

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032919\
 Data File : VL033509.D
 Acq On : 29 Mar 2019 19:34
 Operator : SY/AP
 Sample : K2042-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-4

Manual Integrations
 APPROVED

MMDadoda
 4/2/2019 8:40:15 AM

Quant Time: Mar 31 15:01:00 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 2
 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	823695	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1876693	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1946503	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1495408	9.80	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	16569m	0.138	ppbv	
7) Chloroethane	3.60	64	4978m	0.271	ppbv	
9) Propene	3.04	41	31324	0.787	ppbv	85
10) Heptane	8.25	43	19578	0.184	ppbv	100
11) Trichlorofluoromethane	4.00	101	36869	0.249	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.56	101	7351	0.074	ppbv	95
13) Ethanol	3.66	45	2312504	224.400	ppbv	64
15) Acetone	3.90	43	642671	6.489	ppbv	99
17) tert-Butyl alcohol	4.37	59	18957m	1.041	ppbv	
19) Isopropyl Alcohol	4.03	45	179660	2.868	ppbv #	93
20) Methylene Chloride	4.41	84	134174	3.191	ppbv	97
22) trans-1,2-Dichloroethene	4.96	96	6298	0.141	ppbv #	72
26) Hexane	5.78	57	177359	2.171	ppbv #	43
29) Chloroform	5.85	83	74495m	0.532	ppbv	
31) cis-1,2-Dichloroethene	5.64	61	50932	0.627	ppbv	99
32) 1,1,1-Trichloroethane	6.61	97	4100m	0.031	ppbv	
34) 2-Butanone	5.33	43	68249	0.605	ppbv	98
35) Carbon Tetrachloride	7.13	117	10665m	0.080	ppbv	
36) Benzene	7.00	78	52177	0.331	ppbv #	91
38) Trichloroethene	7.96	130	336174	5.673	ppbv	97
44) 2,2,4-Trimethylpentane	7.99	57	57961	0.211	ppbv #	68
52) Tetrachloroethene	11.37	164	5984m	0.101	ppbv	
53) Toluene	9.94	91	756478	4.134	ppbv	99
58) Ethyl Benzene	12.86	91	33647m	0.129	ppbv	
59) m/p-Xylene	13.12	91	108583m	0.468	ppbv	
60) o-Xylene	13.84	91	30801	0.137	ppbv	92
74) 1,2,4-Trimethylbenzene	16.92	105	25935m	0.100	ppbv	

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

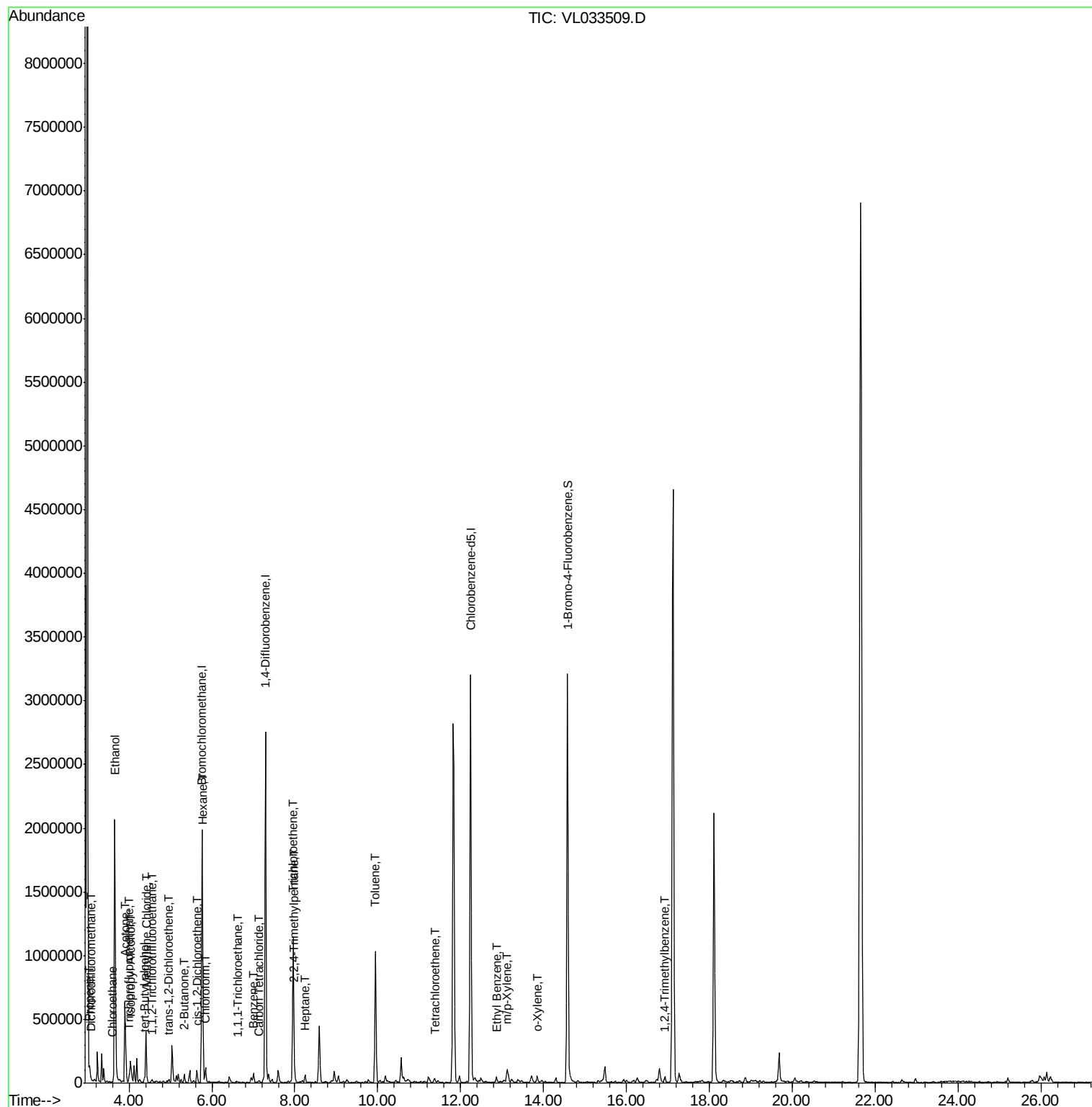
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL032919\
Data File : VL033509.D
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Operator : SY/AP
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Misc : 400ml/MSVOA L
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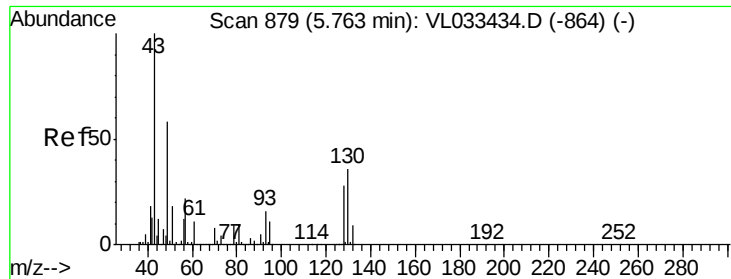
Instrument :
MSVOA_L
ClientSampleId :
SG-4

Manual Integrations
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4/2/2019 8:40:15 AM

Quant Time: Mar 31 15:01:00 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Mar
QLast Update : Tue Mar 26 16:00:50 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Instrument :

MSVOA_L

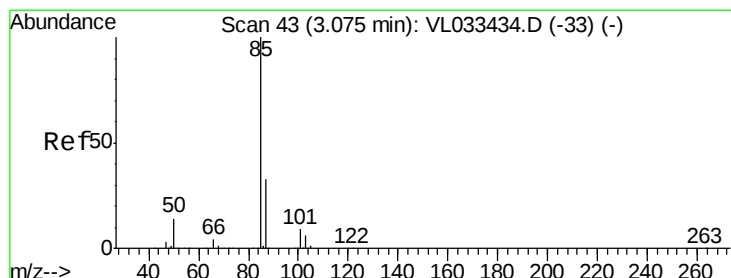
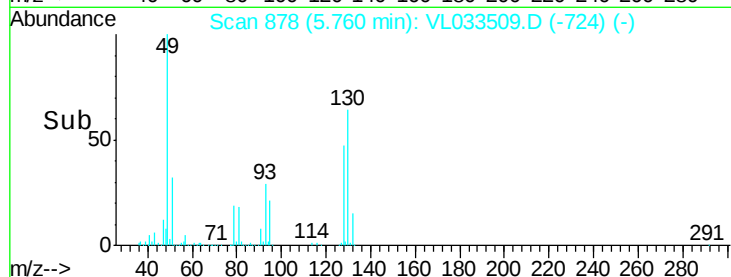
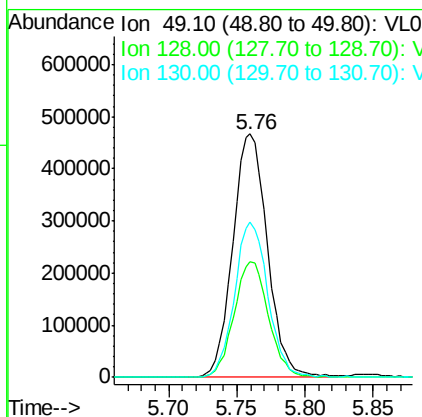
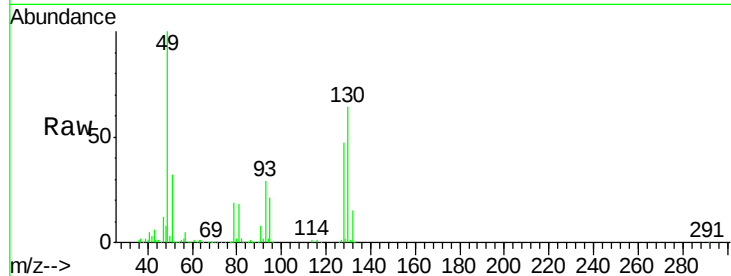
ClientSampled :

SG-4

Tot Ion	Ratio	Lower	Upper
49	100		
128	47.5	24.0	72.0
130	61.7	31.2	93.6

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#2

Dichlorodifluoromethane

Concen: 0.138 ppbv m

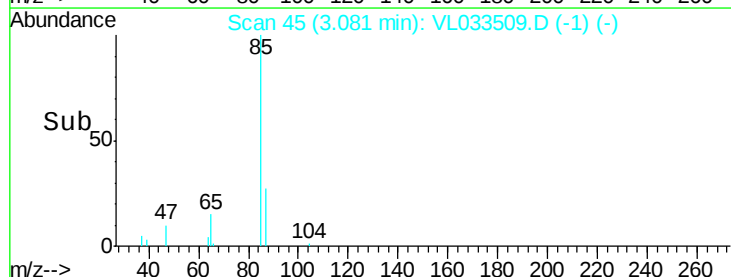
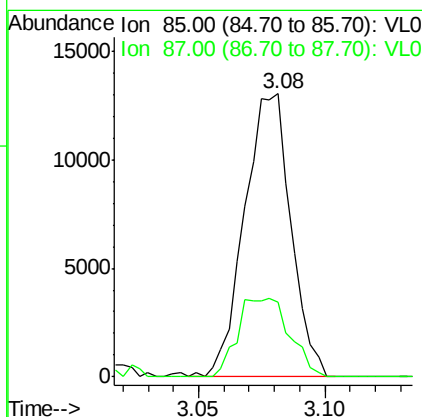
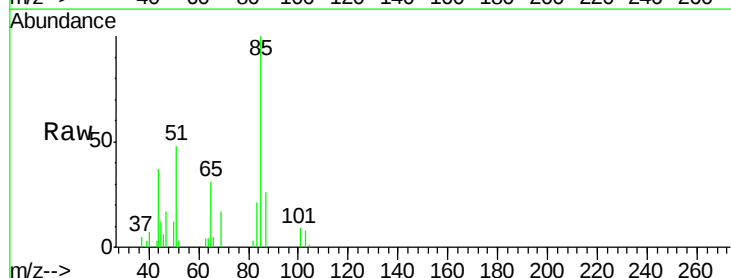
RT: 3.08 min Scan# 45

