

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL070518\
 Data File : VL032212.D
 Acq On : 5 Jul 2018 20:45
 Operator : SY/AP
 Sample : J3867-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 539A

Manual Integrations
 APPROVED

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 7/9/2018 10:47:35 AM

Quant Time: Jul 06 17:04:24 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL062918AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 29 2018
 QLast Update : Fri Jun 29 22:27:58 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.84	49	1465733	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.38	114	3755986	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.34	117	3788187	10.00	ppbv	-0.02

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.67	95	2873859	9.92	ppbv	-0.03	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.20%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.13	85	33807	0.18	ppbv	93
3) Chlorodifluoromethane	3.07	51	95204	0.53	ppbv	96
4) Chloromethane	3.23	50	55159	0.58	ppbv	91
9) Propene	3.09	41	70316	0.84	ppbv	87
10) Heptane	8.34	43	65976	0.27	ppbv	95
11) Trichlorofluoromethane	4.07	101	71489	0.34	ppbv	96
13) Ethanol	3.72	45	325332	12.86	ppbv	97
15) Acetone	3.96	43	1878914	10.96	ppbv	99
17) tert-Butyl alcohol	4.44	59	34646m	0.32	ppbv	
20) Methylene Chloride	4.48	84	379878	6.07	ppbv	94
26) Hexane	5.86	57	3012780	18.45	ppbv #	45
27) Carbon Disulfide	4.69	76	82113	0.51	ppbv #	95
30) Cyclohexane	7.34	84	36841	0.24	ppbv #	84
34) 2-Butanone	5.41	43	259830	1.09	ppbv	100
35) Carbon Tetrachloride	7.23	117	18396	0.07	ppbv #	92
36) Benzene	7.09	78	133631	0.37	ppbv	98
38) Trichloroethene	8.05	130	66147	0.47	ppbv	97
44) 2,2,4-Trimethylpentane	8.08	57	246069	0.39	ppbv #	78
52) Tetrachloroethene	11.47	164	7940m	0.06	ppbv	
53) Toluene	10.04	91	478866	1.09	ppbv	100
58) Ethyl Benzene	12.96	91	157511	0.26	ppbv #	88
59) m/p-Xylene	13.22	91	407690m	0.83	ppbv	
60) o-Xylene	13.95	91	205756	0.42	ppbv	93
72) 4-Ethyltoluene	16.10	105	89040	0.14	ppbv #	94
73) 1,3,5-Trimethylbenzene	16.25	105	116947m	0.20	ppbv	
74) 1,2,4-Trimethylbenzene	17.02	105	316107	0.53	ppbv #	75

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

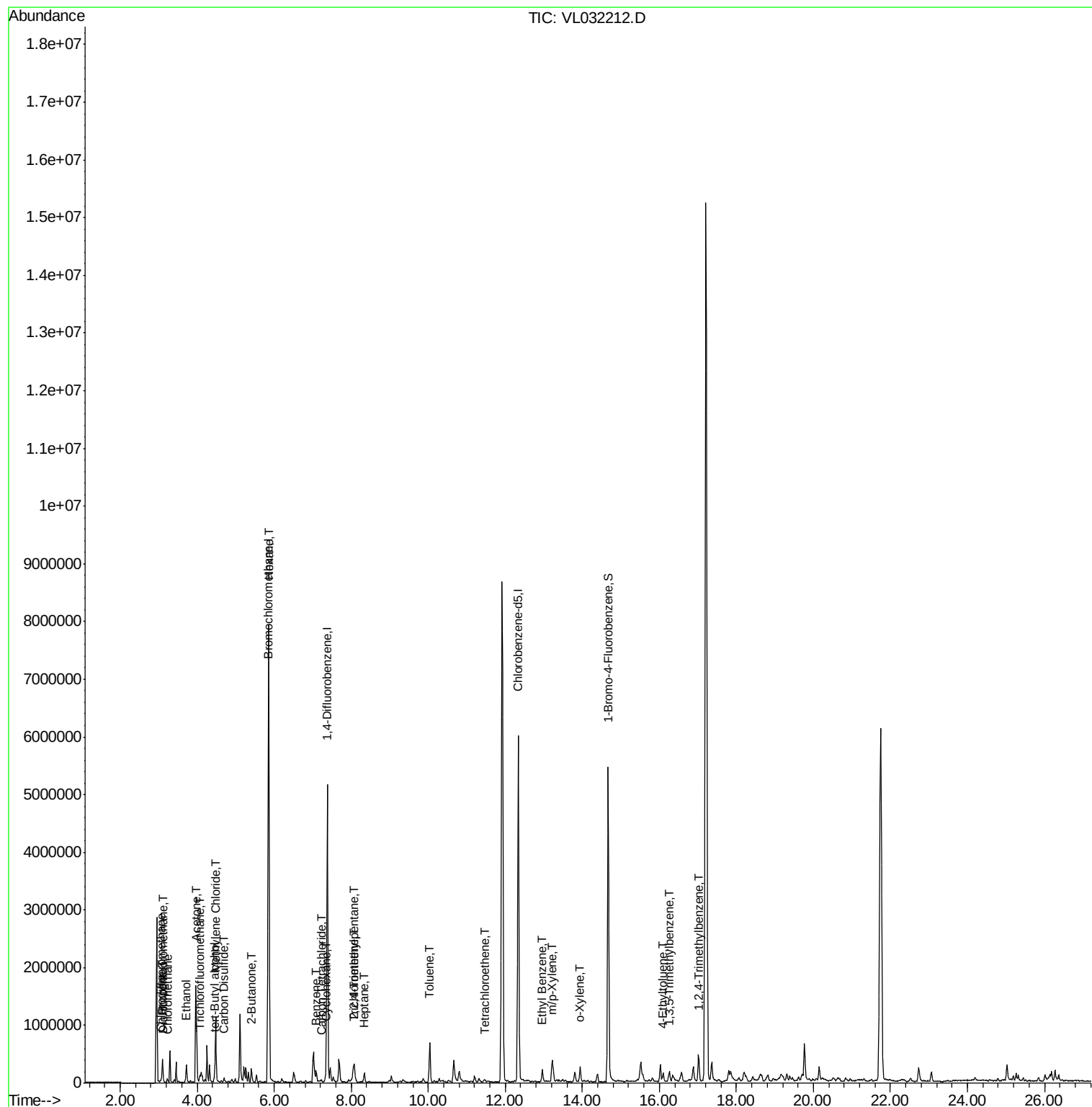
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL070518\
Data File : VL032212.D
Acq On : 5 Jul 2018 20:45
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Misc : 400ml/MSVOA L
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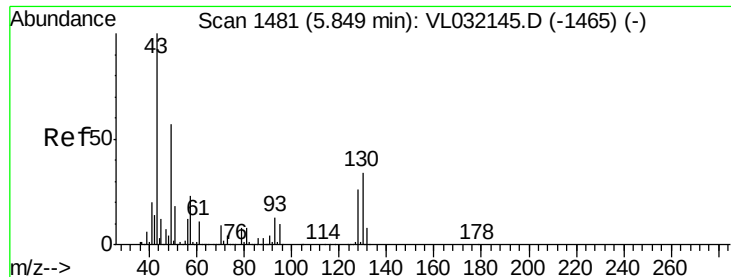
Instrument :
MSVOA_L
ClientSampleId :
539A

Manual Integrations
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7/9/2018 10:47:35 AM

Quant Time: Jul 06 17:04:24 2018
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL062918AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun
QLast Update : Fri Jun 29 22:27:58 2018
Response via : Initial Calibration





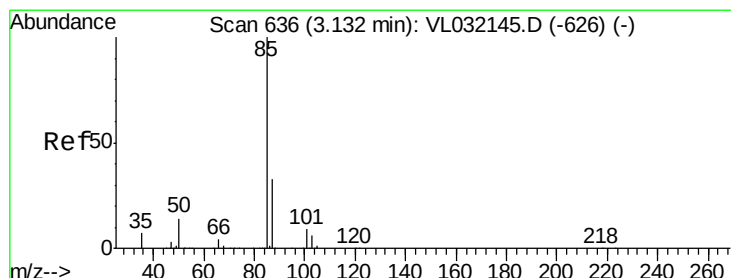
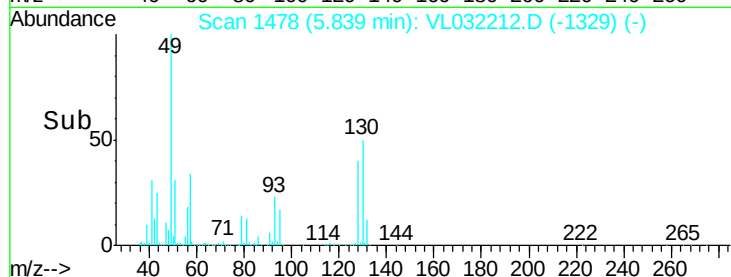
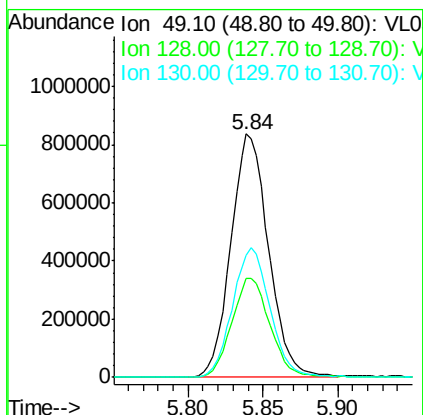
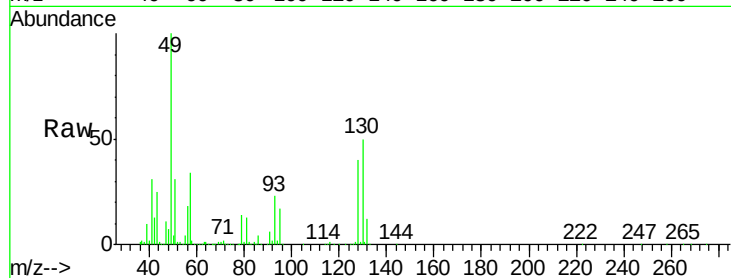
#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 5.84 min Scan# 1478
Delta R.T. -0.02 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Instrument :
MSVOA_L
ClientSampleId :
539A

Tot Ion: 49 Resp: 1465733
Ion Ratio Lower Upper
49 100
128 41.7 23.4 70.0
130 53.5 30.3 90.9

