resp: 851279

Ion Ratio Lower Upper

91 100

92 58.8 47.3 70.9



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 13.79 min Scan# 1755

Delta R.T. -0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

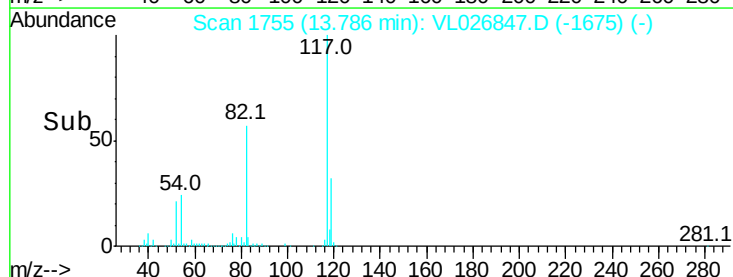
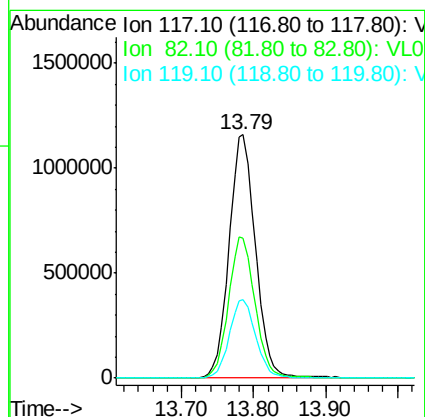
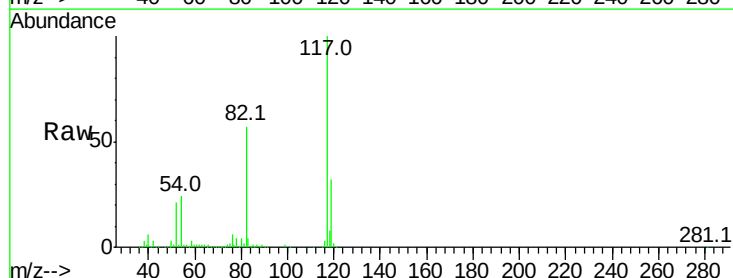
Tgt Ion: 117 Resp: 2966800