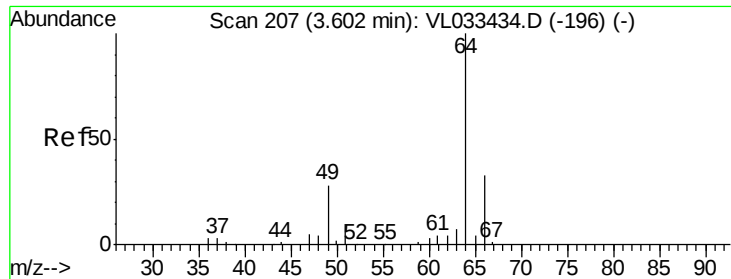
Delta R.T. 0.01 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Tgt Ion	Ratio	Lower	Upper
85	100		
87	26.3	26.7	40.1#





#7

Chloroethane

Concen: 0.271 ppbv m

RT: 3.60 min Scan# 206

Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Instrument :

MSVOA_L

ClientSampled :

SG-4

Tot Ion: 64 Resp: 4978

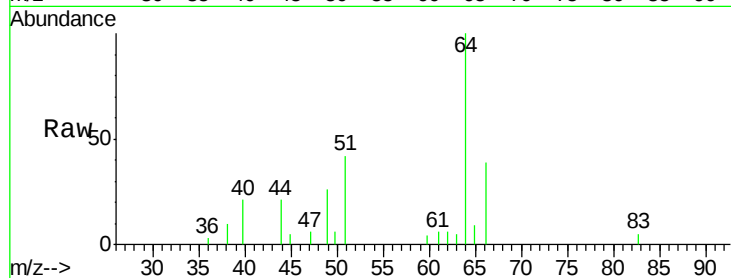
Ion Ratio Lower Upper

64 100

66 38.6 26.7 40.1

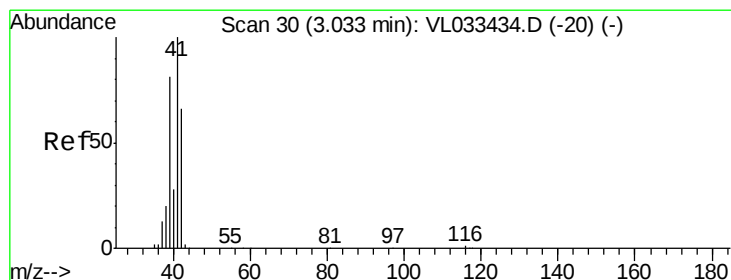
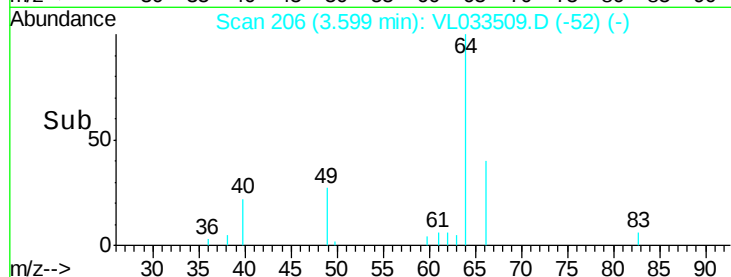
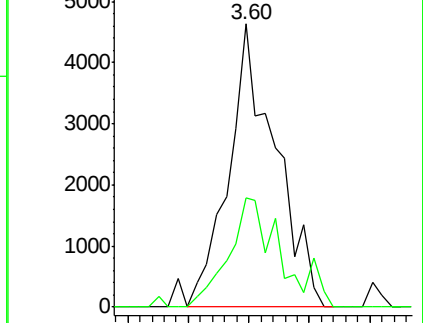
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Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#9

Propene

Concen: 0.787 ppbv

RT: 3.04 min Scan# 32

Delta R.T. 0.01 min

Lab File: VL033509.D

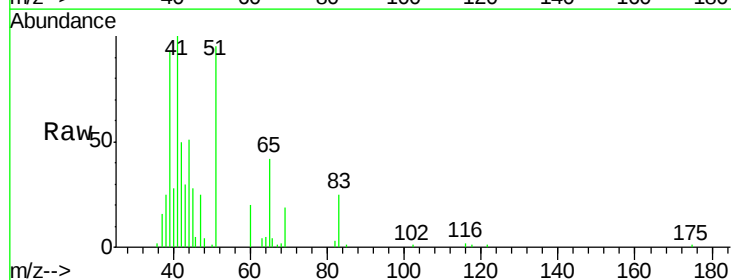
Acq: 29 Mar 2019 19:34

Tgt Ion: 41 Resp: 31324

Ion Ratio Lower Upper

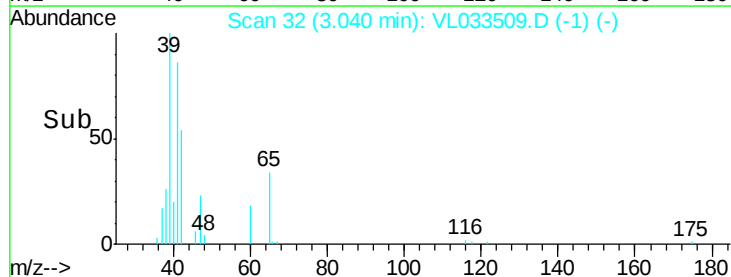
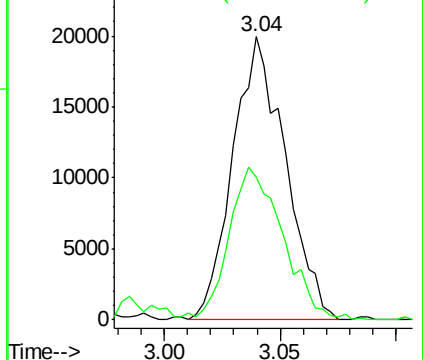
41 100

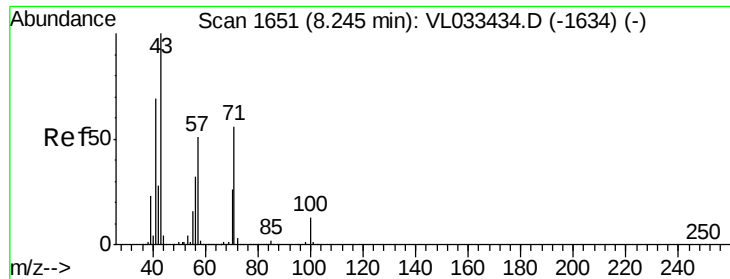
42 55.2 53.9 80.9



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





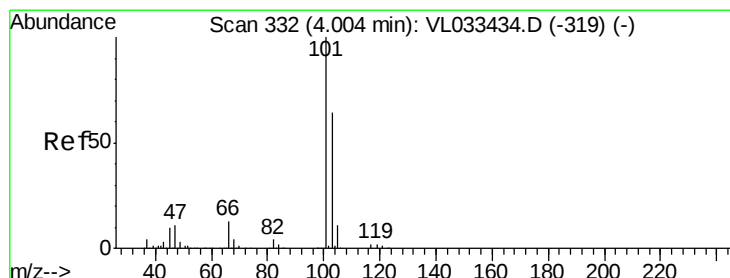
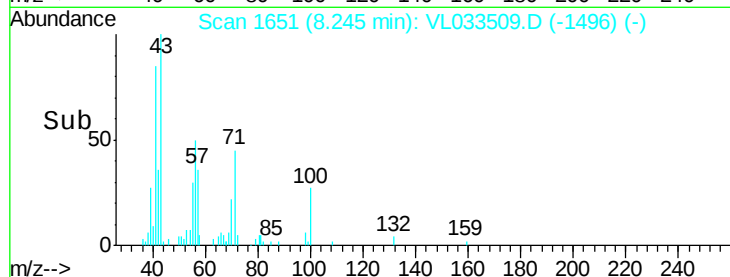
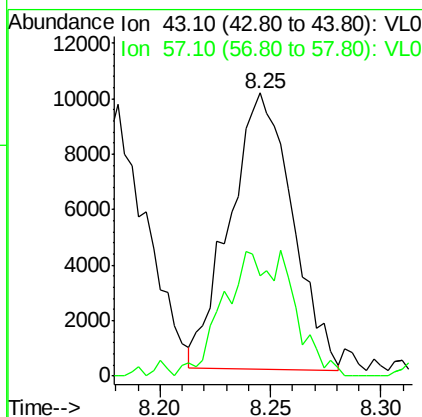
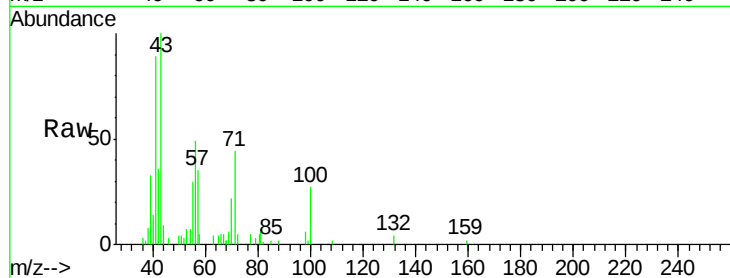
#10
Heptane
Concen: 0.184 ppbv
RT: 8.25 min Scan# 1651
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Instrument :
MSVOA_L
ClientSampled :
SG-4

Tot Ion: 43 Resp: 19578
Ion Ratio Lower Upper
43 100
57 50.8 40.6 60.8

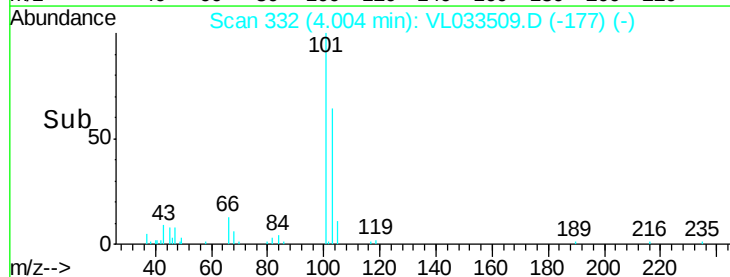
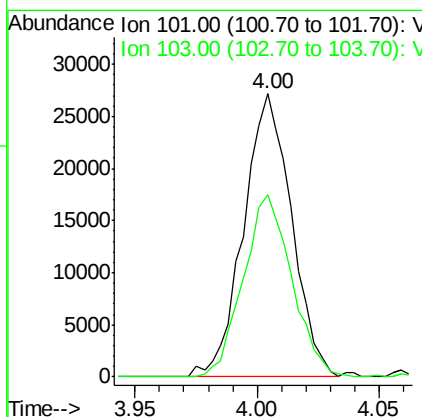
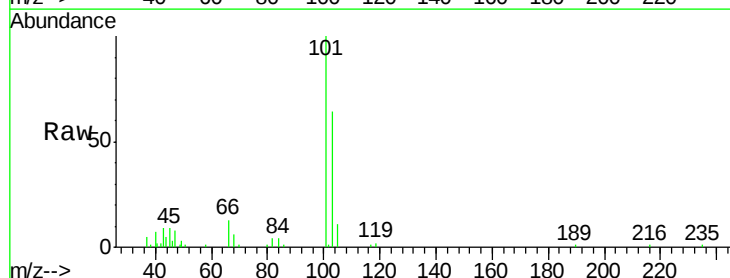
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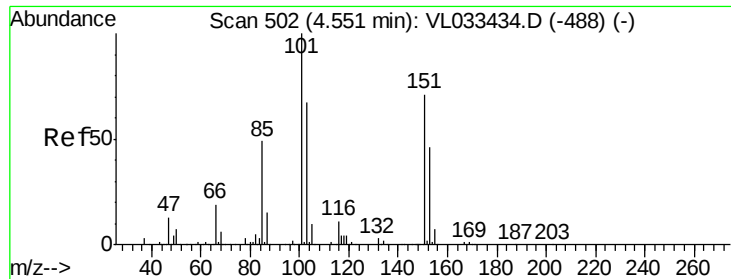
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#11
Trichlorofluoromethane
Concen: 0.249 ppbv
RT: 4.00 min Scan# 332
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Tgt Ion: 101 Resp: 36869
Ion Ratio Lower Upper
101 100
103 63.3 51.3 76.9