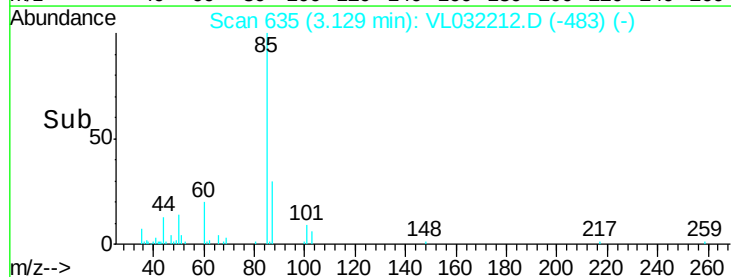
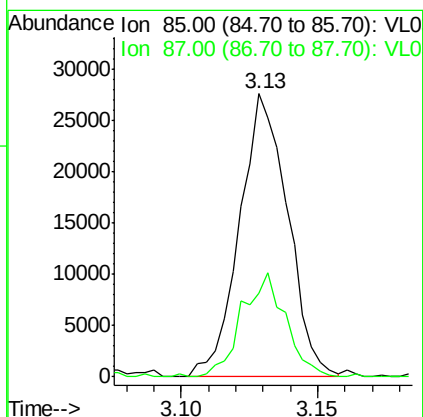
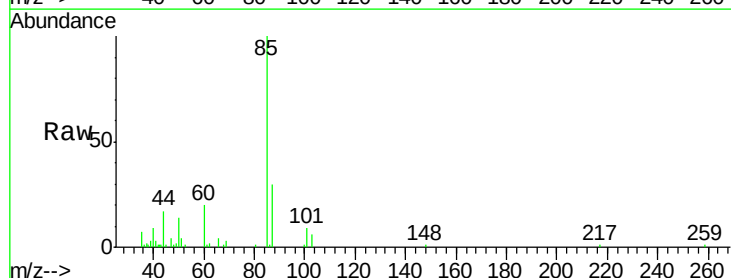
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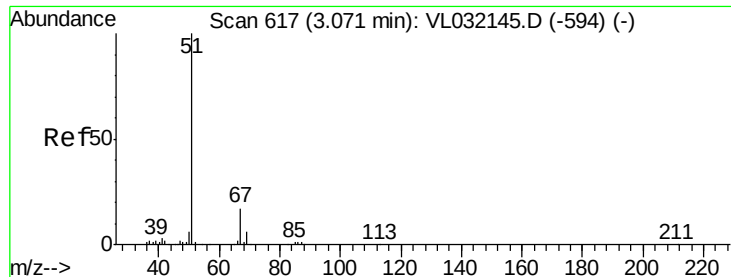
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#2
Dichlorodifluoromethane
Concen: 0.18 ppbv
RT: 3.13 min Scan# 635
Delta R.T. -0.01 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Tgt Ion: 85 Resp: 33807
Ion Ratio Lower Upper
85 100
87 29.6 26.7 40.1





#3

Chlorodifluoromethane

Concen: 0.53 ppbv

RT: 3.07 min Scan# 616

Delta R.T. -0.01 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Instrument :

MSVOA_L

ClientSampleId :

539A

Tot Ion: 51 Resp: 95204

Ion Ratio Lower Upper

51 100

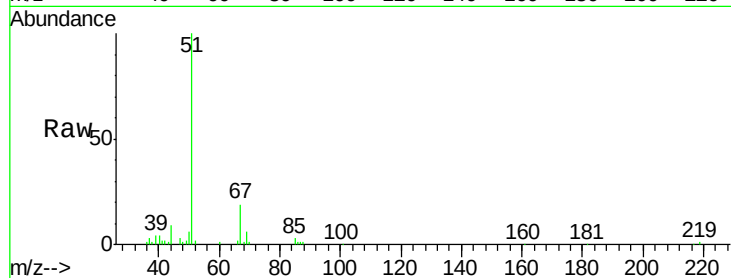
67 14.9 13.2 19.8

Manual Integrations

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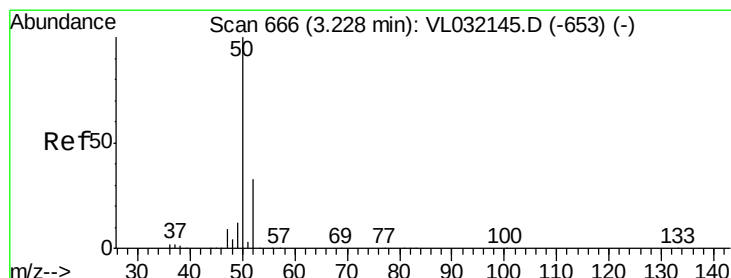
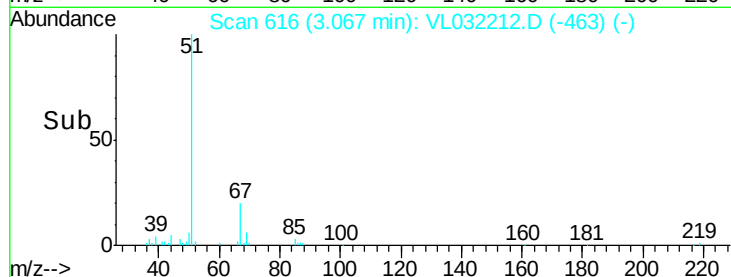
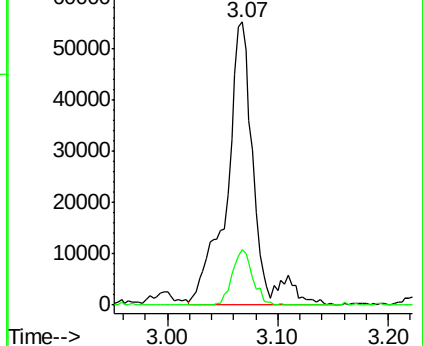
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.58 ppbv

RT: 3.23 min Scan# 665

Delta R.T. -0.01 min

Lab File: VL032212.D

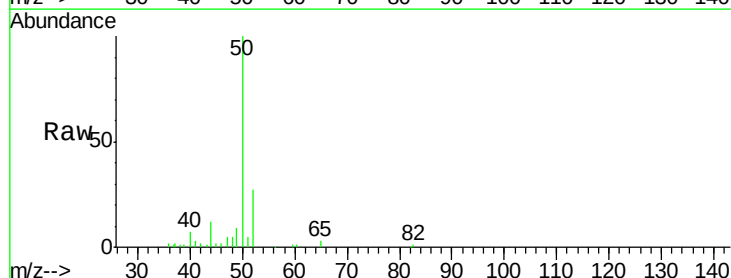
Acq: 5 Jul 2018 20:45

Tgt Ion: 50 Resp: 55159

Ion Ratio Lower Upper

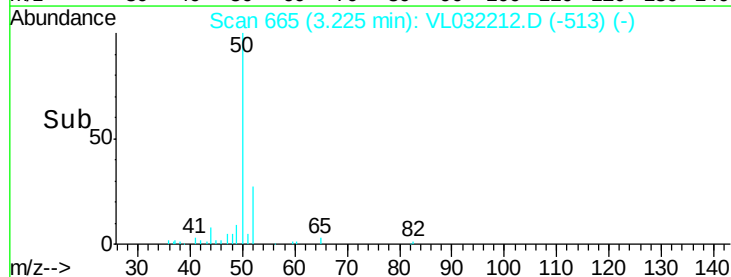
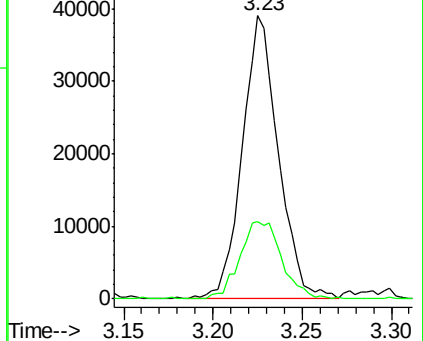
50 100

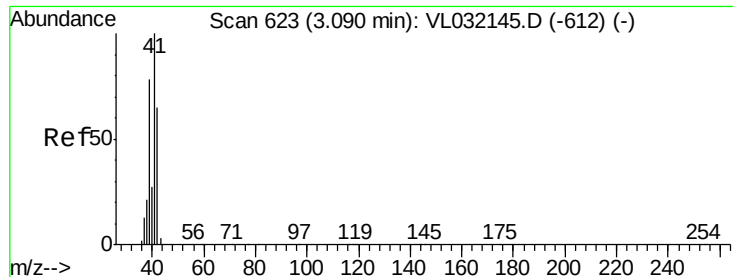
52 27.5 26.0 39.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.84 ppbv

RT: 3.09 min Scan# 624

Delta R.T. -0.01 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Instrument :

MSVOA_L

ClientSampled :

539A

Tot Ion: 41 Resp: 70316

Ion Ratio Lower Upper

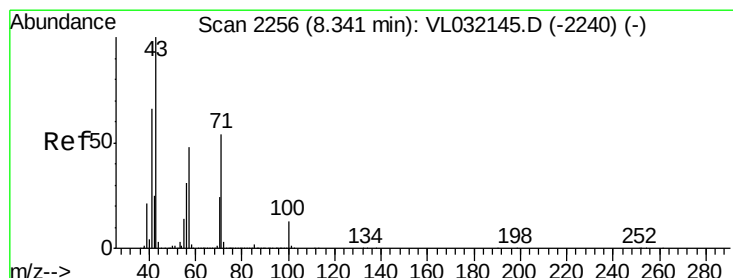
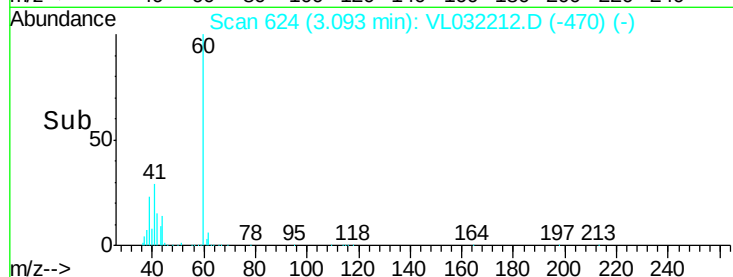
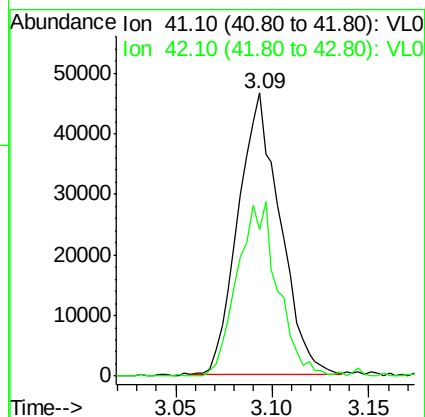
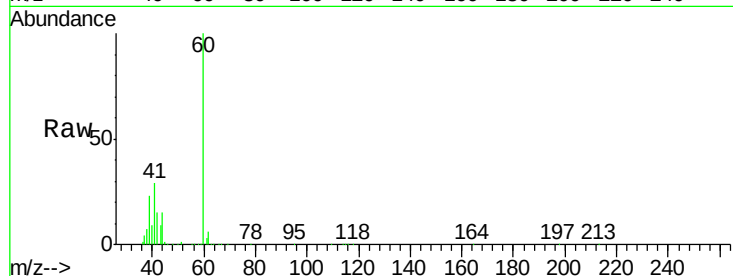
41 100

42 60.0 56.2 84.4

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#10

Heptane

Concen: 0.27 ppbv

RT: 8.34 min Scan# 2256

Delta R.T. -0.02 min

Lab File: VL032212.D

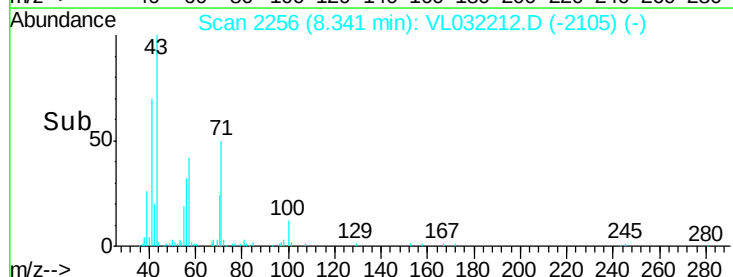
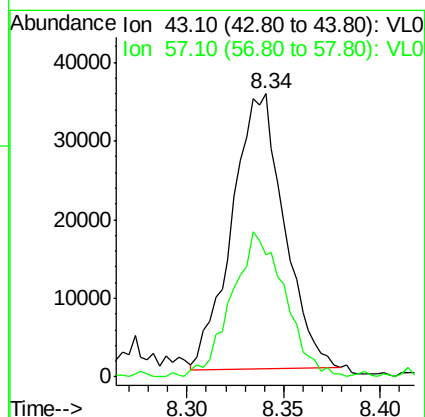
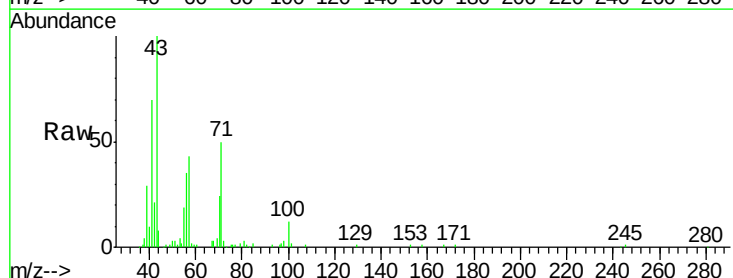
Acq: 5 Jul 2018 20:45

