Initial Calibration Verification

Job Number: JC37024 **Sample:** V4B2828-ICV2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B68840.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42	M	cis-1,2-dichloroethene		----------NA----------					
43		methylacrylate		----------NA----------					
44	M	propionitrile		----------NA----------					
45	M	bromochloromethane		----------NA----------					
46	M	tetrahydrofuran		----------NA----------					
47	M	chloroform		----------NA----------					
48	M	T-BUTYL FORMATE		----------NA----------					
49	S	dibromofluoromethane (s)	50.00	0.422	0.440	-4.3	94	0.00	8.89
50	S	1,2-dichloroethane-d4 (s)	50.00	0.457	0.499	-9.2	101	0.00	9.29
51	M	freon 113		----------NA----------					
52	M	methacrylonitrile		----------NA----------					
53	M	1,1,1-trichloroethane		----------NA----------					
54	M	cyclohexane		----------NA----------					
55		iso-butyl alcohol		----------NA----------					
56	I	1,4-difluorobenzene	50.00	1.000	1.000	0.0	92	0.00	9.72
57	M	epichlorohydrin		----------NA----------					
58	M	n-butyl alcohol		----------NA----------					
59	M	carbon tetrachloride		----------NA----------					
60	M	1,1-dichloropropene		----------NA----------					
61	M	hexane		----------NA----------					
62		Tert Amyl alcohol		----------NA----------					
63	M	benzene		----------NA----------					
64	m	iso-octane		----------NA----------					
65	M	tert-amyl methyl ether		----------NA----------					
66	M	heptane		----------NA----------					
67	M	isopropyl acetate		----------NA----------					
68	M	1,2-dichloroethane		----------NA----------					
69	M	trichloroethene		----------NA----------					
70		Tert-amyl Ethyl Ether		----------NA----------					
71		ethyl acrylate		----------NA----------					
72	M	2-nitropropane		----------NA----------					
73	M	2-chloroethyl vinyl ether		----------NA----------					
74	M	methyl methacrylate		----------NA----------					
75	M	1,2-dichloropropane		----------NA----------					
76	M	dibromomethane		----------NA----------					
77	M	methylcyclohexane		----------NA----------					
78	M	bromodichloromethane		----------NA----------					
79	M	cis-1,3-dichloropropene		----------NA----------					
80	S	toluene-d8 (s)	50.00	1.155	1.163	-0.7	92	0.00	11.31
81	M	4-methyl-2-pentanone		----------NA----------					
82	M	toluene		----------NA----------					
83	M	3-methyl-1-butanol		----------NA----------					
84	M	trans-1,3-dichloropropene		----------NA----------					
85	M	ethyl methacrylate		----------NA----------					
86	M	1,1,2-trichloroethane		----------NA----------					
87	M	2-hexanone		----------NA----------					
88	I	chlorobenzene-d5	50.00	1.000	1.000	0.0	94	0.00	12.90
89	M	tetrachloroethene		----------NA----------					
90	M	1,3-dichloropropane		----------NA----------					
91	M	butyl acetate		----------NA----------					
92	M	3,3-DIMETHYL-1-BUTANOL		----------NA----------					
93	M	dibromochloromethane		----------NA----------					
94	M	1,2-dibromoethane		----------NA----------					
95		n-butyl ether		----------NA----------					
96	M	chlorobenzene		----------NA----------					
97	M	1,1,1,2-tetrachloroethane		----------NA----------					
98	M	ethylbenzene		----------NA----------					
99	M	m,p-xylene		----------NA----------					

6.9.3 6

Initial Calibration Verification

Job Number: JC37024
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B2828-ICV2825
Lab FileID: 4B68840.D

100	M	o-xylene		----------NA----------					
101	M	styrene		----------NA----------					
102	M	bromoform		----------NA----------					
103	I	1,4-dichlorobenzene-d4	50.00	1.000	1.000	0.0	90	0.00	15.48
104	M	isopropylbenzene		----------NA----------					
105	S	4-bromofluorobenzene (s)	50.00	0.819	0.826	-0.9	92	0.00	14.18
106		cyclohexanone		----------NA----------					
107	M	bromobenzene		----------NA----------					
108	M	1,1,2,2-tetrachloroethane		----------NA----------					
109	M	trans-1,4-dichloro-2-bute		----------NA----------					
110	M	1,2,3-trichloropropane		----------NA----------					
111	M	n-propylbenzene		----------NA----------					
112		4-ETHYLTOLUENE		----------NA----------					
113	M	2-chlorotoluene		----------NA----------					
114	M	4-chlorotoluene		----------NA----------					
115	M	1,3,5-trimethylbenzene		----------NA----------					
116	M	tert-butylbenzene		----------NA----------					
117	M	pentachloroethane		----------NA----------					
118	M	1,2,4-trimethylbenzene		----------NA----------					
119	M	sec-butylbenzene		----------NA----------					
120	M	1,3-dichlorobenzene		----------NA----------					
121	M	p-isopropyltoluene		----------NA----------					
122	M	1,4-dichlorobenzene		----------NA----------					
123		benzyl chloride		----------NA----------					
124	M	1,2-dichlorobenzene		----------NA----------					
125		1,4-DIETHYLBENZENE		----------NA----------					
126	M	n-butylbenzene		----------NA----------					
127		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------					
128	M	1,2-dibromo-3-chloropropa		----------NA----------					
129		1,3,5-TRICHLOROBENZENE		----------NA----------					
130	M	1,2,4-trichlorobenzene		----------NA----------					
131	M	hexachlorobutadiene		----------NA----------					
132	M	naphthalene		----------NA----------					
133	M	1,2,3-trichlorobenzene		----------NA----------					
134	m	hexachloroethane		----------NA----------					
135		2-ethylhexyl acrylate		----------NA----------					
136		2-methylnaphthalene		----------NA----------					
137	I	pentafluorobenzene(a)	50.00	1.000	1.000	0.0	95	0.00	8.84