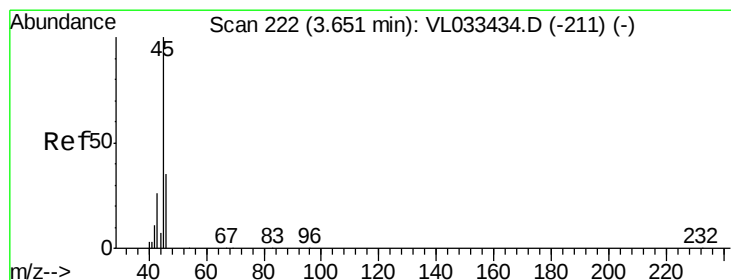
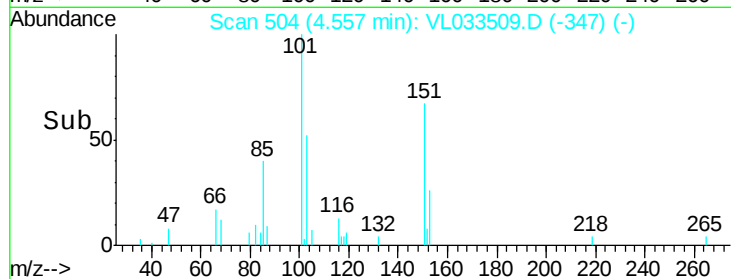
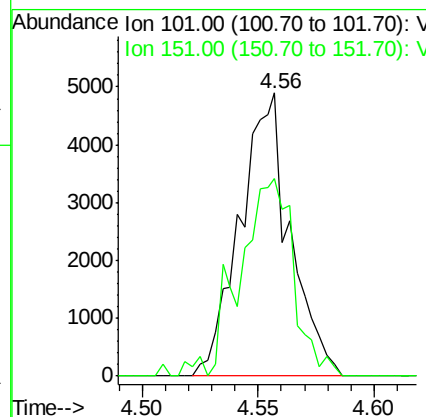
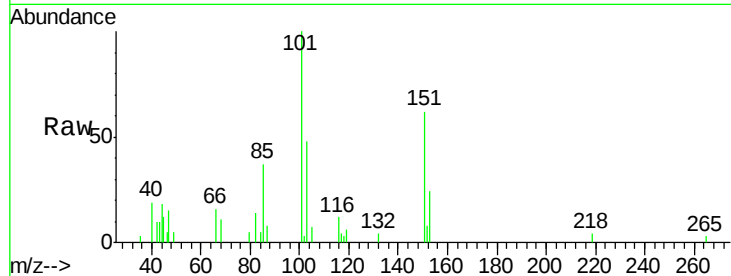
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.074 ppbv
 RT: 4.56 min Scan# 504
 Delta R.T. 0.01 min
 Lab File: VL033509.D
 Acq: 29 Mar 2019 19:34

Instrument :
 MSVOA_L
 ClientSampled :
 SG-4

Tot Ion	Ratio	Lower	Upper
101	100		
151	76.3	57.7	86.5

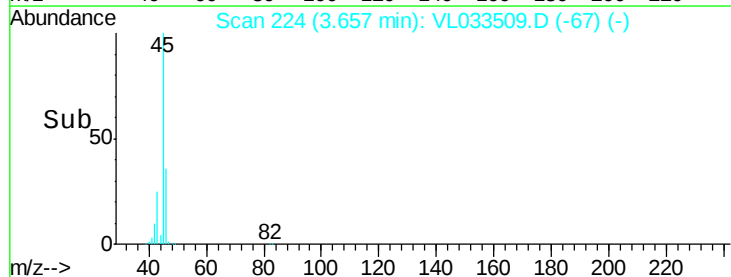
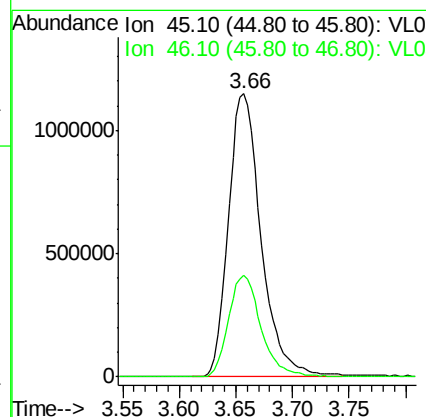
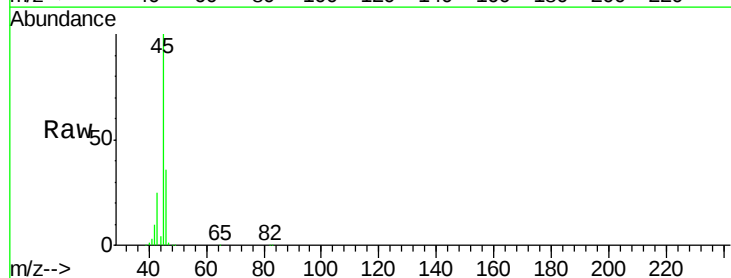
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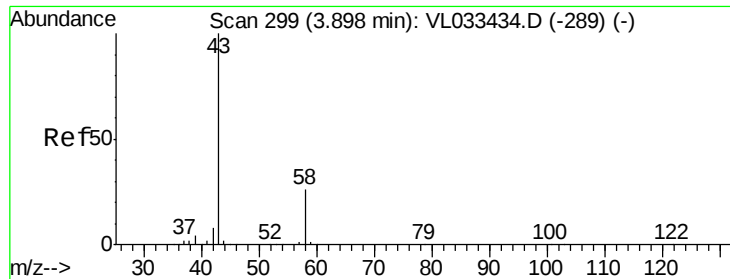
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#13
 Ethanol
 Concen: 224.400 ppbv
 RT: 3.66 min Scan# 224
 Delta R.T. 0.01 min
 Lab File: VL033509.D
 Acq: 29 Mar 2019 19:34

Tgt Ion	Ratio	Lower	Upper
45	100		
46	35.7	25.4	101.8





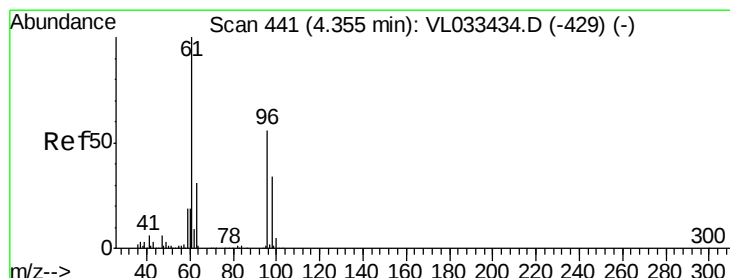
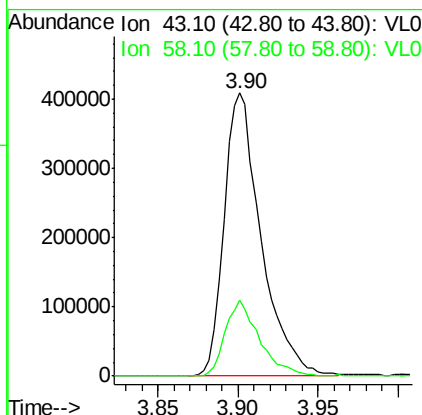
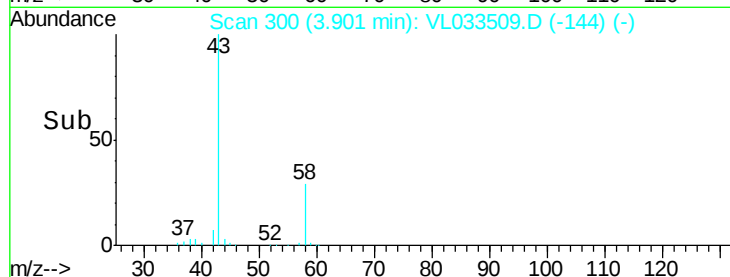
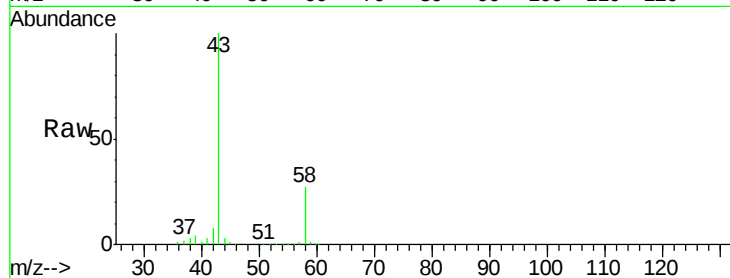
#15
Acetone
Concen: 6.489 ppbv
RT: 3.90 min Scan# 300
Delta R.T. 0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Instrument :
MSVOA_L
ClientSampleId :
SG-4

Tot Ion: 43 Resp: 642671
Ion Ratio Lower Upper
43 100
58 25.2 20.5 30.7

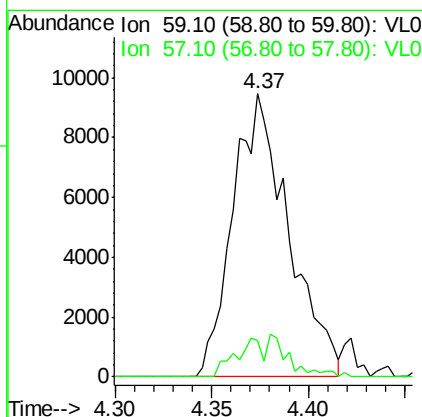
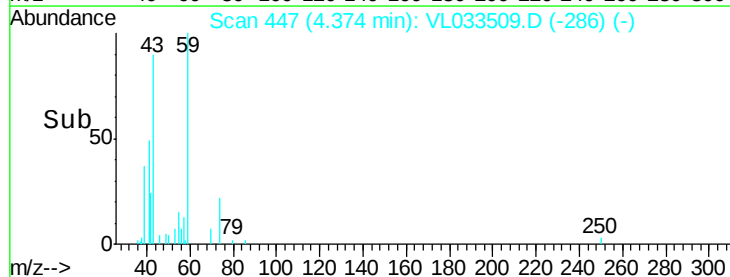
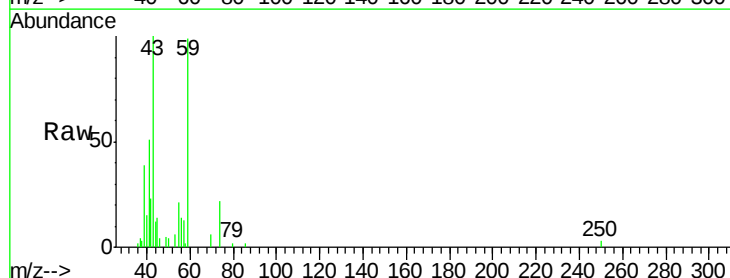
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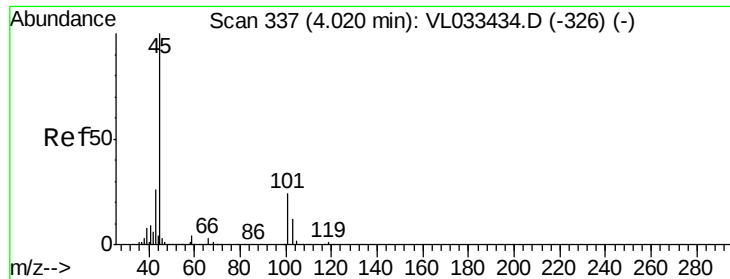
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#17
tert-Butyl alcohol
Concen: 1.041 ppbv m
RT: 4.37 min Scan# 447
Delta R.T. 0.02 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Tgt Ion: 59 Resp: 18957
Ion Ratio Lower Upper
59 100
57 0.0 7.8 11.8#