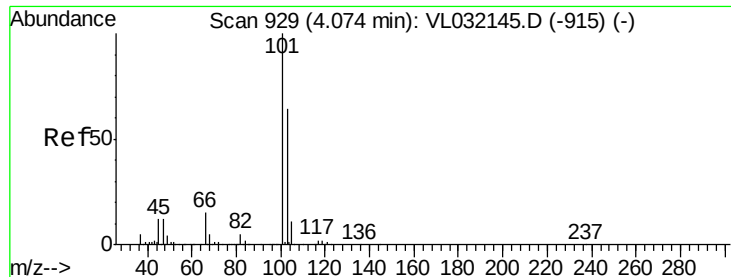
Tgt Ion: 43 Resp: 65976

Ion Ratio Lower Upper

43 100

57 53.5 39.8 59.8





#11

Trichlorofluoromethane

Concen: 0.34 ppbv

RT: 4.07 min Scan# 929

Delta R.T. -0.01 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Instrument :

MSVOA_L

ClientSampleId :

539A

Tot Ion:101 Resp: 71489

Ion Ratio Lower Upper

101 100

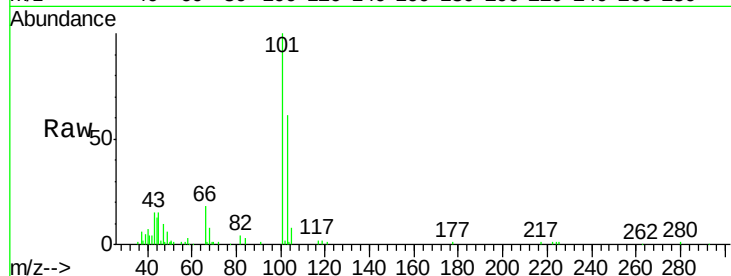
103 61.3 51.4 77.0

Manual Integrations

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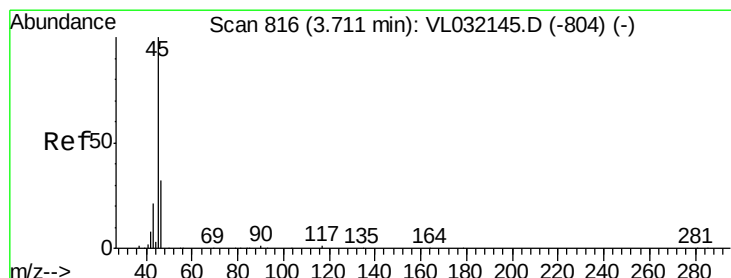
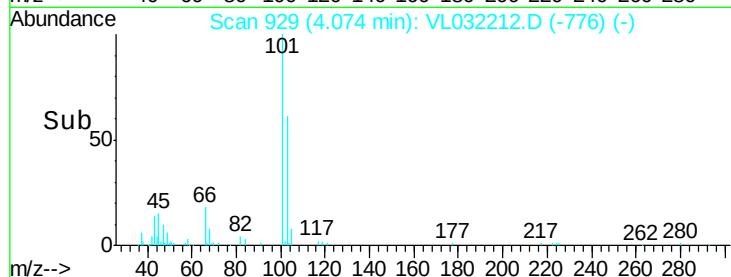
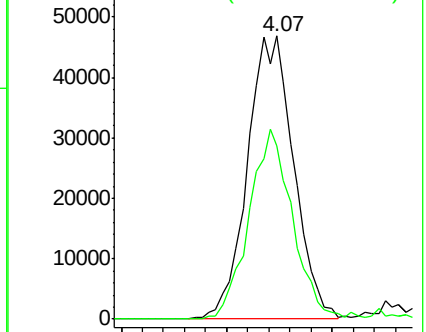
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Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#13

Ethanol

Concen: 12.86 ppbv

RT: 3.72 min Scan# 818

Delta R.T. -0.01 min

Lab File: VL032212.D

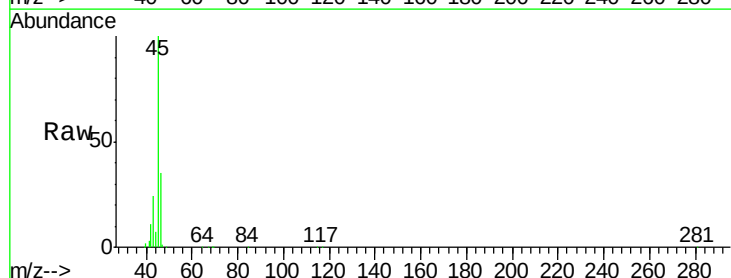
Acq: 5 Jul 2018 20:45

Tgt Ion: 45 Resp: 325332

Ion Ratio Lower Upper

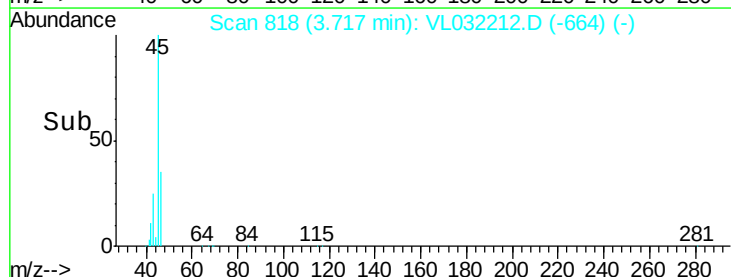
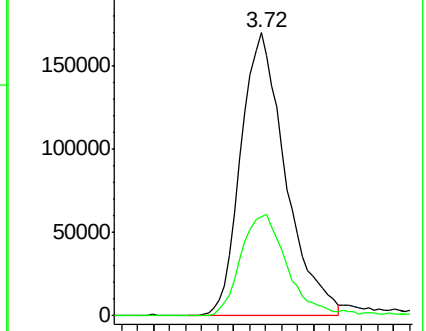
45 100

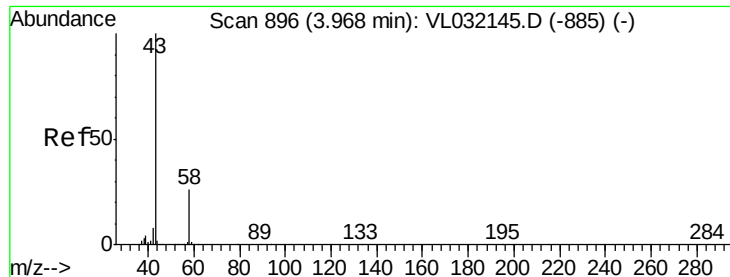
46 38.5 14.6 58.4



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 10.96 ppbv

RT: 3.96 min Scan# 895

Delta R.T. -0.01 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Instrument :

MSVOA_L

ClientSampleId :

539A

Tot Ion: 43 Resp: 1878914

Ion Ratio Lower Upper

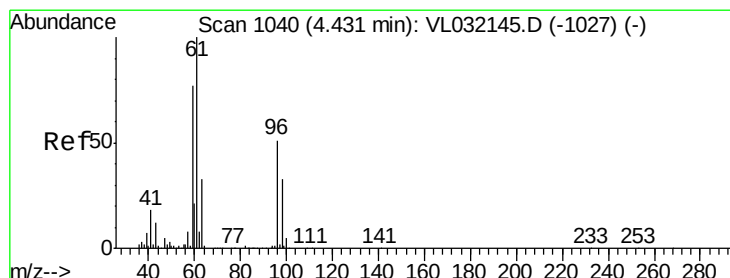
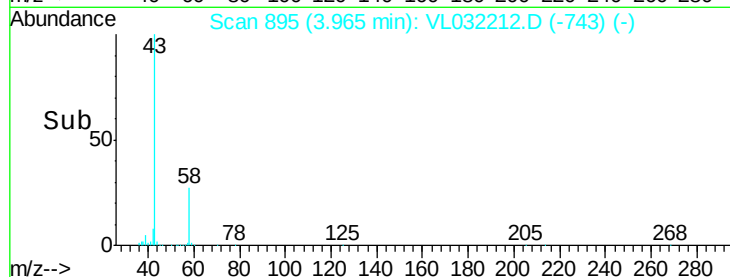
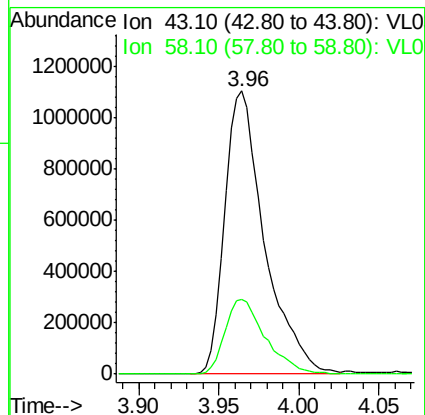
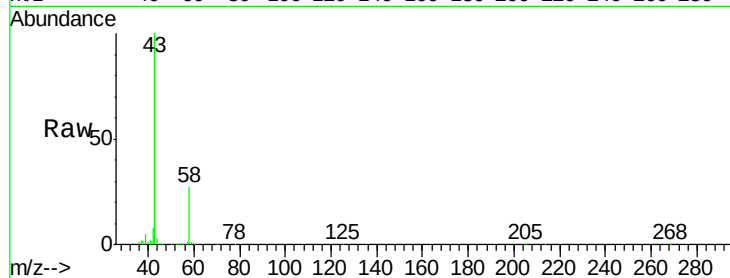
43 100

58 27.0 21.4 32.0

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#17

tert-Butyl alcohol

Concen: 0.32 ppbv m

RT: 4.44 min Scan# 1043

Delta R.T. 0.00 min

Lab File: VL032212.D

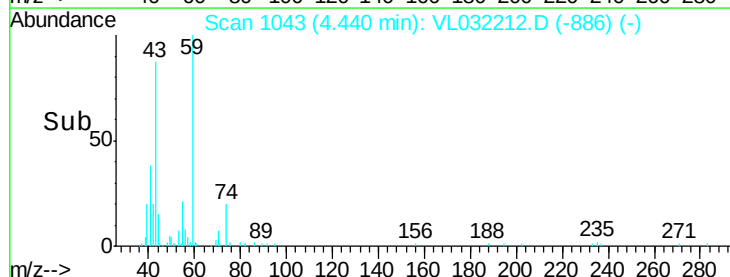
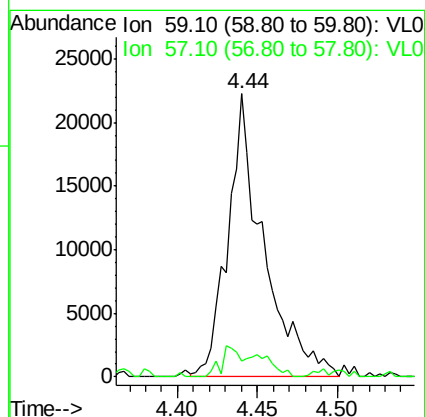
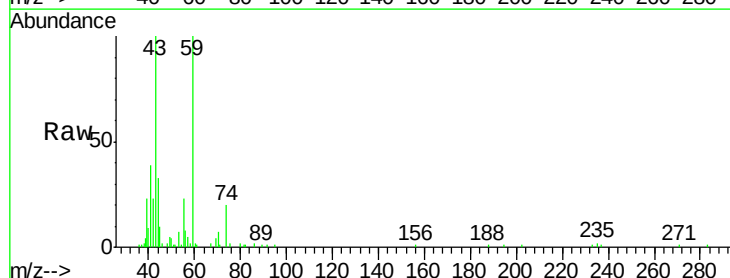
Acq: 5 Jul 2018 20:45