		----------TrueValue	CC-RF	Calc.	% Drift	----------		R.T.
138	Freon 142B	50.00	0.420	42.546	14.9	87	0.00	4.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B68758.D M4B2825.M Tue Jan 31 17:12:12 2017 GCMS4B

6.9.3 6

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2850-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69259.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4B\V4B2850-51\4B69259.D Vial: 3
Acq On : 14 Feb 2017 9:31 am Operator: Hueanht
Sample : CC2825-20 Inst : MS4B
Misc : MS12448,V4B2850,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Tue Jan 31 16:58:58 2017
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	84	0.00	6.80
2	M	tertiary butyl alcohol	1.304	1.320	-1.2	86	0.00	6.90
3	M	1,4-dioxane	0.113	0.119	-5.3	88	0.00	10.34
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	93	0.00	8.84
6		CHLOROTRIFLUOROETHENE		----------NA----------				
7	M	chlorodifluoromethane	0.791	0.983	-24.3#	113	0.00	3.86
8	M	dichlorodifluoromethane	0.686	0.615	10.3	81	0.00	3.82
9		Freon 114		----------NA----------				
10	M	chloromethane	0.343	0.353	-2.9	94	0.00	4.18
11	M	vinyl chloride	0.914	0.895	2.1	90	0.00	4.40
12	M	bromomethane	0.423	0.457	-8.0	102	0.01	4.99
13	M	chloroethane	0.408	0.401	1.7	89	0.02	5.17
14		vinyl bromide	0.571	0.520	8.9	81	0.01	5.46
15	M	trichlorofluoromethane	0.785	0.877	-11.7	102	-0.02	5.51
16		1,3-butadiene	0.751	0.725	3.5	78	0.00	4.47
17		Pentane		----------NA----------				
18		freon 123a		----------NA----------				
19	M	ethyl ether	0.282	0.283	-0.4	86	0.00	5.88
20		2-chloropropane	0.191	0.176	7.9	79	0.00	6.07
21	M	acrolein	0.113	0.102	9.7	85	0.00	6.09
22	M	1,1-dichloroethene	0.463	0.508	-9.7	96	0.00	6.25
23	M	acetone	0.055	0.048	12.7	75	0.00	6.26
		----------	True	Calc.	% Drift	----------		
24	M	allyl chloride	20.000	33.735	-68.7#	180	0.00	6.71
		----------	AvgRF	CCRF	% Dev	----------		
25	M	acetonitrile	0.032	0.034	-6.3	99	0.00	6.62
26	M	iodomethane	0.952	0.794	16.6	73	-0.03	6.48
27	M	carbon disulfide	1.467	1.397	4.8	78	0.00	6.61
28	M	methylene chloride	0.521	0.540	-3.6	92	0.00	6.87
29	M	methyl acetate	0.078	0.072	7.7	83	0.00	6.66
30		1-chloropropane		----------NA----------				
31	M	methyl tert butyl ether	1.421	1.381	2.8	87	0.00	7.17
32	M	trans-1,2-dichloroethene	0.466	0.502	-7.7	95	0.00	7.21
33	M	di-isopropyl ether	1.974	2.050	-3.9	95	0.00	7.69
34	M	2-butanone	0.060	0.054	10.0	78	0.00	8.30
35	M	1,1-dichloroethane	0.941	1.006	-6.9	96	0.00	7.73
36	M	chloroprene	0.762	0.806	-5.8	94	0.00	7.82
37	M	acrylonitrile	0.201	0.184	8.5	81	0.00	7.13