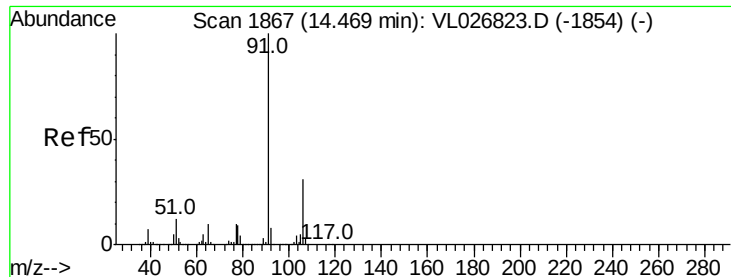
Ion Ratio Lower Upper

117 100

82 58.6 51.9 77.9

119 32.6 48.5 72.7#





#58

Ethyl Benzene

Concen: 0.13 ppbv

RT: 14.46 min Scan# 1865

Delta R.T. -0.01 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

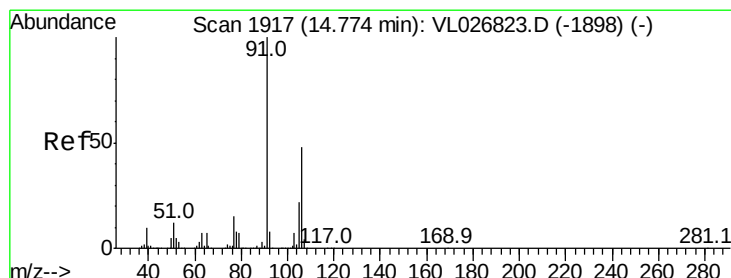
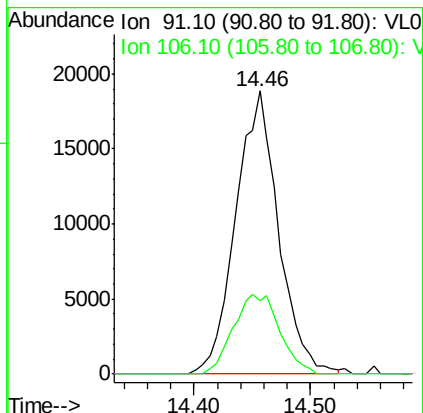
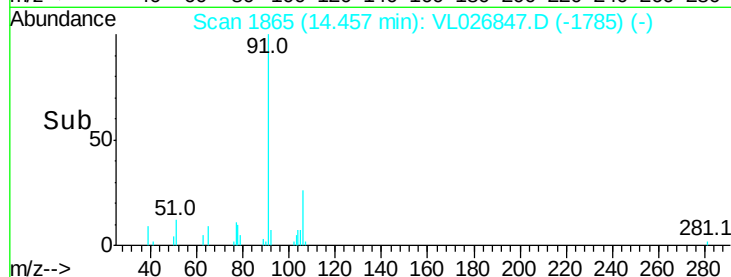
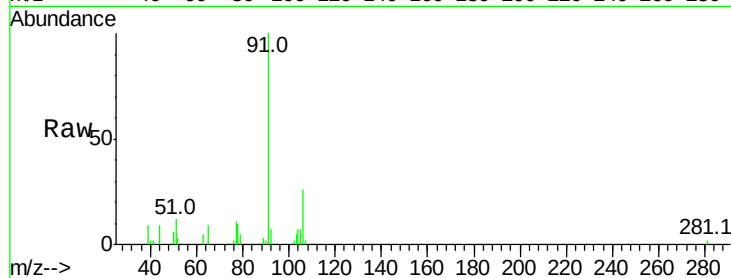
OA-1

Tgt Ion: 91 Resp: 48090

Ion Ratio Lower Upper

91 100

106 26.1 24.9 37.3



#59

m/p-Xylene

Concen: 0.31 ppbv

RT: 14.73 min Scan# 1910

Delta R.T. -0.04 min

Lab File: VL026847.D

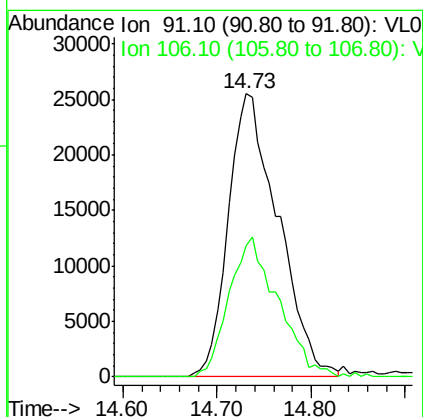
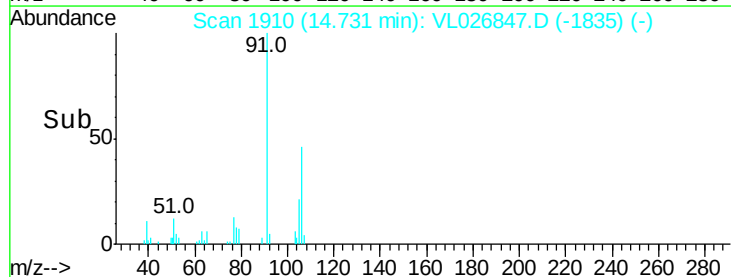
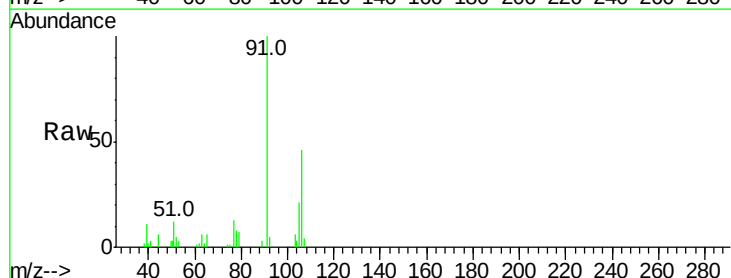
Acq: 10 Feb 2016 9:33