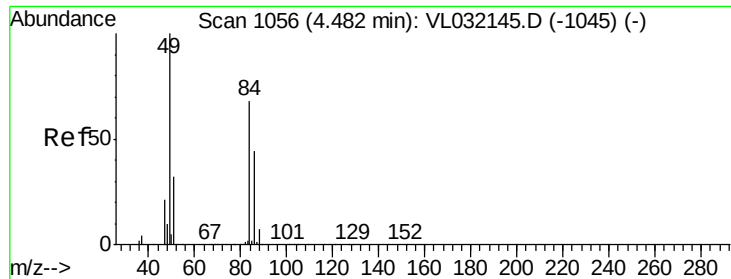
Tgt Ion: 59 Resp: 34646

Ion Ratio Lower Upper

59 100

57 0.0 8.2 12.2#





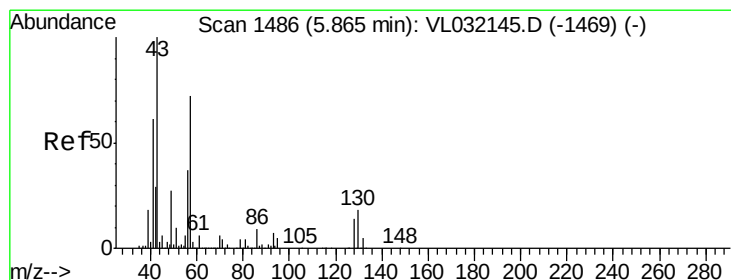
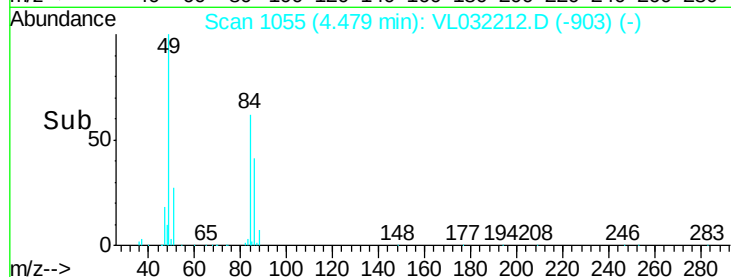
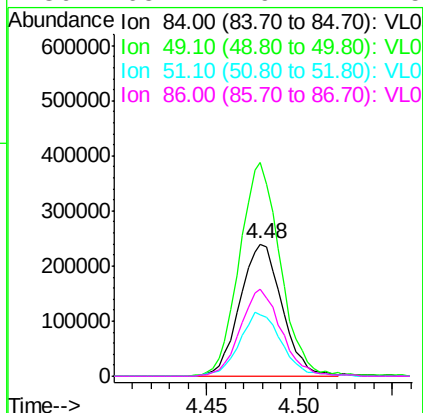
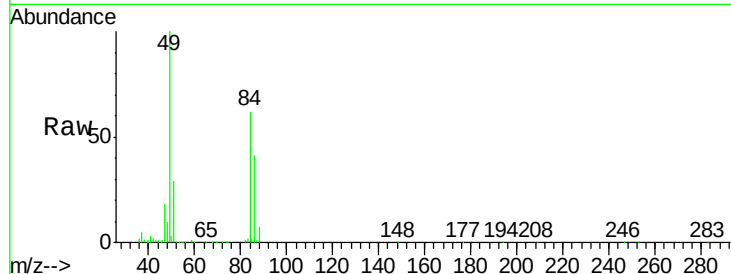
#20
Methvlene Chloride
Concen: 6.07 ppbv
RT: 4.48 min Scan# 1055
Delta R.T. -0.01 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Instrument :
MSVOA_L
ClientSampleId :
539A

Tot Ion	Ion	Ratio	Lower	Upper
84	100			
49	160.9	119.6	179.4	
51	45.9	36.3	54.5	
86	65.2	49.7	74.5	

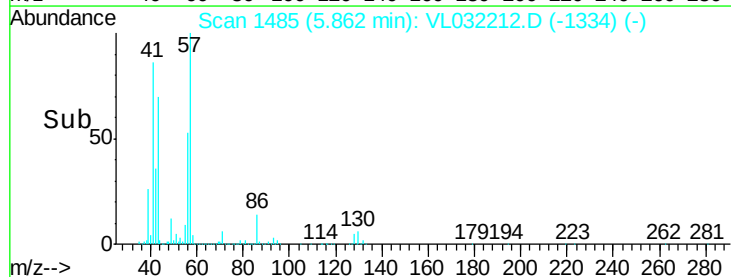
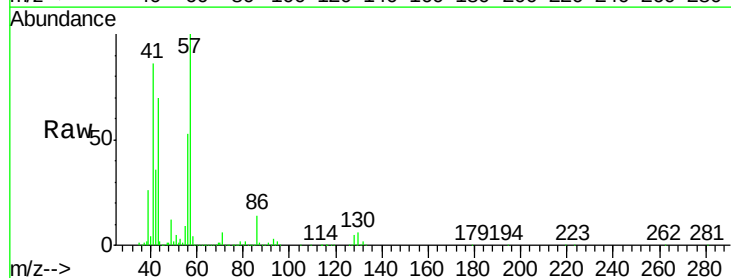
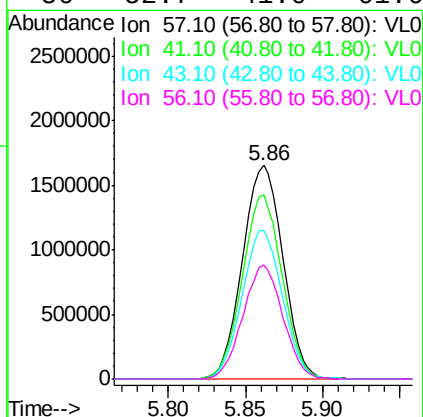
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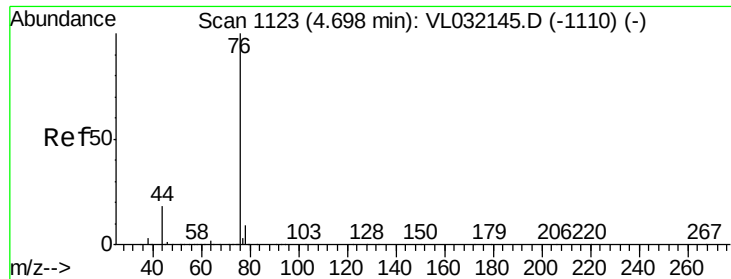
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#26
Hexane
Concen: 18.45 ppbv
RT: 5.86 min Scan# 1485
Delta R.T. -0.02 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Tgt Ion	Ion	Ratio	Lower	Upper
57	100			
41	85.5	68.6	103.0	
43	69.8	168.6	252.8	
56	52.7	41.0	61.6	





#27

Carbon Disulfide

Concen: 0.51 ppbv

RT: 4.69 min Scan# 1122

Delta R.T. -0.01 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Instrument :

MSVOA_L

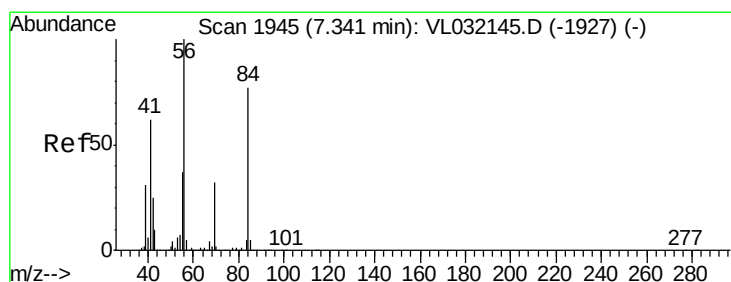
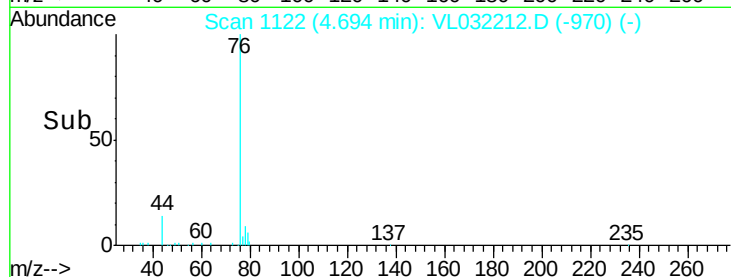
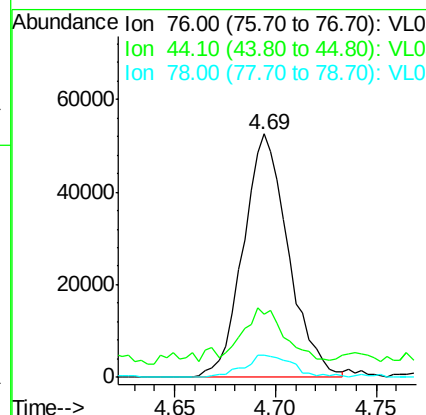
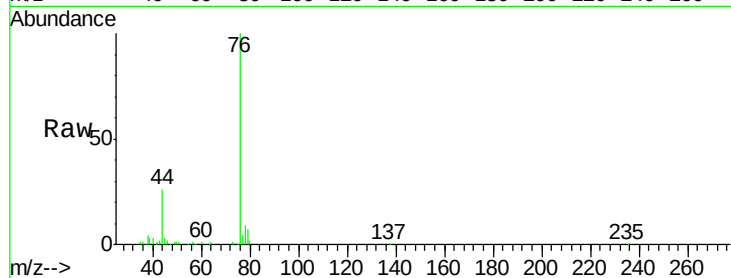
ClientSampleId :

539A

Tot Ion:	76	Resp:	82113
Ion Ratio	Lower	Upper	
76	100		
44	21.1	15.1	22.7
78	10.9	7.2	10.8#

Manual Integrations
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#30

Cyclohexane

Concen: 0.24 ppbv

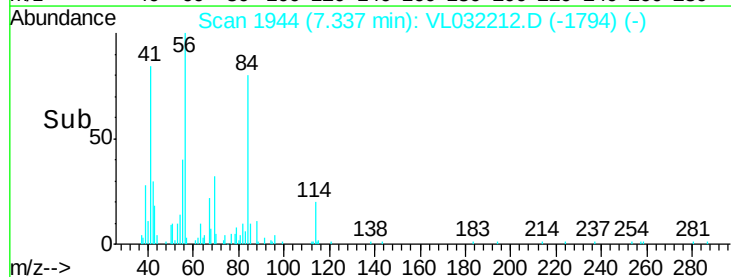
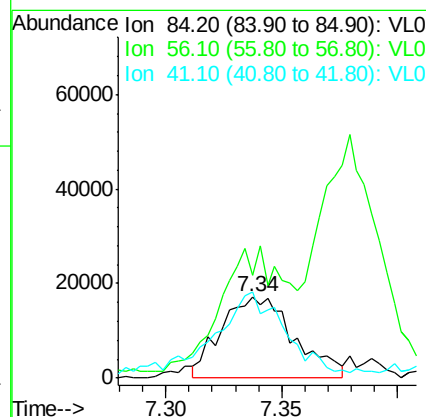
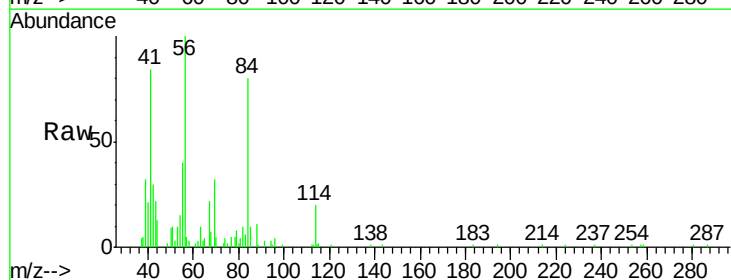
RT: 7.34 min Scan# 1944