#19

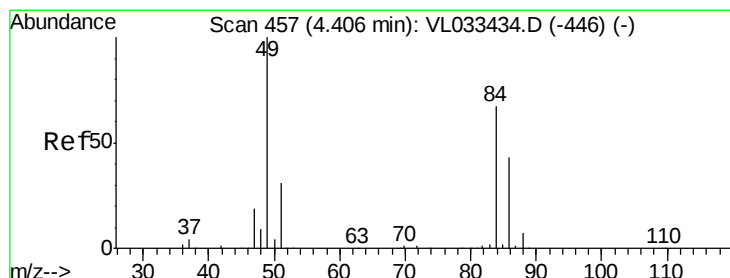
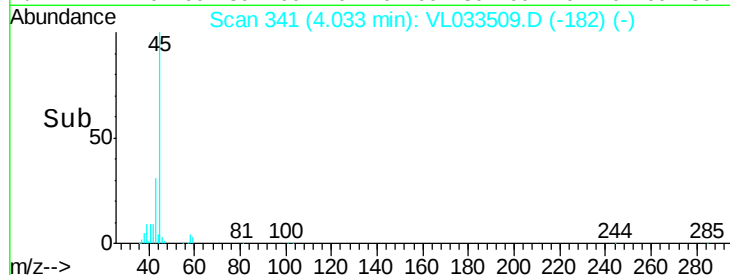
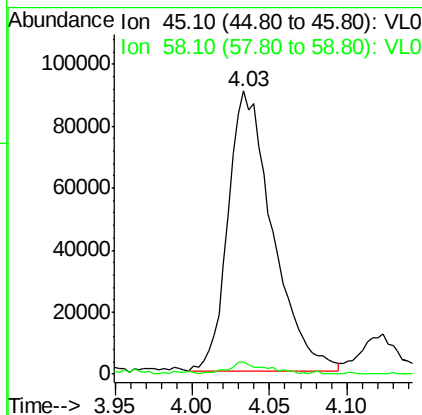
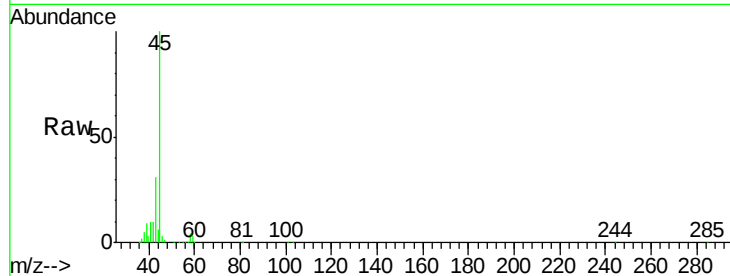
Isopropyl Alcohol
 Concen: 2.868 ppbv
 RT: 4.03 min Scan# 341
 Delta R.T. 0.01 min
 Lab File: VL033509.D
 Acq: 29 Mar 2019 19:34

Instrument :
 MSVOA_L
 ClientSampled :
 SG-4

Tot Ion: 45 Resp: 179660
 Ion Ratio Lower Upper
 45 100
 58 4.4 1.4 2.2#

Manual Integrations
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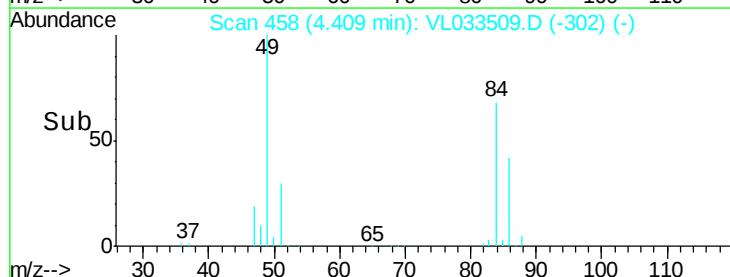
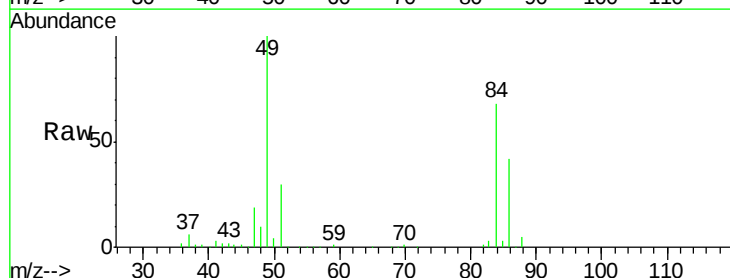
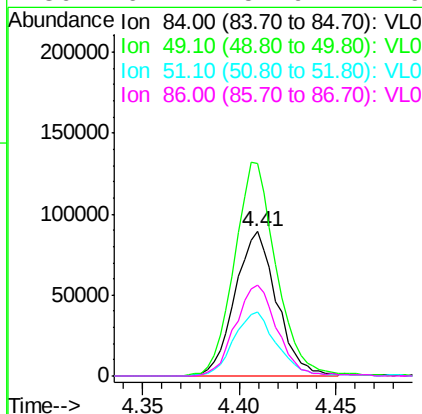
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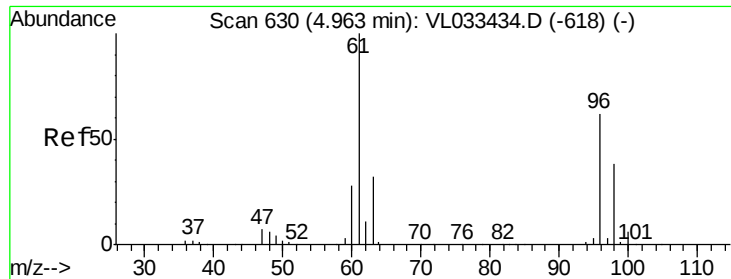


#20

Methylene Chloride
 Concen: 3.191 ppbv
 RT: 4.41 min Scan# 458
 Delta R.T. 0.00 min
 Lab File: VL033509.D
 Acq: 29 Mar 2019 19:34

Tgt Ion: 84 Resp: 134174
 Ion Ratio Lower Upper
 84 100
 49 146.6 120.0 180.0
 51 44.7 36.7 55.1
 86 62.7 51.9 77.9





#22

trans-1,2-Dichloroethene

Concen: 0.141 ppbv

RT: 4.96 min Scan# 629

Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Instrument :

MSVOA_L

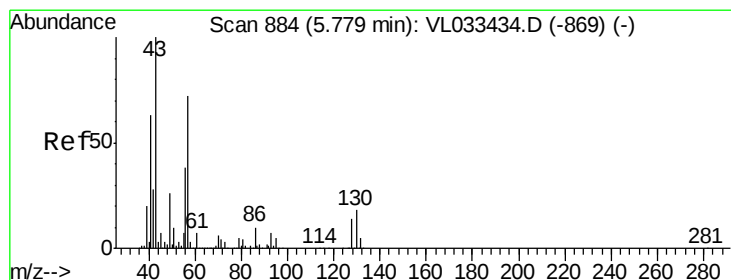
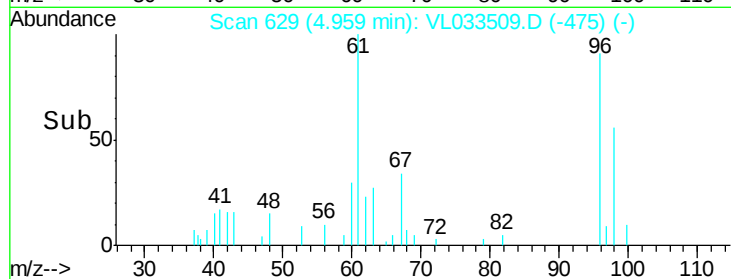
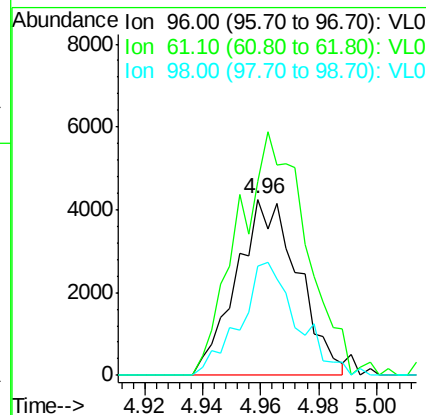
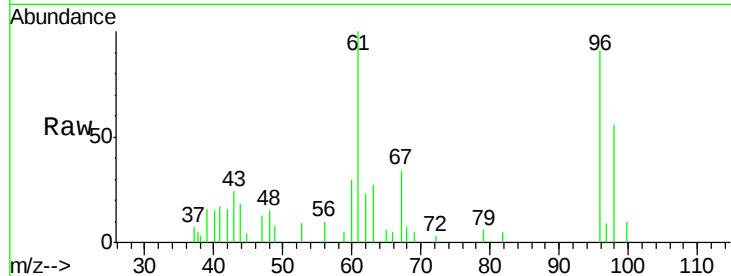
ClientSampled :

SG-4

Tot Ion:	96	Resp:	6298
Ion	Ratio	Lower	Upper
96	100		
61	110.1	128.9	193.3#
98	61.8	49.5	74.3

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#26

Hexane

Concen: 2.171 ppbv

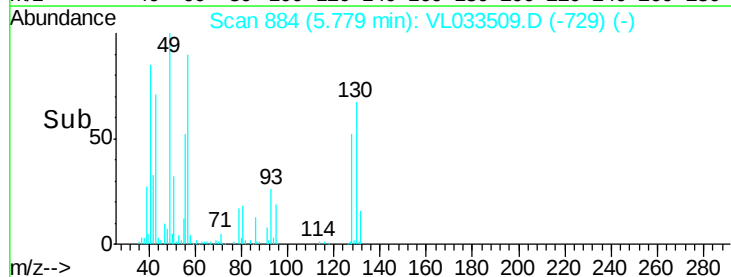
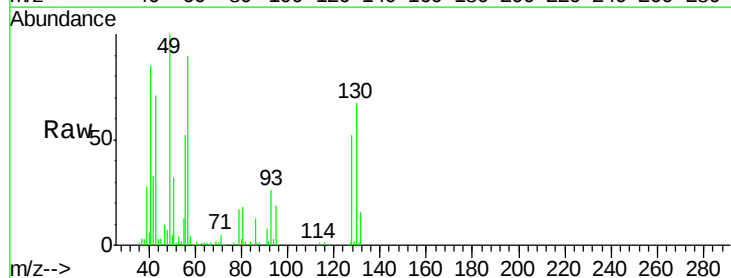
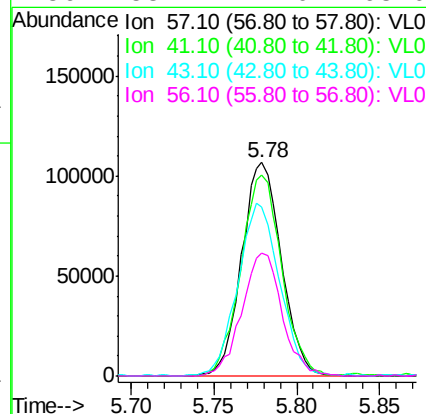
RT: 5.78 min Scan# 884