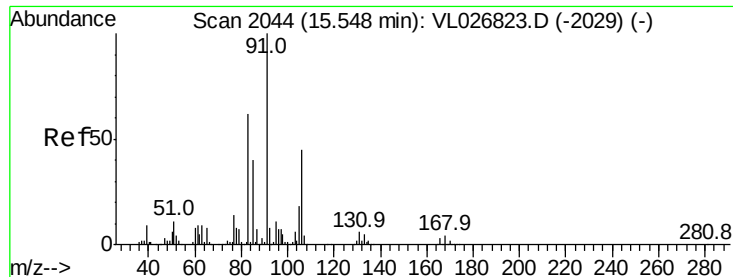
Tgt Ion: 91 Resp: 93919

Ion Ratio Lower Upper

91 100

106 48.8 38.2 57.2





#60

o-Xylene

Concen: 0.11 ppbv

RT: 15.53 min Scan# 2041

Delta R.T. -0.02 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

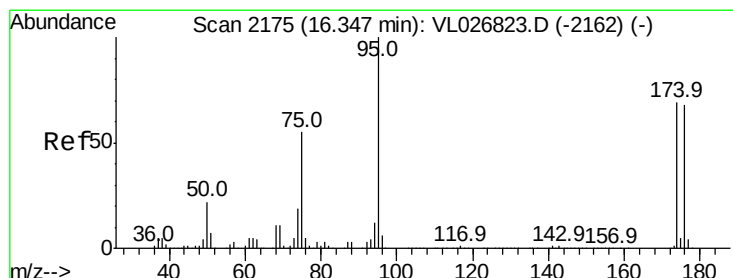
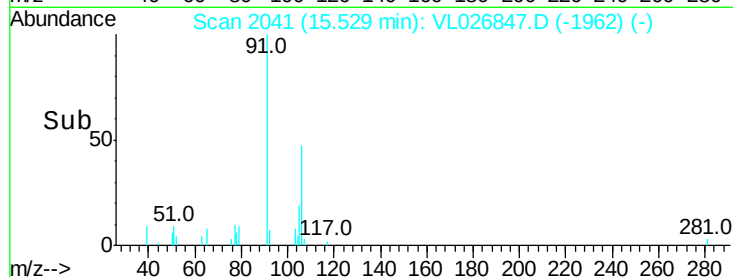
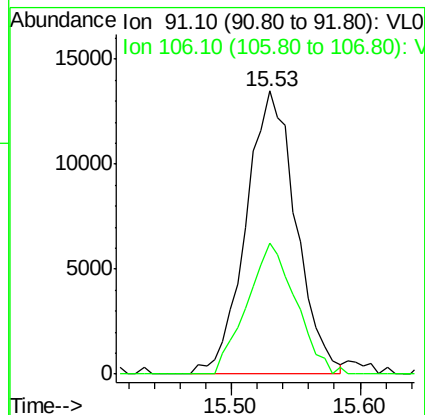
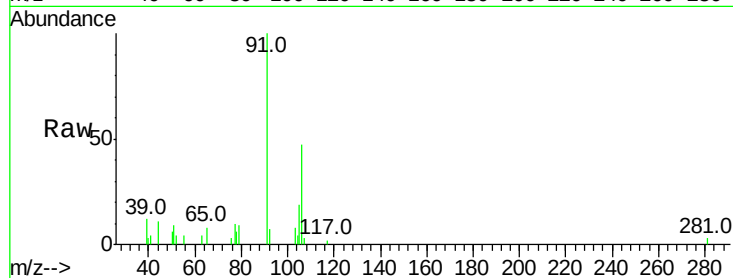
OA-1