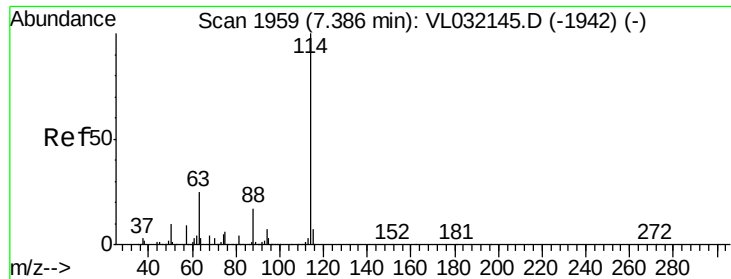
Delta R.T. -0.02 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Tgt Ion:	84	Resp:	36841
Ion Ratio	Lower	Upper	
84	100		
56	153.4	109.1	163.7
41	98.4	64.6	96.8#





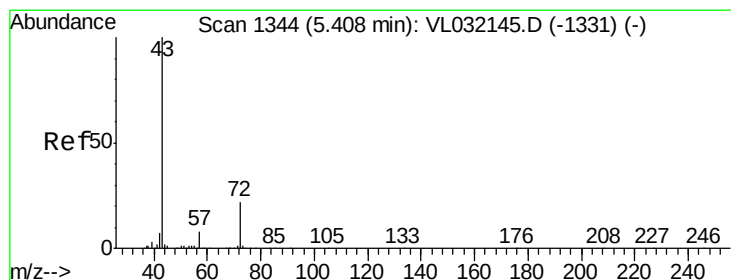
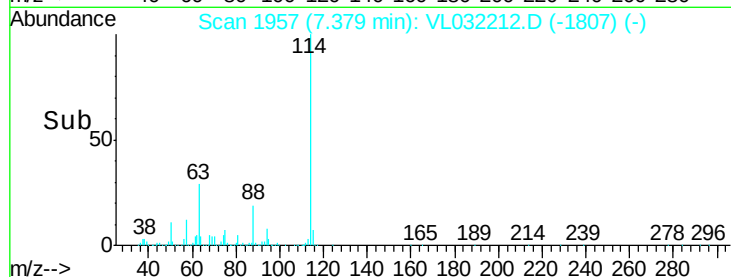
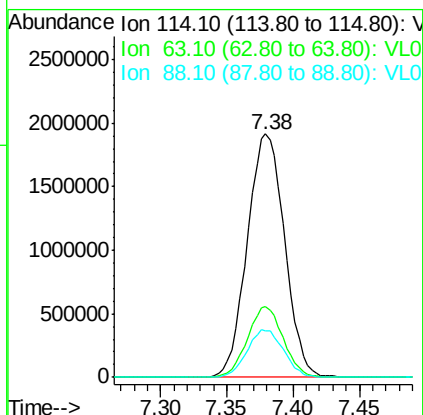
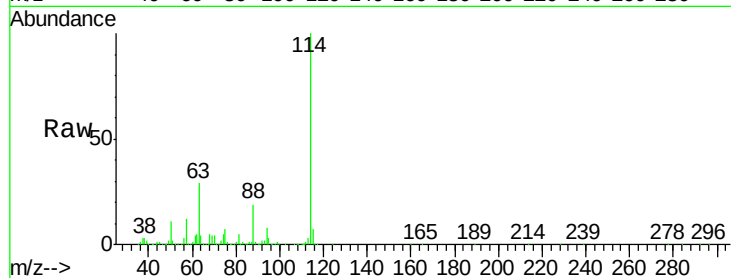
#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 7.38 min Scan# 1957
 Delta R.T. -0.02 min
 Lab File: VL032212.D
 Acq: 5 Jul 2018 20:45

Instrument :
 MSVOA_L
 ClientSampleId :
 539A

Tot Ion	Ratio	Lower	Upper
114	100		
63	28.0	19.1	28.7
88	19.1	13.9	20.9

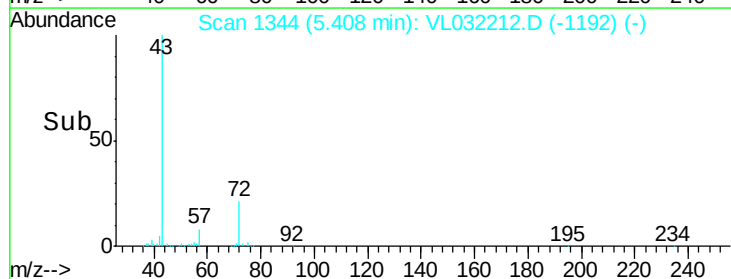
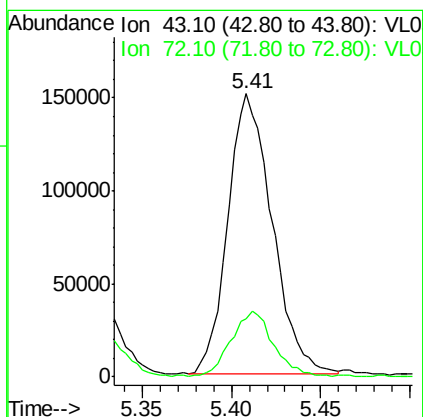
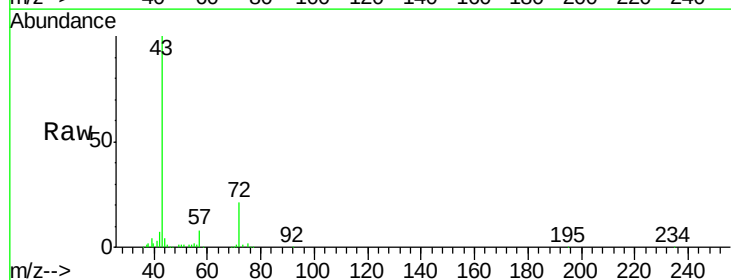
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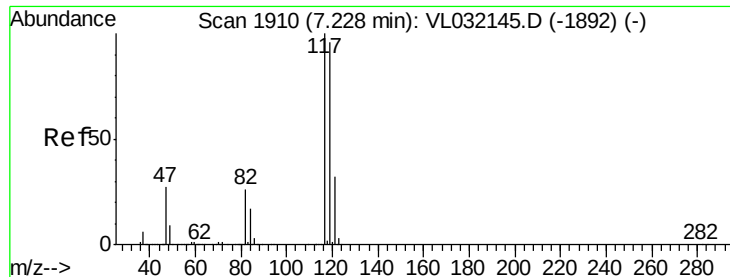
MMDadoda
 7/9/2018 10:47:35 AM



#34
 2-Butanone
 Concen: 1.09 ppbv
 RT: 5.41 min Scan# 1344
 Delta R.T. -0.01 min
 Lab File: VL032212.D
 Acq: 5 Jul 2018 20:45

Tgt Ion	Ratio	Lower	Upper
43	100		
72	23.2	18.4	27.6





#35

Carbon Tetrachloride

Concen: 0.07 ppbv

RT: 7.23 min Scan# 1910

Delta R.T. -0.01 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Instrument :

MSVOA_L

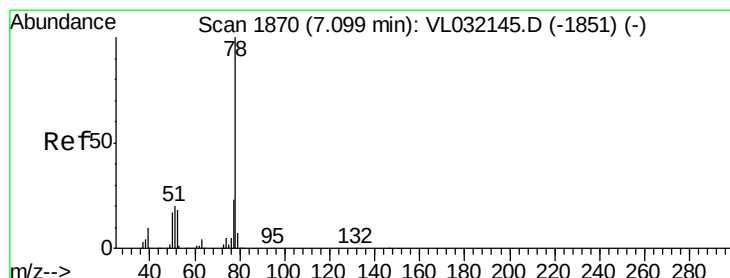
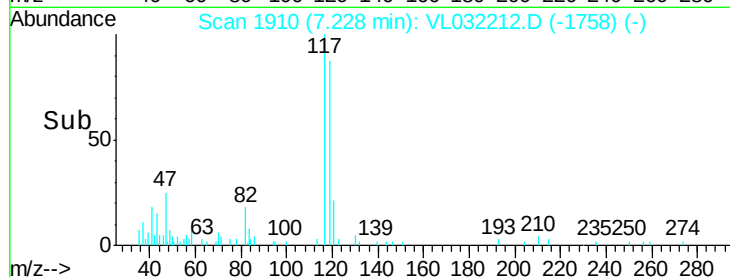
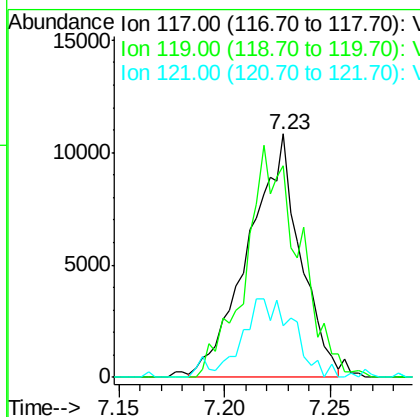
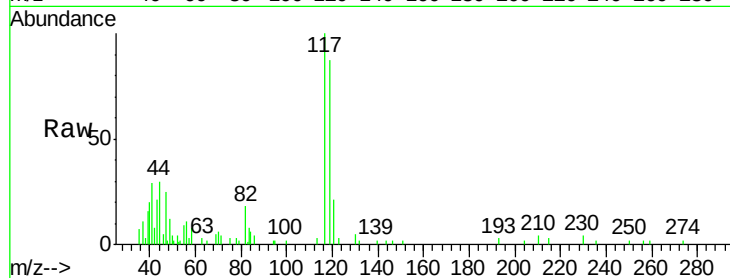
ClientSampleId :

539A

Tot Ion:	117	Resp:	18396
Ion Ratio	Lower	Upper	
117	100		
119	88.1	74.8	112.2
121	21.7	24.0	36.0#