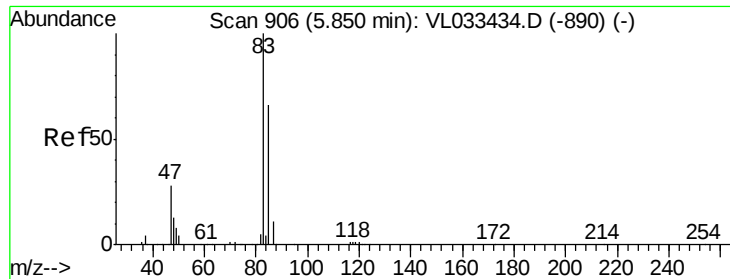
Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Tgt Ion:	57	Resp:	177359
Ion	Ratio	Lower	Upper
57	100		
41	97.3	70.7	106.1
43	85.9	182.6	274.0#
56	58.7	42.0	63.0





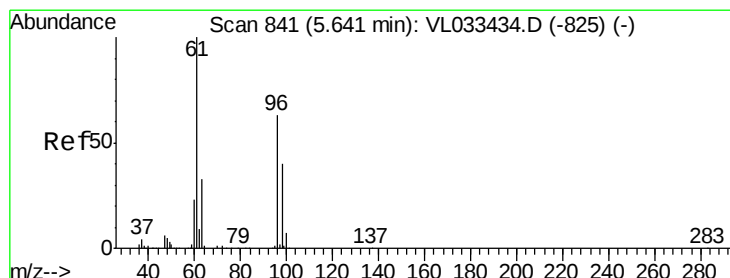
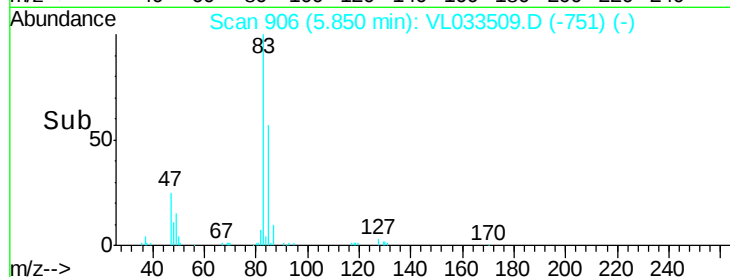
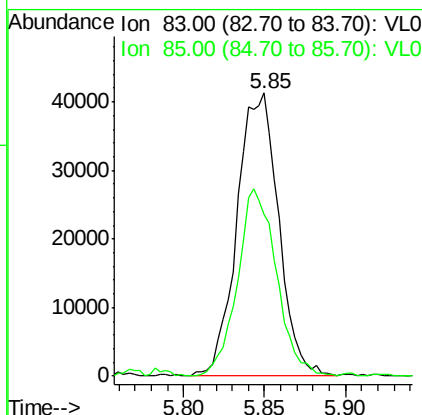
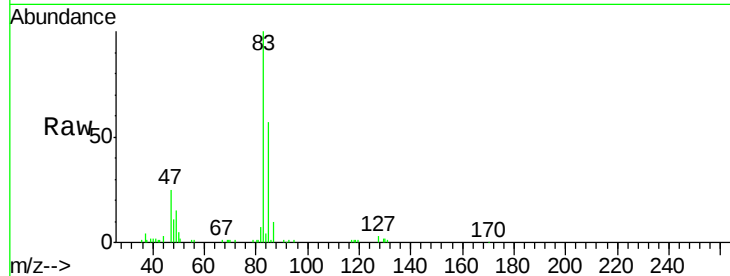
#29
Chloroform
Concen: 0.532 ppbv m
RT: 5.85 min Scan# 906
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Instrument :
MSVOA_L
ClientSampleId :
SG-4

Tot Ion	83	Resp	74495
Ion Ratio	100	Lower	Upper
83	100		
85	57.3	52.6	79.0

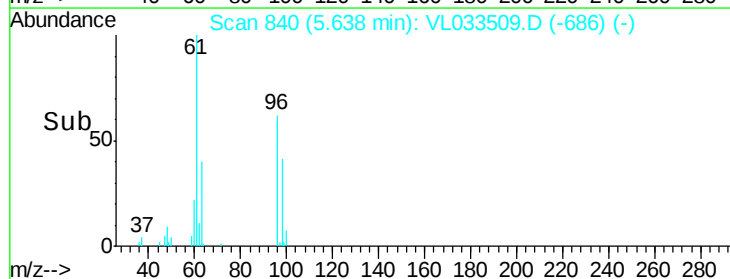
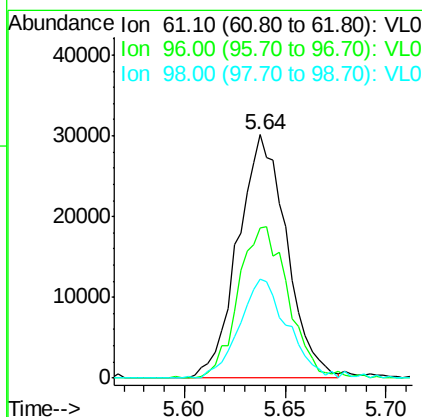
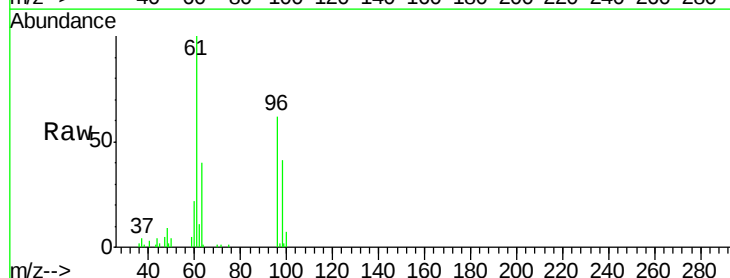
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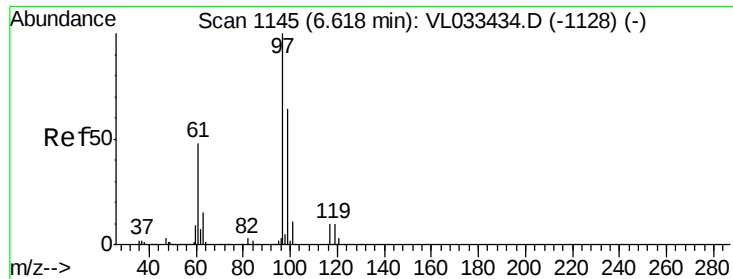
MMDadoda
4/2/2019 8:40:15 AM



#31
cis-1,2-Dichloroethene
Concen: 0.627 ppbv
RT: 5.64 min Scan# 840
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Tgt Ion	61	Resp	50932
Ion Ratio	100	Lower	Upper
61	100		
96	61.9	50.6	76.0
98	40.7	32.2	48.2





#32

1,1,1-Trichloroethane

Concen: 0.031 ppbv m

RT: 6.61 min Scan# 1143

Delta R.T. -0.01 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Instrument :

MSVOA_L

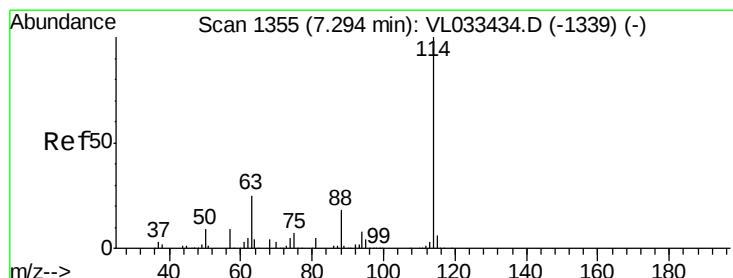
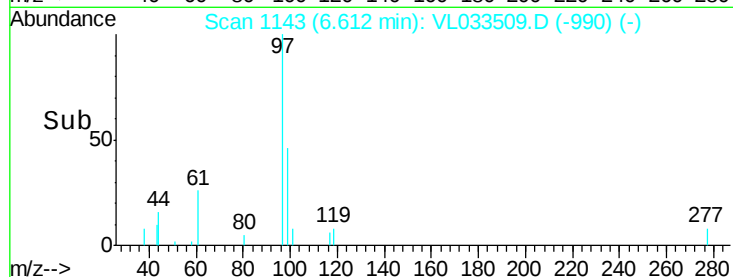
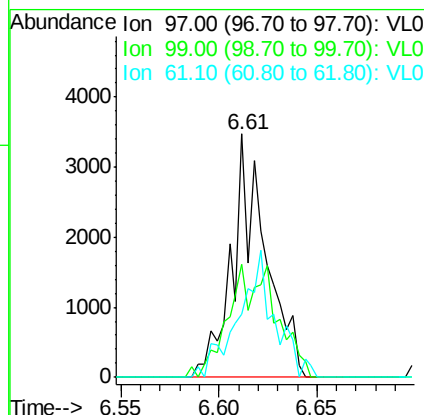
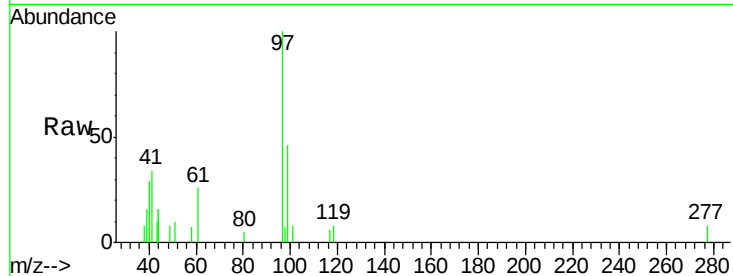
ClientSampleId :

SG-4

Tot Ion:	97	Resp:	4100
Ion	Ratio	Lower	Upper
97	100		
99	66.0	51.5	77.3
61	0.0	38.8	58.2#

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#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

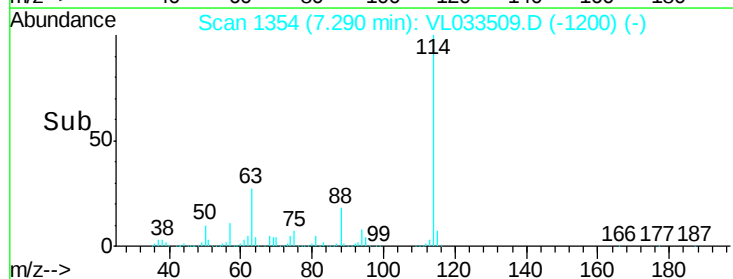
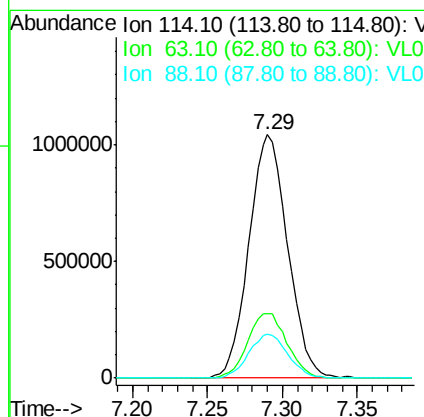
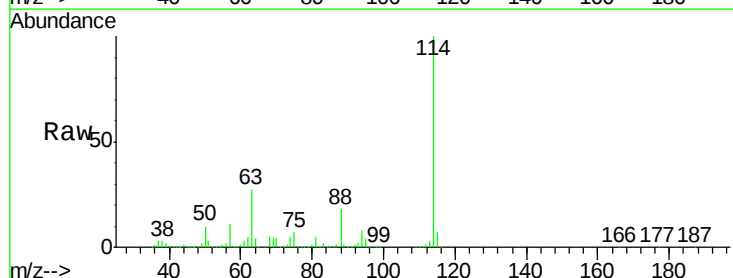
RT: 7.29 min Scan# 1354