Tgt Ion: 91 Resp: 36467

Ion Ratio Lower Upper

91 100

106 45.0 22.3 66.8



#68

1-Bromo-4-Fluorobenzene

Concen: 11.49 ppbv

RT: 16.33 min Scan# 2172

Delta R.T. -0.02 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

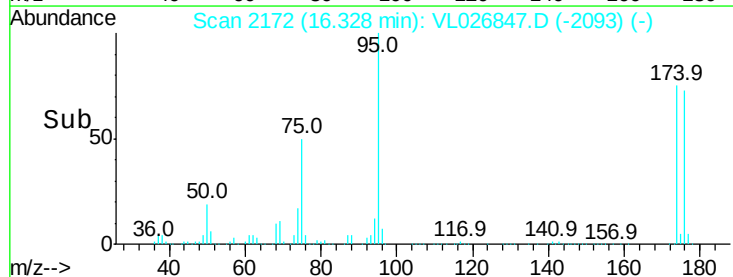
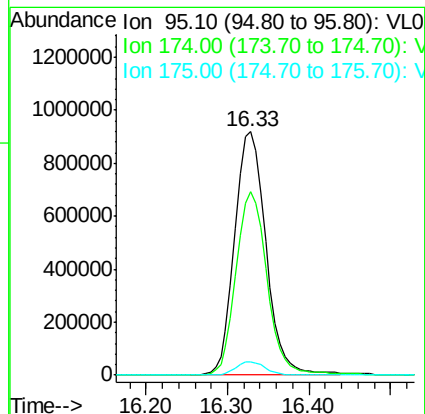
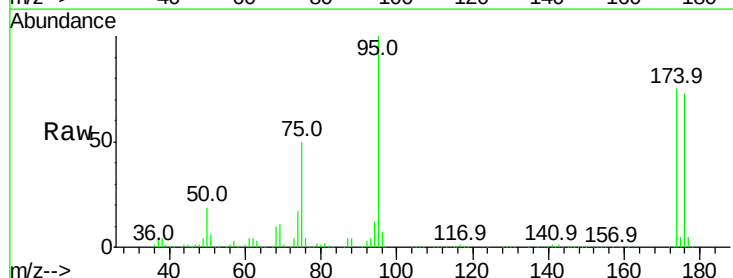
Tgt Ion: 95 Resp: 2447653

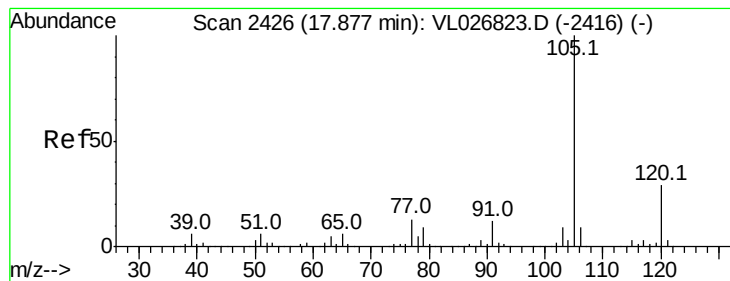
Ion Ratio Lower Upper

95 100

174 75.7 55.6 83.4

175 5.3 3.9 5.9





#72

4-Ethyltoluene

Concen: 0.05 ppbv

RT: 17.86 min Scan# 2423

Delta R.T. -0.02 min

Lab File: VL026847.D

Acq: 10 Feb 2016 9:33

Instrument :

MSVOA_L

ClientSampleId :

OA-1

Tgt Ion:105 Resp: 14546

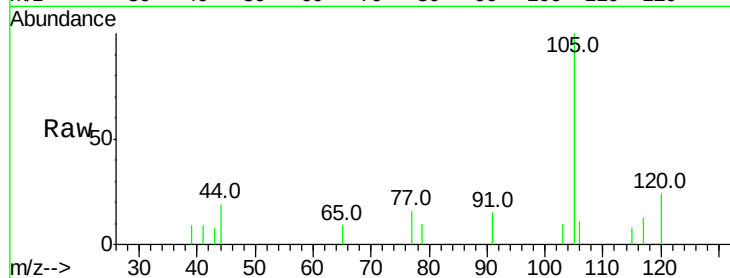
Ion Ratio Lower Upper

105 100

120 27.5 23.8 35.6

91 14.9 10.2 15.4

77 13.7 10.8 16.2

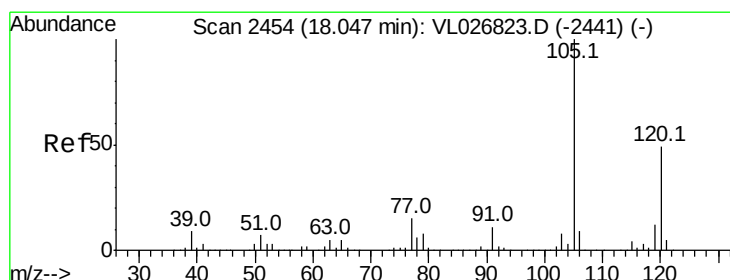
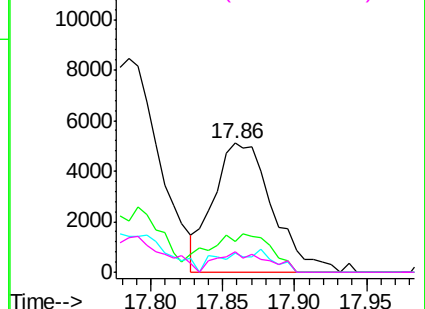
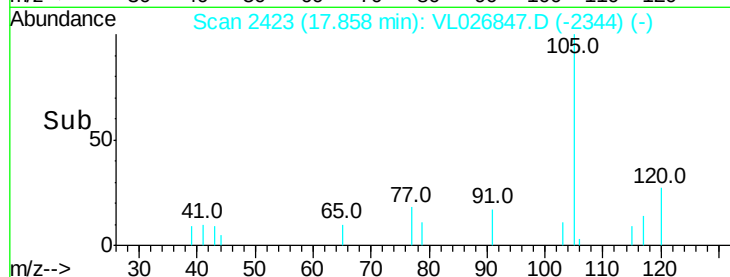