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#36

Benzene

Concen: 0.37 ppbv

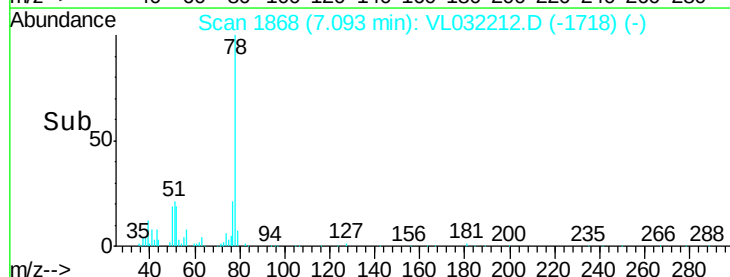
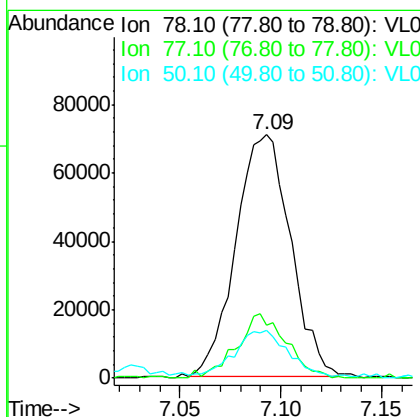
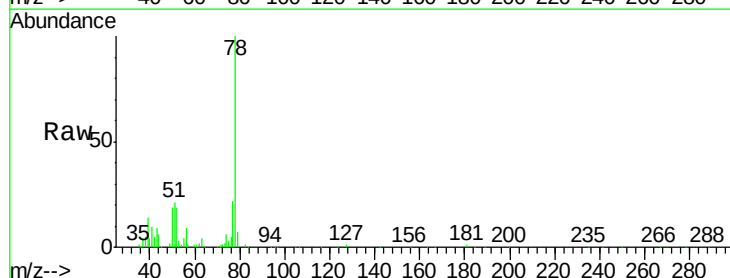
RT: 7.09 min Scan# 1868

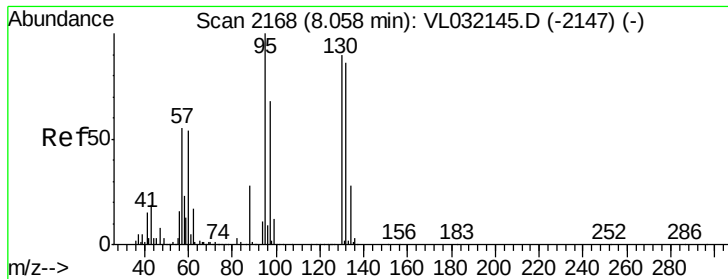
Delta R.T. -0.02 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Tgt Ion:	78	Resp:	133631
Ion Ratio	Lower	Upper	
78	100		
77	21.2	17.7	26.5
50	18.5	14.0	21.0





#38

Trichloroethene

Concen: 0.47 ppbv

RT: 8.05 min Scan# 2166

Delta R.T. -0.02 min

Lab File: VL032212.D

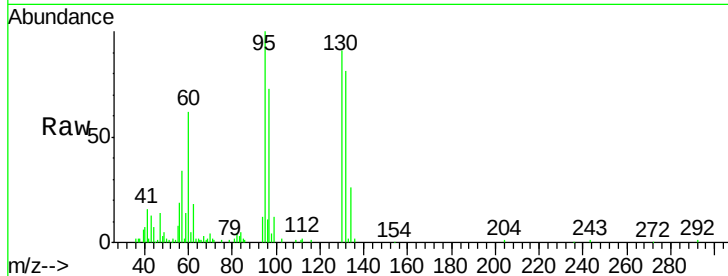
Acq: 5 Jul 2018 20:45

Instrument :

MSVOA_L

ClientSampleId :

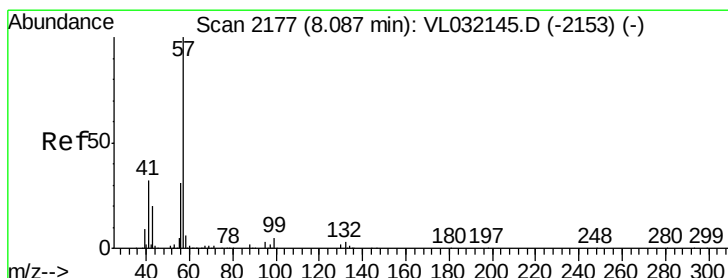
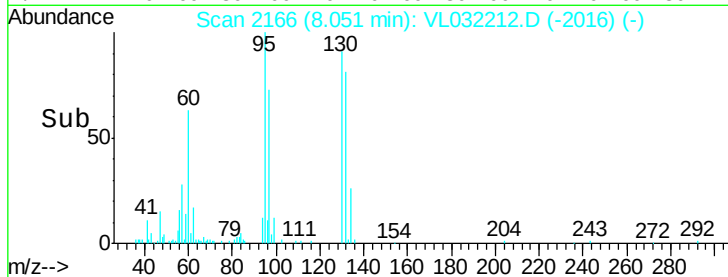
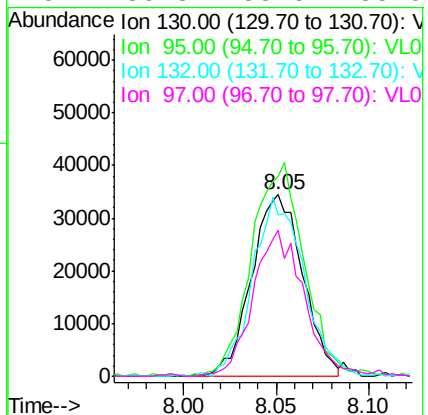
539A



Tot Ion	Ratio	Lower	Upper
130	100		
95	110.0	88.1	132.1
132	90.6	74.6	112.0
97	80.3	58.6	88.0

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#44

2,2,4-Trimethylpentane

Concen: 0.39 ppbv

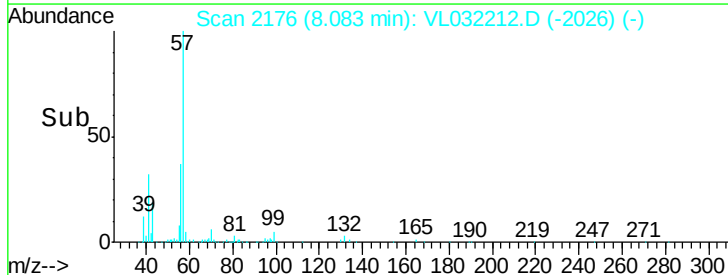
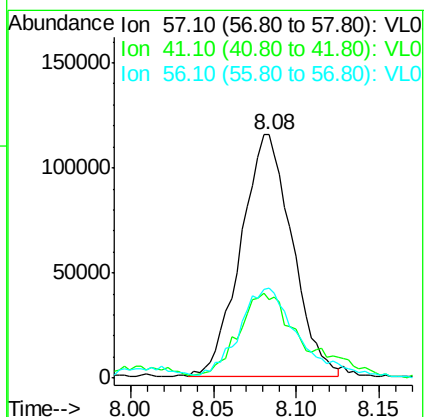
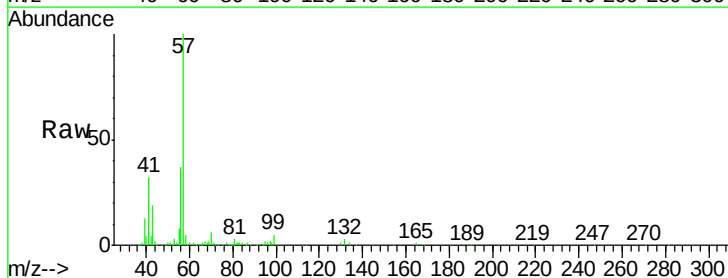
RT: 8.08 min Scan# 2176

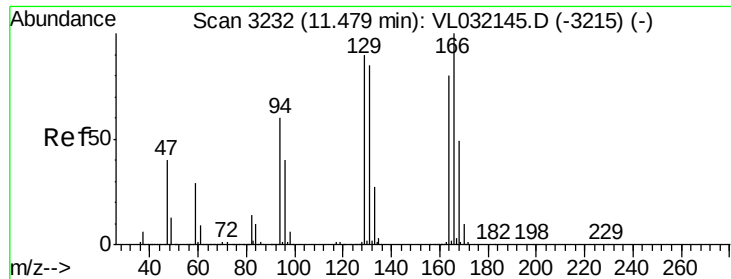
Delta R.T. -0.02 min

Lab File: VL032212.D

Acq: 5 Jul 2018 20:45

Tgt Ion	Ratio	Lower	Upper
57	100		
41	42.3	24.3	36.5#
56	44.1	25.1	37.7#





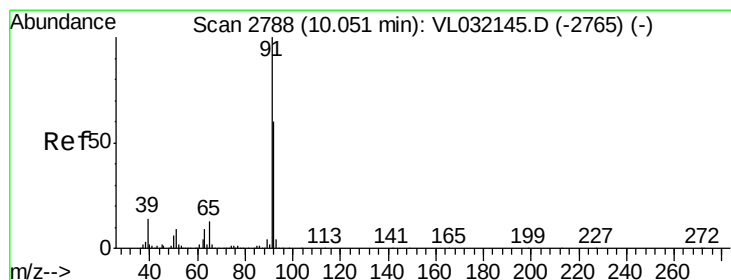
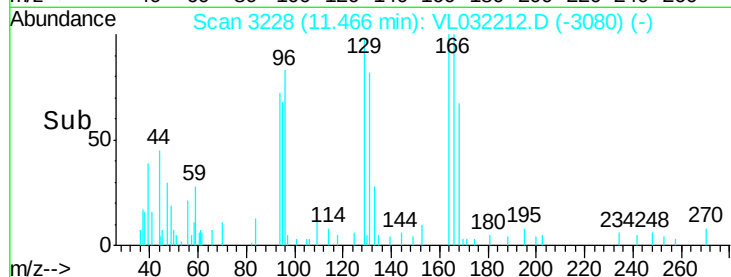
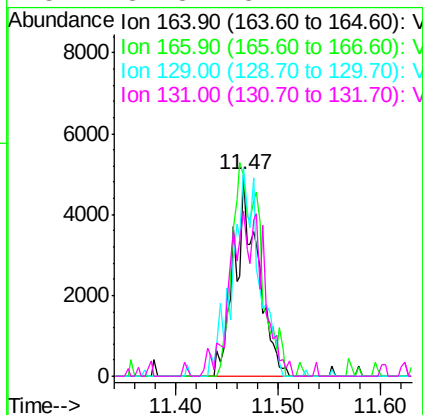
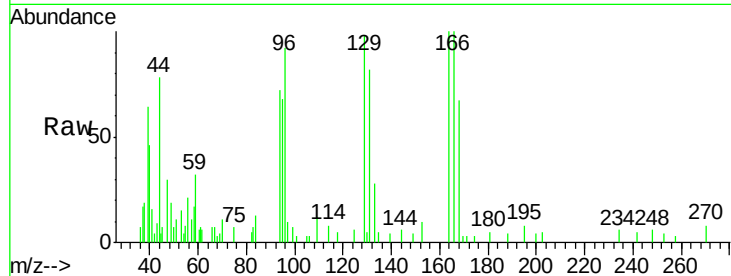
#52
Tetrachloroethene
Concen: 0.06 ppbv m
RT: 11.47 min Scan# 3228
Delta R.T. -0.03 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Instrument :
MSVOA_L
ClientSampleId :
539A

Tot Ion	Ratio	Lower	Upper
164	100		
166	99.6	100.6	151.0#
129	98.5	84.0	126.0
131	81.8	82.7	124.1#