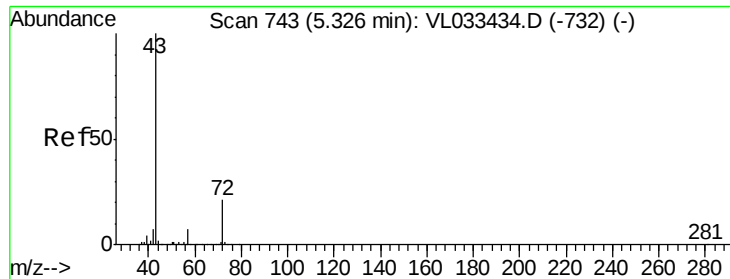
Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Tgt Ion:	114	Resp:	1876693
Ion	Ratio	Lower	Upper
114	100		
63	27.2	21.5	32.3
88	18.3	14.5	21.7





#34

2-Butanone

Concen: 0.605 ppbv

RT: 5.33 min Scan# 745

Delta R.T. 0.01 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Instrument :

MSVOA_L

ClientSampleId :

SG-4

Tot Ion: 43 Resp: 68249

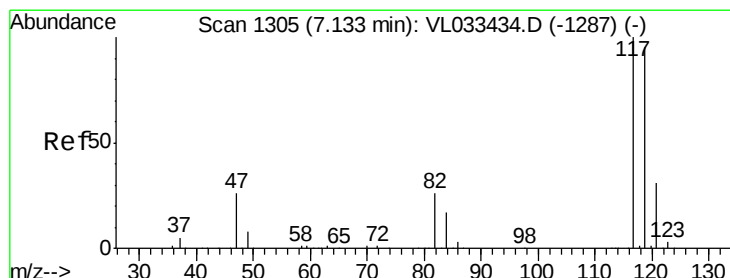
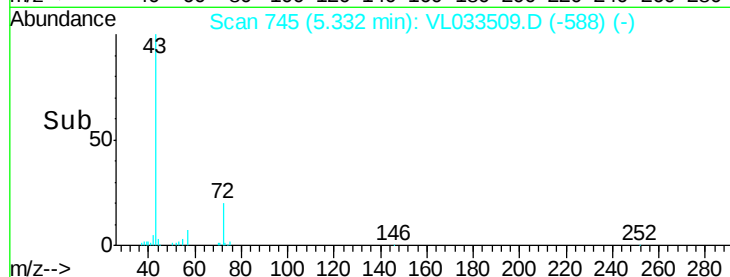
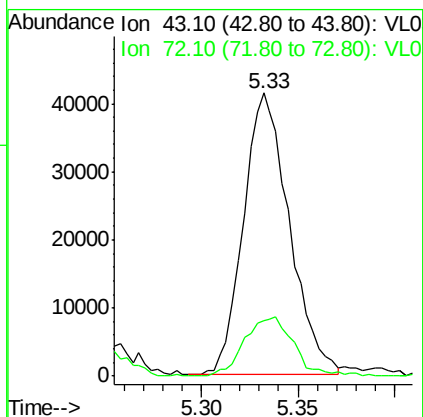
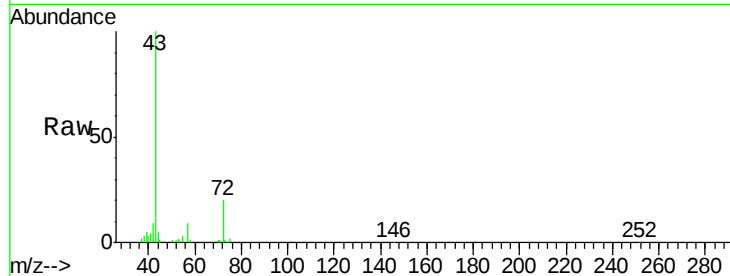
Ion Ratio Lower Upper

43 100

72 22.6 17.4 26.2

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#35

Carbon Tetrachloride

Concen: 0.080 ppbv m

RT: 7.13 min Scan# 1304

Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

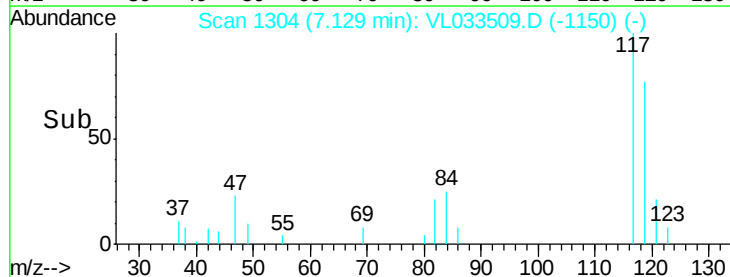
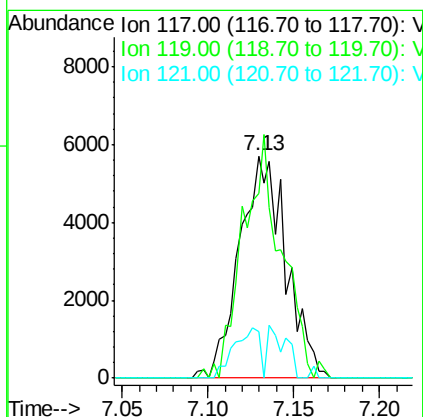
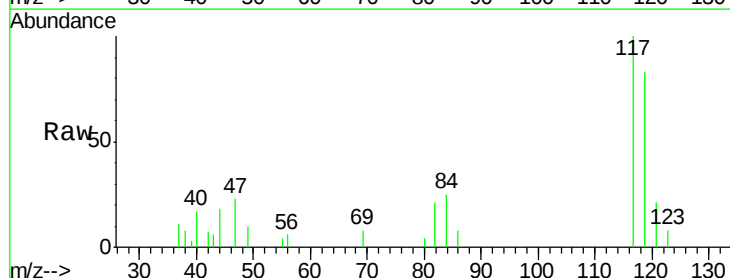
Tgt Ion: 117 Resp: 10665

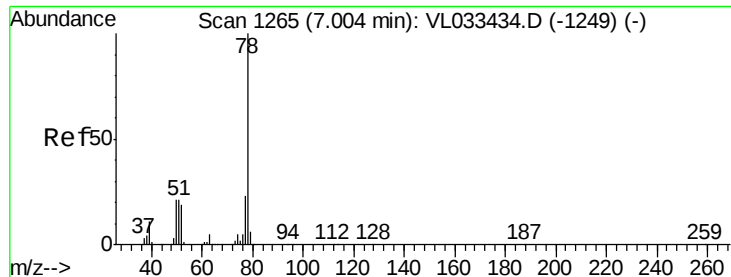
Ion Ratio Lower Upper

117 100

119 83.1 75.8 113.8

121 20.8 24.7 37.1#





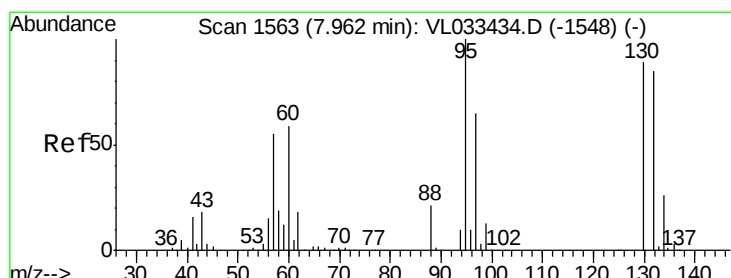
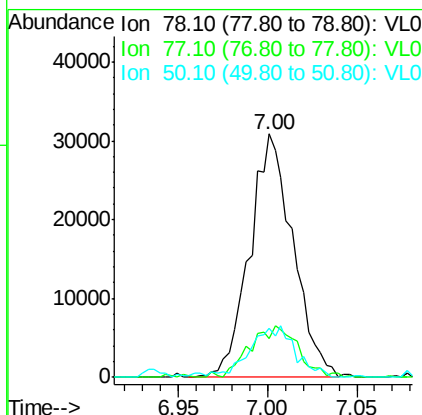
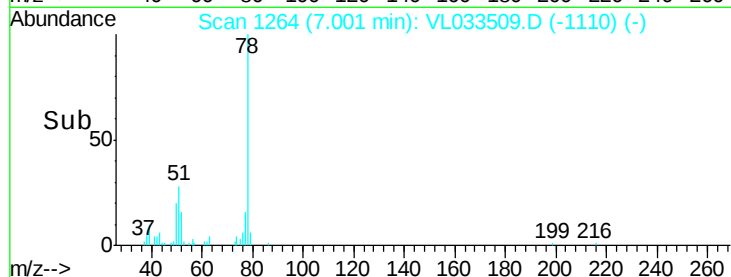
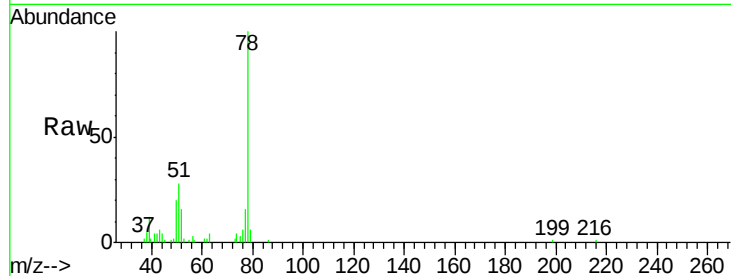
#36
Benzene
Concen: 0.331 ppbv
RT: 7.00 min Scan# 1264
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Instrument :
MSVOA_L
ClientSampleId :
SG-4

Tot Ion	Ratio	Lower	Upper
78	100		
77	15.2	18.1	27.1#
50	19.5	16.7	25.1

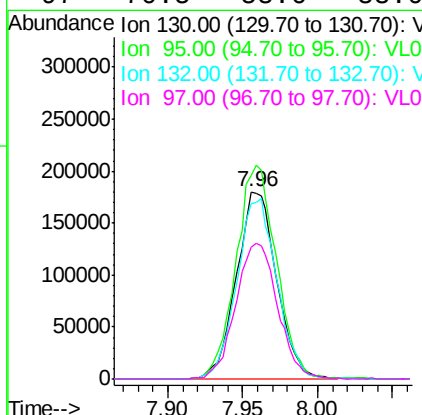
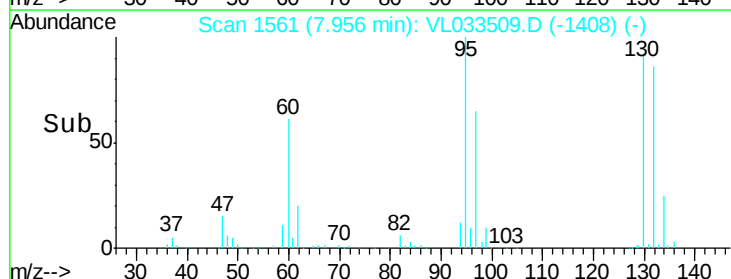
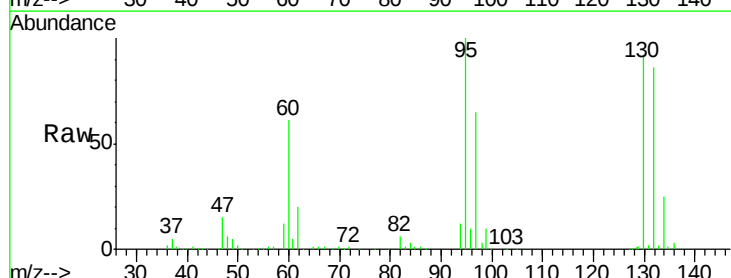
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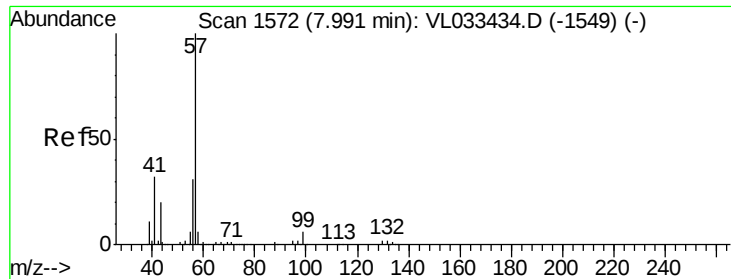
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#38
Trichloroethene
Concen: 5.673 ppbv
RT: 7.96 min Scan# 1561
Delta R.T. -0.01 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Tgt Ion	Ratio	Lower	Upper
130	100		
95	108.8	89.8	134.8
132	93.3	76.6	115.0
97	70.5	58.6	88.0