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#73

1,3,5-Trimethylbenzene

Concen: 0.04 ppbv

RT: 18.03 min Scan# 2451

Delta R.T. -0.02 min

Lab File: VL026847.D

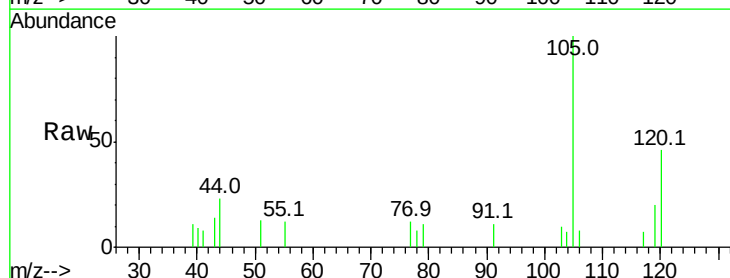
Acq: 10 Feb 2016 9:33

Tgt Ion:105 Resp: 12474

Ion Ratio Lower Upper

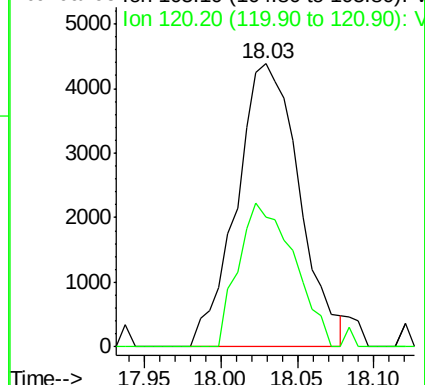
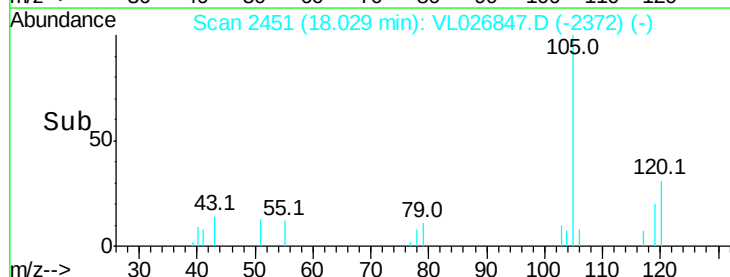
105 100

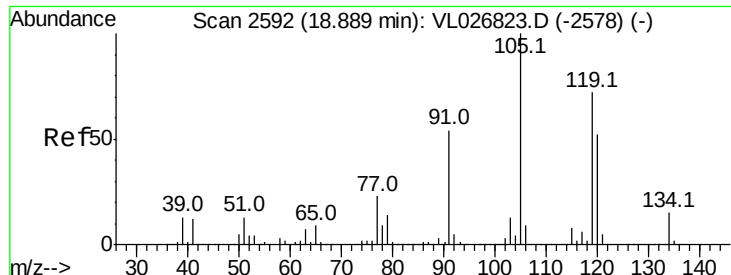
120 46.1 39.4 59.0



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.15 ppbv
 RT: 18.88 min Scan# 2590
 Delta R.T. -0.01 min
 Lab File: VL026847.D
 Acq: 10 Feb 2016 9:33

Instrument :
 MSVOA_L
 ClientSampleId :
 OA-1

Tgt Ion:	105	Resp:	50622
Ion Ratio	Lower	Upper	
105	100		
120	37.7	41.3	61.9#
91	11.9	43.3	64.9#
77	15.8	18.3	27.5#