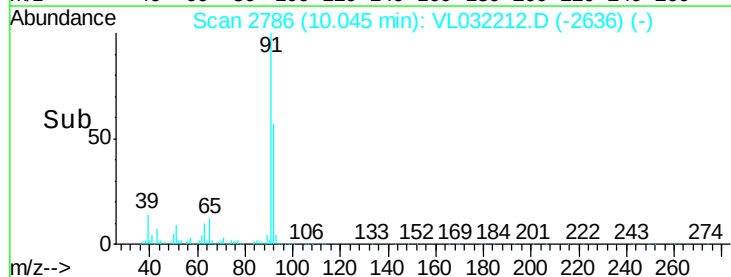
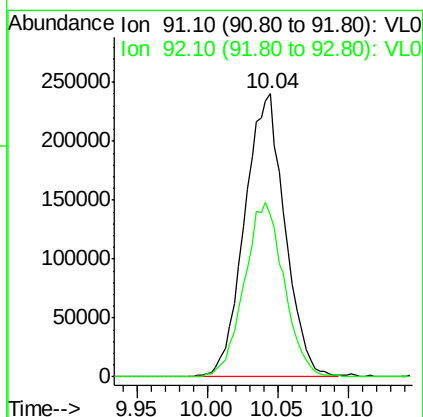
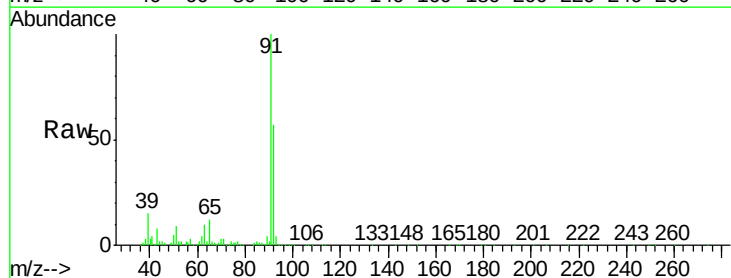
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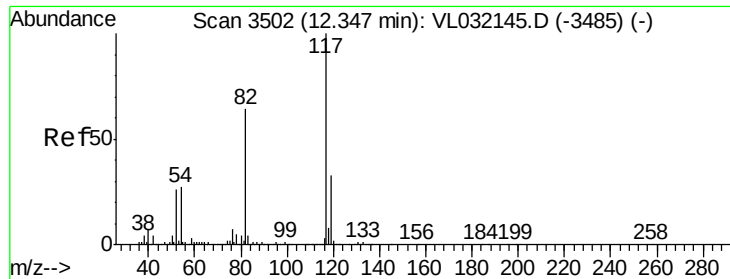
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#53
Toluene
Concen: 1.09 ppbv
RT: 10.04 min Scan# 2786
Delta R.T. -0.02 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Tgt Ion	Ratio	Lower	Upper
91	100		
92	61.3	49.2	73.8





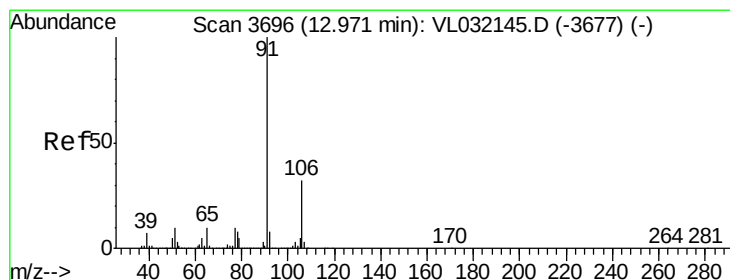
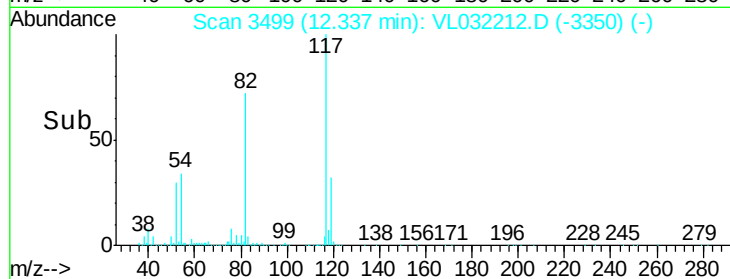
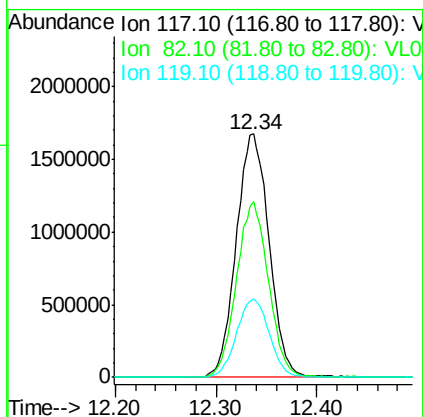
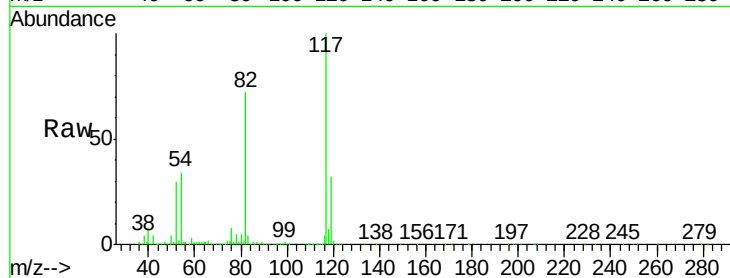
#55
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 12.34 min Scan# 3499
Delta R.T. -0.02 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Instrument :
MSVOA_L
ClientSampled :
539A

Tot Ion	Ratio	Lower	Upper
117	100		
82	70.7	47.8	71.8
119	32.1	43.3	64.9#

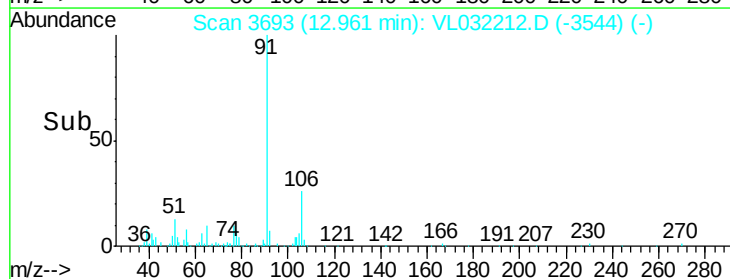
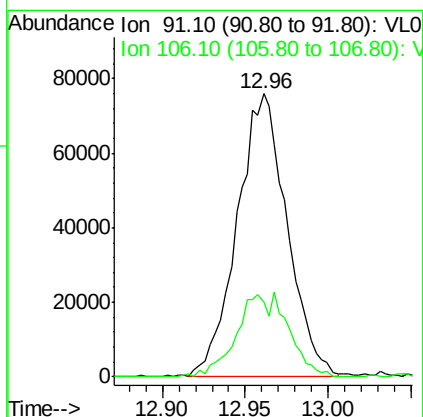
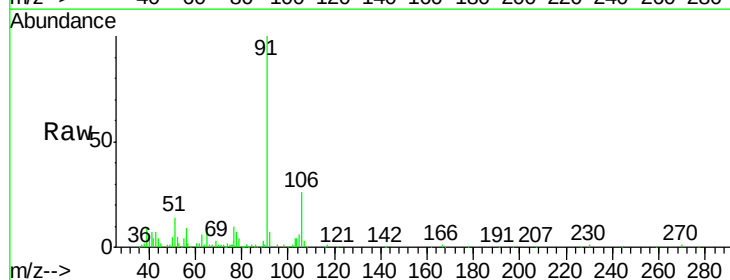
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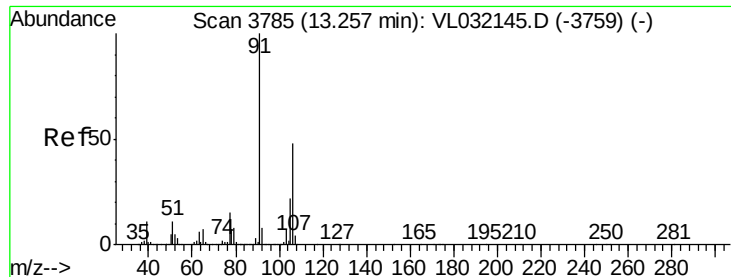
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#58
Ethyl Benzene
Concen: 0.26 ppbv
RT: 12.96 min Scan# 3693
Delta R.T. -0.02 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Tgt Ion	Ratio	Lower	Upper
91	100		
106	26.2	26.5	39.7#





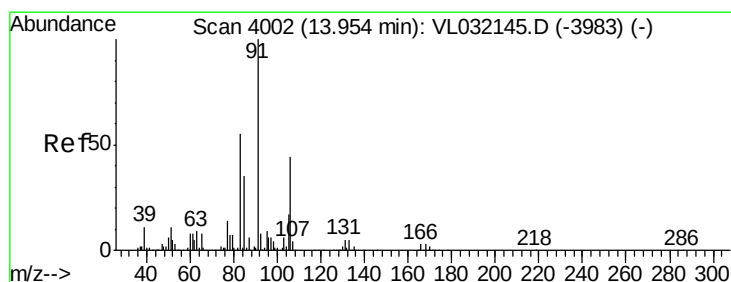
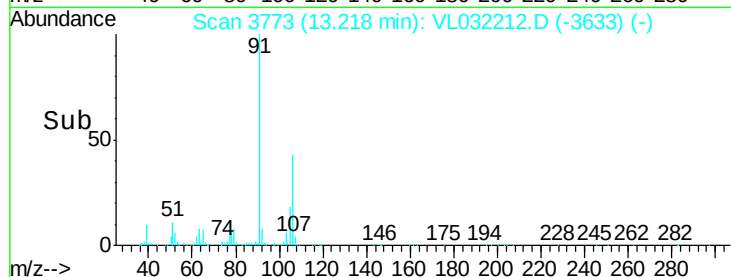
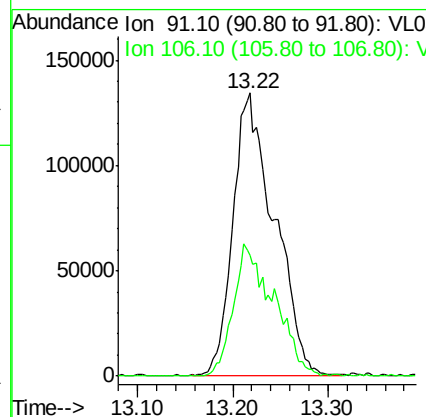
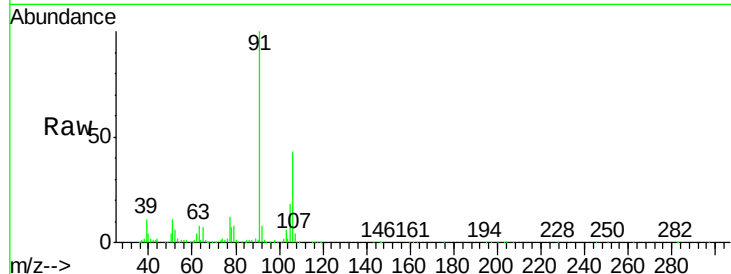
#59
m/p-Xylene
Concen: 0.83 ppbv m
RT: 13.22 min Scan# 3773
Delta R.T. -0.05 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Instrument :
MSVOA_L
ClientSampled :
539A