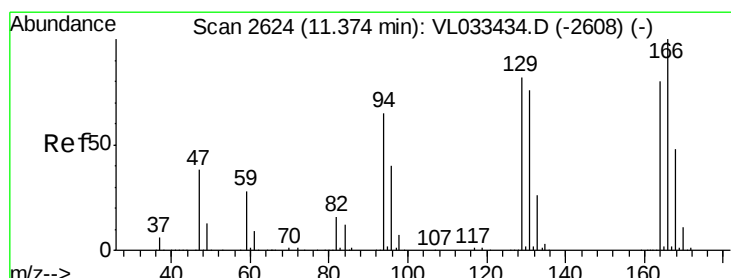
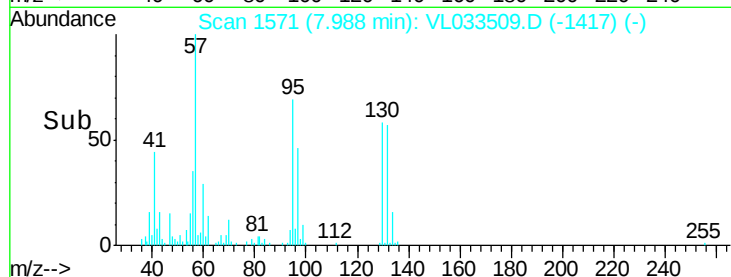
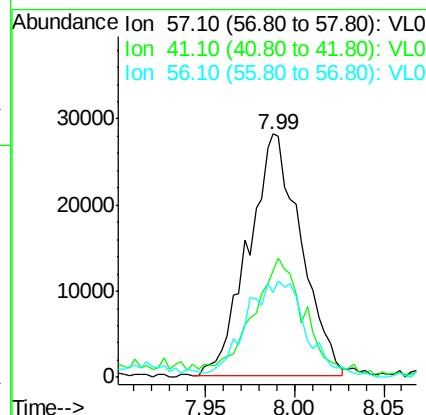
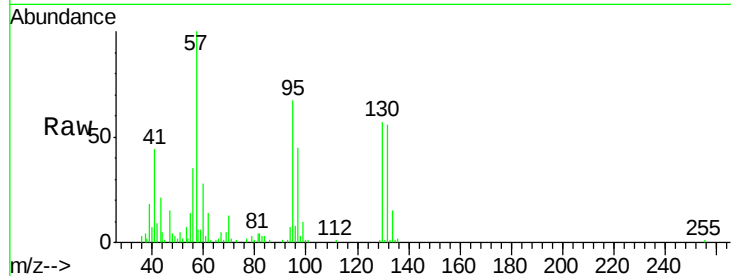
#44
2,2,4-Trimethylpentane
Concen: 0.211 ppbv
RT: 7.99 min Scan# 1571
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Instrument :
MSVOA_L
ClientSampled :
SG-4

Tot Ion	Ratio	Lower	Upper
57	100		
41	51.1	26.0	39.0#
56	47.2	24.6	37.0#

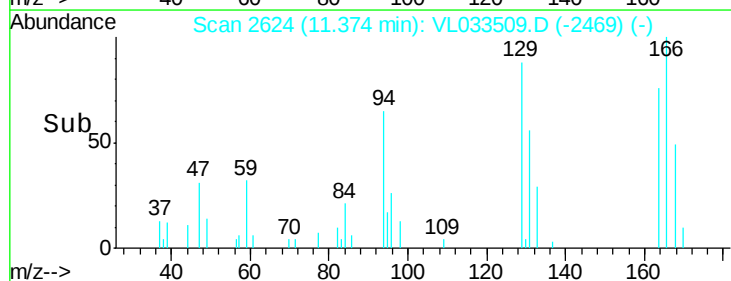
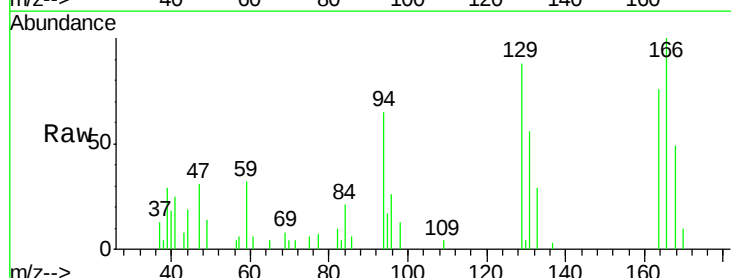
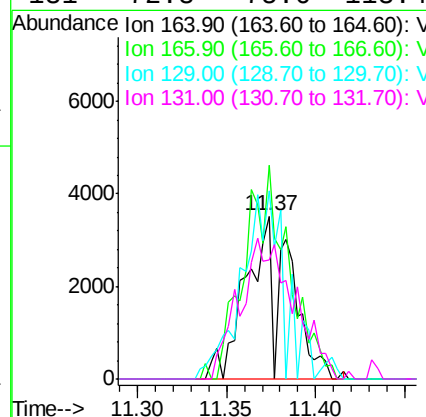
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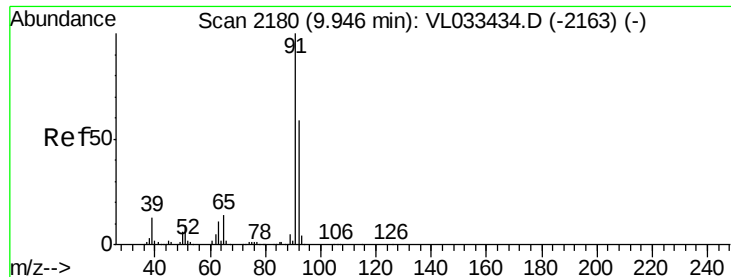
MMDadoda
4/2/2019 8:40:15 AM



#52
Tetrachloroethene
Concen: 0.101 ppbv m
RT: 11.37 min Scan# 2624
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Tgt Ion	Ratio	Lower	Upper
164	100		
166	130.9	99.5	149.3
129	114.9	81.4	122.2
131	72.8	75.6	113.4#





#53

Toluene

Concen: 4.134 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

Instrument :

MSVOA_L

ClientSampleId :

SG-4

Tot Ion: 91 Resp: 756478

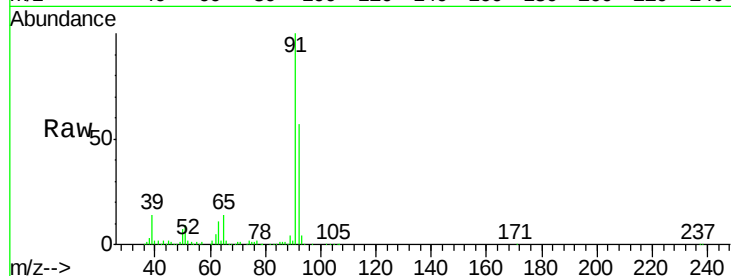
Ion Ratio Lower Upper

91 100

92 58.2 47.4 71.0

Manual Integrations
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.94

400000

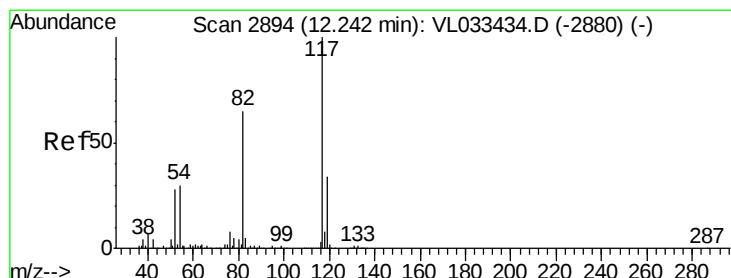
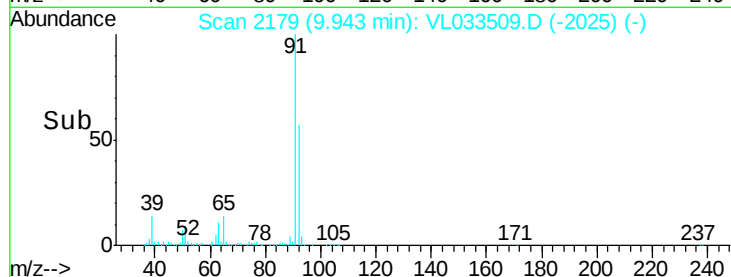
300000