Tot Ion: 91 Resp: 407690
Ion Ratio Lower Upper
91 100
106 0.0 38.6 58.0#

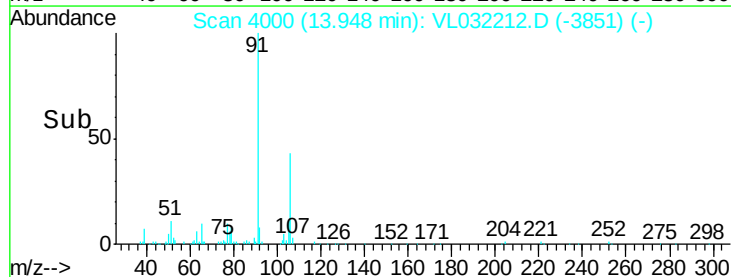
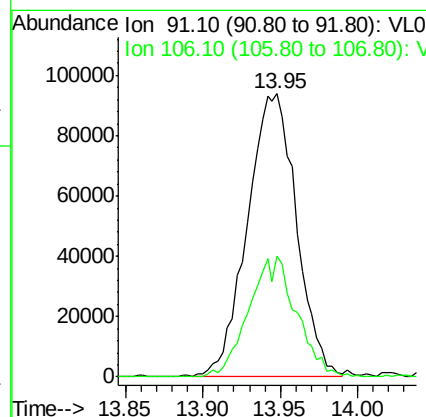
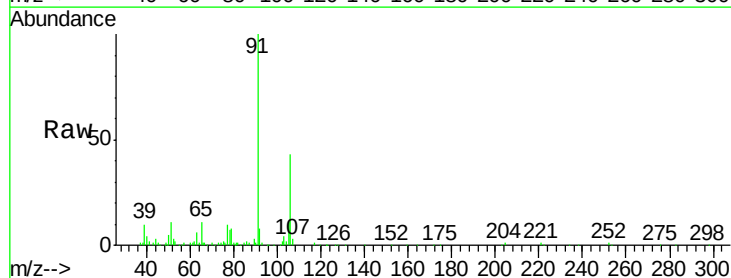
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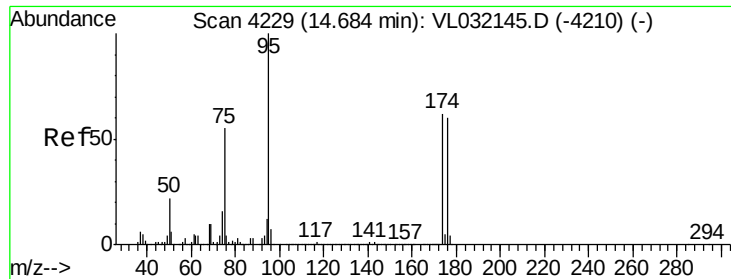
MMDadoda
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#60
o-Xylene
Concen: 0.42 ppbv
RT: 13.95 min Scan# 4000
Delta R.T. -0.02 min
Lab File: VL032212.D
Acq: 5 Jul 2018 20:45

Tgt Ion: 91 Resp: 205756
Ion Ratio Lower Upper
91 100
106 41.6 23.3 69.8





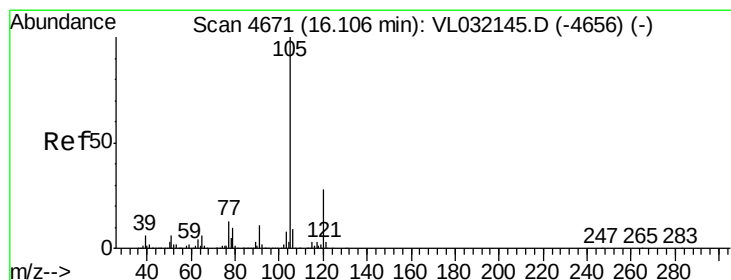
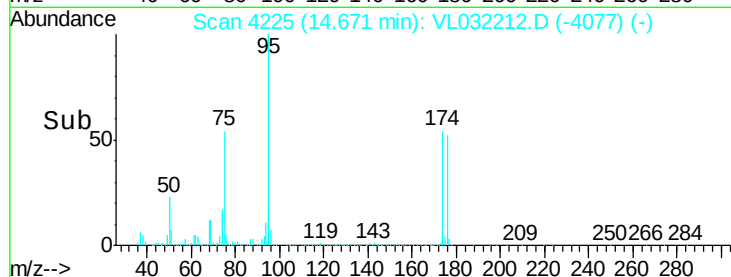
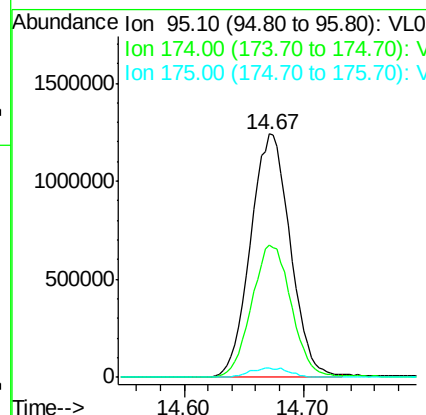
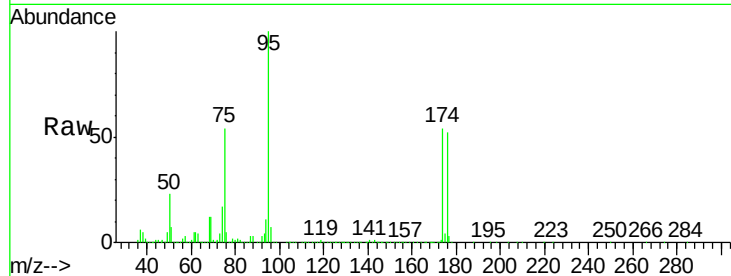
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.92 ppbv
 RT: 14.67 min Scan# 4225
 Delta R.T. -0.03 min
 Lab File: VL032212.D
 Acq: 5 Jul 2018 20:45

Instrument :
 MSVOA_L
 ClientSampleId :
 539A

Tot Ion: 95 Resp: 2873859
 Ion Ratio Lower Upper
 95 100
 174 54.8 52.1 78.1
 175 3.9 4.0 6.0#

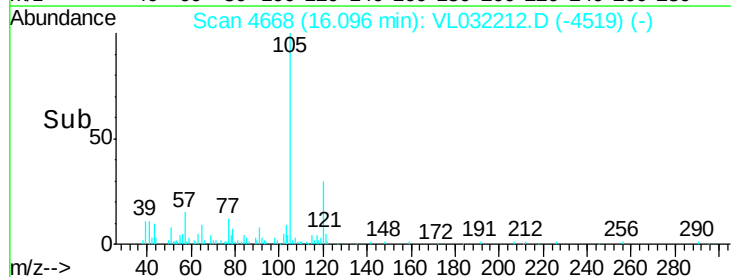
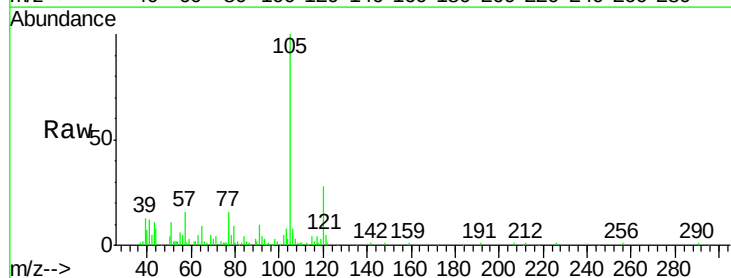
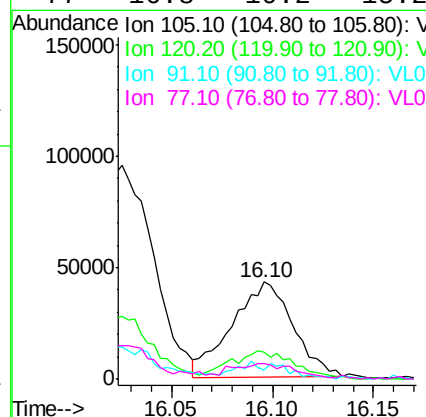
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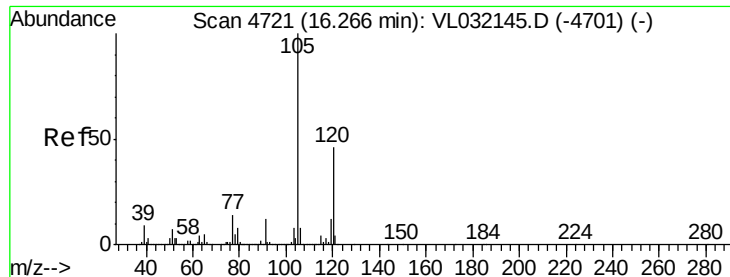
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#72
 4-Ethyltoluene
 Concen: 0.14 ppbv
 RT: 16.10 min Scan# 4668
 Delta R.T. -0.02 min
 Lab File: VL032212.D
 Acq: 5 Jul 2018 20:45

Tgt Ion: 105 Resp: 89040
 Ion Ratio Lower Upper
 105 100
 120 31.7 24.3 36.5
 91 15.3 9.4 14.0#
 77 16.8 10.2 15.2#





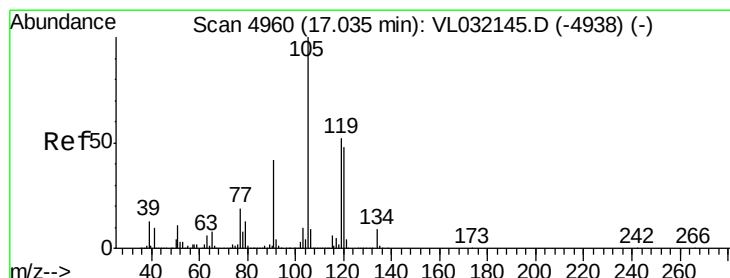
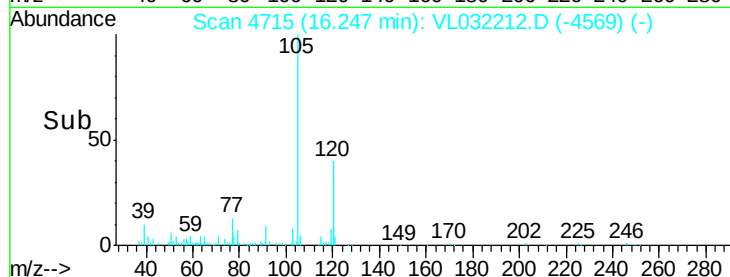
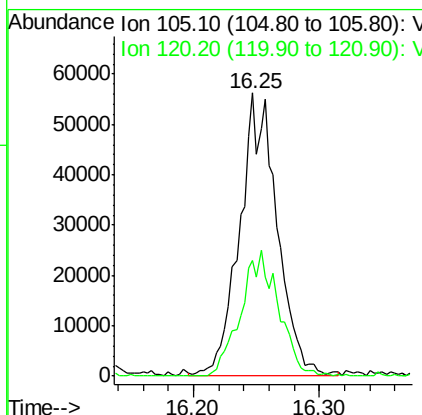
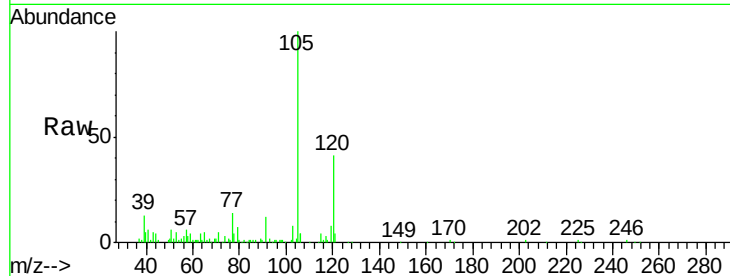
#73
 1,3,5-Trimethylbenzene
 Concen: 0.20 ppbv m
 RT: 16.25 min Scan# 4715
 Delta R.T. -0.03 min
 Lab File: VL032212.D
 Acq: 5 Jul 2018 20:45

Instrument :
 MSVOA_L
 ClientSampled :
 539A

Tot Ion:105 Resp: 116947
 Ion Ratio Lower Upper
 105 100
 120 41.0 38.6 57.8

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#74
 1,2,4-Trimethylbenzene
 Concen: 0.53 ppbv
 RT: 17.02 min Scan# 4955
 Delta R.T. -0.03 min
 Lab File: VL032212.D
 Acq: 5 Jul 2018 20:45

Tgt Ion:105 Resp: 316107
 Ion Ratio Lower Upper
 105 100
 120 41.7 38.8 58.2
 91 11.3 33.6 50.4#
 77 14.0 16.0 24.0#