200000

100000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL033509.D

Acq: 29 Mar 2019 19:34

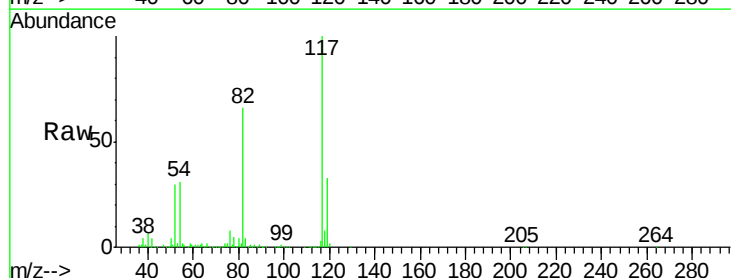
Tgt Ion: 117 Resp: 1946503

Ion Ratio Lower Upper

117 100

82 67.1 51.5 77.3

119 32.6 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

12.24

1200000

1000000

800000

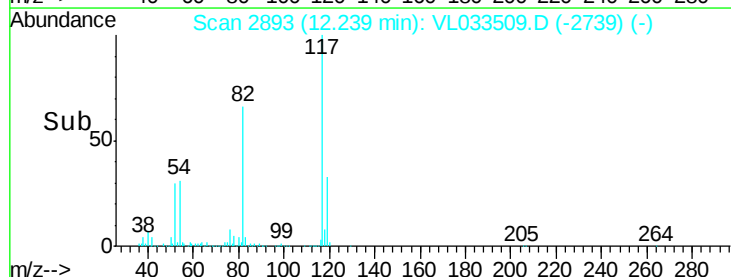
600000

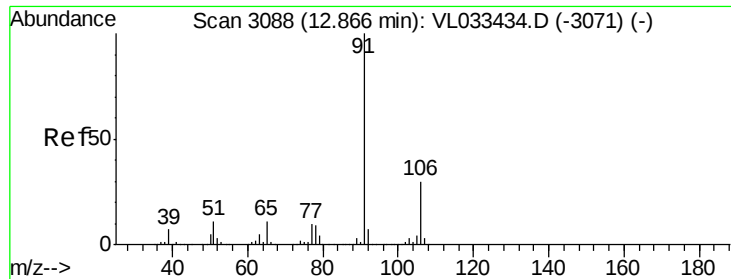
400000

200000

0

Time-->





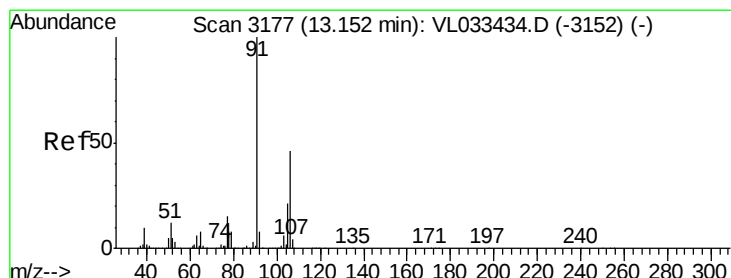
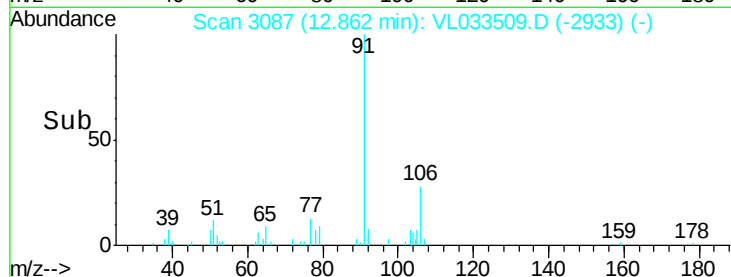
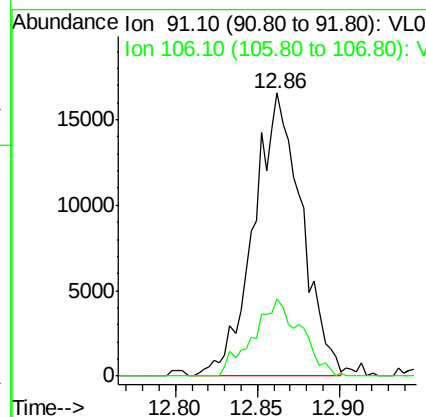
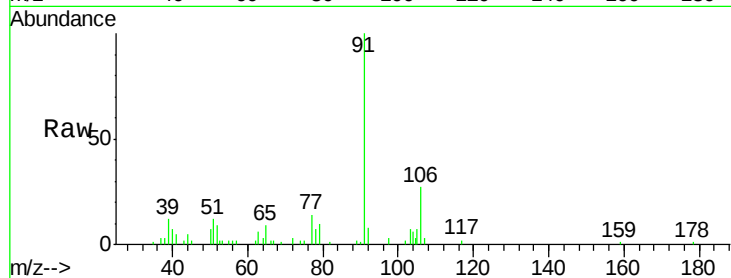
#58
Ethyl Benzene
Concen: 0.129 ppbv m
RT: 12.86 min Scan# 3087
Delta R.T. -0.00 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Instrument :
MSVOA_L
ClientSampled :
SG-4

Tot Ion: 91 Resp: 33647
Ion Ratio Lower Upper
91 100
106 27.4 23.8 35.6

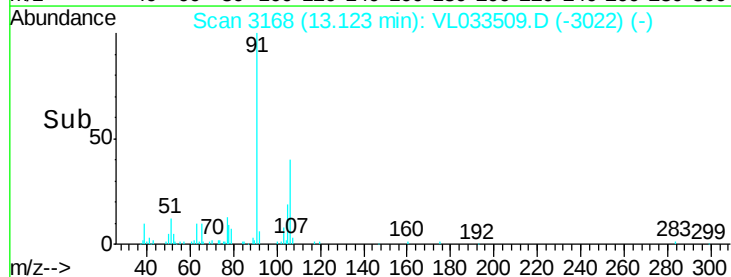
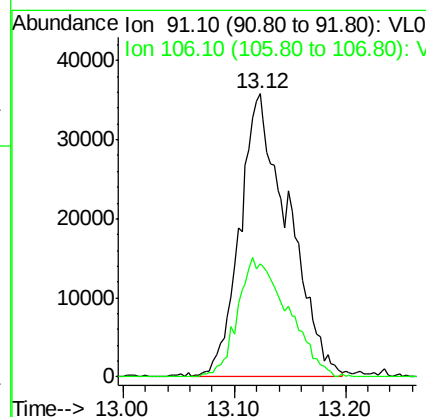
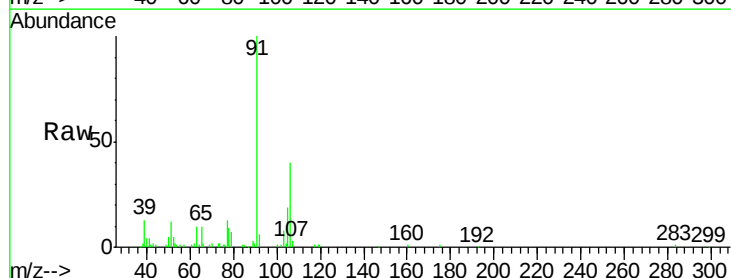
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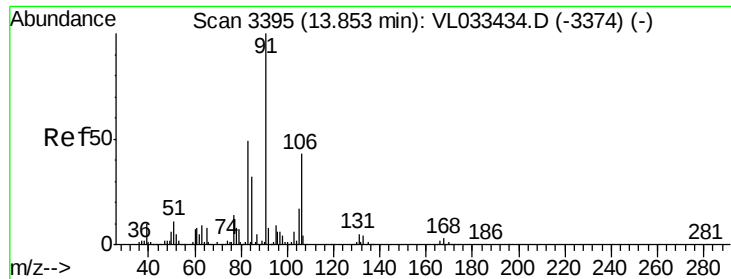
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#59
m/p-Xylene
Concen: 0.468 ppbv m
RT: 13.12 min Scan# 3168
Delta R.T. -0.03 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Tgt Ion: 91 Resp: 108583
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0





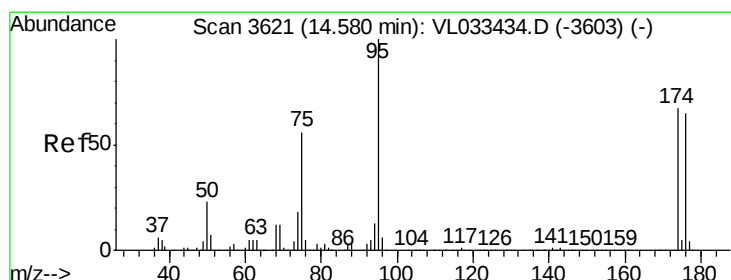
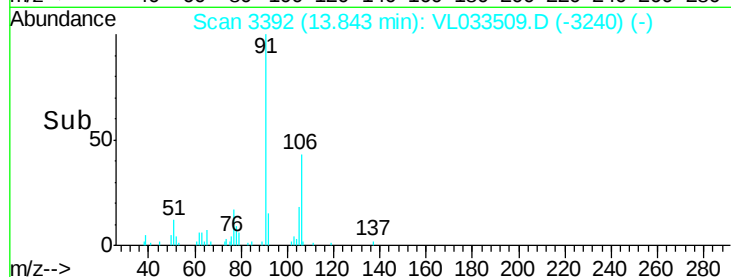
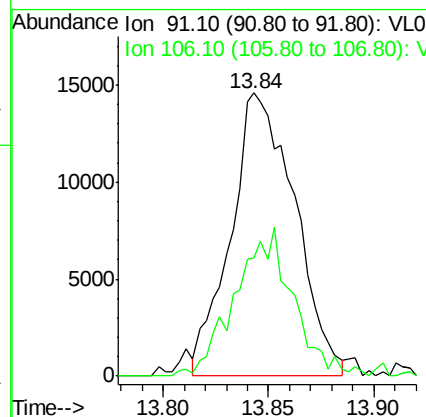
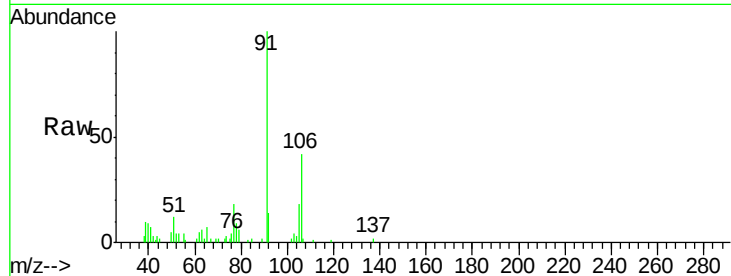
#60
o-Xylene
Concen: 0.137 ppbv
RT: 13.84 min Scan# 3392
Delta R.T. -0.01 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Instrument :
MSVOA_L
ClientSampled :
SG-4

Tot Ion: 91 Resp: 30801
Ion Ratio Lower Upper
91 100
106 47.8 21.4 64.3

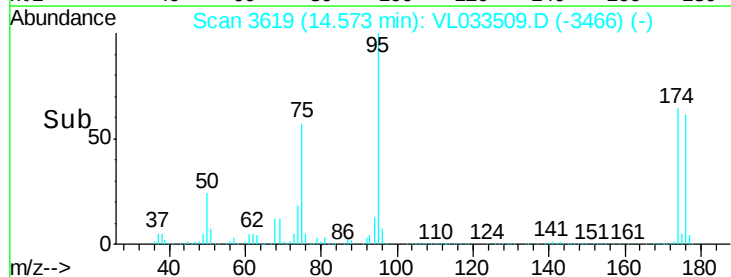
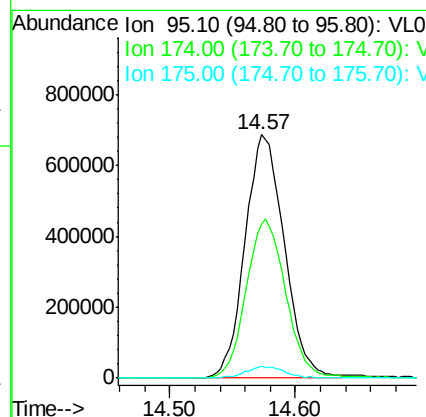
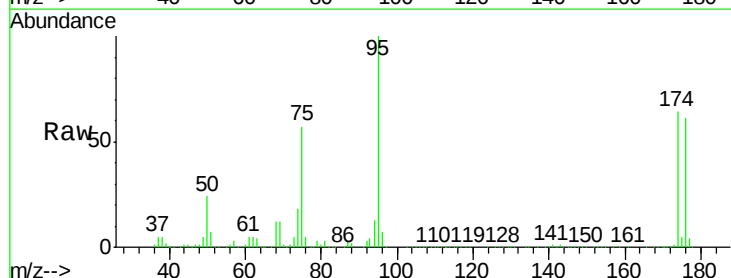
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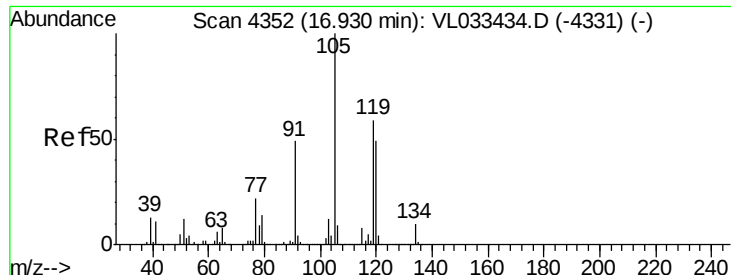
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#68
1-Bromo-4-Fluorobenzene
Concen: 9.800 ppbv
RT: 14.57 min Scan# 3619
Delta R.T. -0.01 min
Lab File: VL033509.D
Acq: 29 Mar 2019 19:34

Tgt Ion: 95 Resp: 1495408
Ion Ratio Lower Upper
95 100
174 66.4 52.9 79.3
175 4.8 3.8 5.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.100 ppbv m
 RT: 16.92 min Scan# 4349
 Delta R.T. -0.01 min
 Lab File: VL033509.D
 Acq: 29 Mar 2019 19:34

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-4

Tot Ion:	105	Resp:	25935
Ion Ratio		Lower	Upper
105	100		
120	34.8	39.0	58.6#
91	11.3	40.0	60.0#
77	18.1	17.5	26.3

Manual Integrations
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MMDadoda
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