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2850-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69259.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38	M	vinyl acetate	0.093	0.088	5.4	86	0.00	7.66
39	M	ethyl tert-butyl ether	1.674	1.664	0.6	90	0.00	8.11
40	M	ethyl acetate	0.086	0.084	2.3	87	0.00	8.31
41	M	2,2-dichloropropane	0.467	0.514	-10.1	94	0.00	8.39
42	M	cis-1,2-dichloroethene	0.521	0.560	-7.5	95	0.00	8.37
43		methylacrylate	0.075	0.067	10.7	81	0.00	8.39
44	M	propionitrile	0.074	0.070	5.4	86	0.00	8.38
45	M	bromochloromethane	0.260	0.280	-7.7	92	0.00	8.64
46	M	tetrahydrofuran	0.176	0.157	10.8	80	0.00	8.66
47	M	chloroform	0.568	0.600	-5.6	98	0.00	8.71
48	M	T-BUTYL FORMATE	0.410	0.378	7.8	79	0.00	8.74
49	S	dibromofluoromethane (s)	0.422	0.437	-3.6	95	0.00	8.89
50	S	1,2-dichloroethane-d4 (s)	0.457	0.475	-3.9	97	0.00	9.29
51	M	freon 113	0.397	0.381	4.0	84	0.00	6.25
52	M	methacrylonitrile	0.369	0.339	8.1	87	0.00	8.56
53	M	1,1,1-trichloroethane	0.659	0.700	-6.2	93	0.00	8.95
54	M	cyclohexane	0.676	0.617	8.7	78	0.00	9.05
55		iso-butyl alcohol		----------NA----------				
56	I	1,4-difluorobenzene	1.000	1.000	0.0	93	0.00	9.71
57	M	epichlorohydrin	0.038	0.035	7.9	81	0.00	10.87
58	M	n-butyl alcohol	0.012	0.011	8.3	88	0.00	9.75
59	M	carbon tetrachloride	0.420	0.461	-9.8	95	0.00	9.13
60	M	1,1-dichloropropene	0.490	0.524	-6.9	96	0.00	9.11
61	M	hexane	0.574	0.635	-10.6	95	0.00	7.51
62		Tert Amyl alcohol	0.019	0.016	15.8	81	0.00	9.20
63	M	benzene	1.432	1.459	-1.9	94	0.00	9.34
64	m	iso-octane	1.526	1.542	-1.0	90	0.00	9.41
65	M	tert-amyl methyl ether	0.223	0.217	2.7	86	0.00	9.40
66	M	heptane	0.361	0.407	-12.7	102	0.00	9.55
67	M	isopropyl acetate	0.148	0.129	12.8	78	0.00	9.23
68	M	1,2-dichloroethane	0.458	0.486	-6.1	95	0.00	9.37
69	M	trichloroethene	0.359	0.388	-8.1	96	0.00	10.01
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate	0.467	0.407	12.8	80	0.00	9.99
72	M	2-nitropropane	0.144	0.140	2.8	87	0.00	10.75
73	M	2-chloroethyl vinyl ether	0.242	0.225	7.0	85	0.00	10.77
74	M	methyl methacrylate	0.100	0.092	8.0	82	0.00	10.24
75	M	1,2-dichloropropane	0.389	0.424	-9.0	95	0.00	10.30
76	M	dibromomethane	0.231	0.235	-1.7	94	0.00	10.41
77	M	methylcyclohexane	0.600	0.635	-5.8	93	0.00	10.30
78	M	bromodichloromethane	0.467	0.530	-13.5	100	0.00	10.55
79	M	cis-1,3-dichloropropene	0.624	0.672	-7.7	94	0.00	11.00
80	S	toluene-d8 (s)	1.155	1.165	-0.9	94	0.00	11.31
81	M	4-methyl-2-pentanone	0.159	0.142	10.7	82	0.00	11.09
82	M	toluene	0.907	0.909	-0.2	94	0.00	11.39
83	M	3-methyl-1-butanol	0.016	0.017	-6.3	94	0.00	11.09
84	M	trans-1,3-dichloropropene	0.540	0.584	-8.1	96	0.00	11.58
85	M	ethyl methacrylate	0.495	0.455	8.1	83	0.00	11.55
86	M	1,1,2-trichloroethane	0.290	0.298	-2.8	94	0.00	11.81
87	M	2-hexanone	0.163	0.144	11.7	80	0.00	11.97
88	I	chlorobenzene-d5	1.000	1.000	0.0	94	0.00	12.91
89	M	tetrachloroethene	0.411	0.390	5.1	93	0.00	11.96
90	M	1,3-dichloropropane	0.631	0.594	5.9	93	0.00	12.00
91	M	butyl acetate	0.291	0.261	10.3	84	0.00	12.05
92	M	3,3-DIMETHYL-1-BUTANOL	0.036	0.039	-8.3	102	0.00	12.15
93	M	dibromochloromethane	0.394	0.437	-10.9	99	0.00	12.26
94	M	1,2-dibromoethane	0.414	0.384	7.2	89	0.00	12.43
95		n-butyl ether	1.882	1.790	4.9	91	0.00	12.88

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2850-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69259.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

96	M	chlorobenzene	1.116	1.096	1.8	95	0.00	12.94
97	M	1,1,1,2-tetrachloroethane	0.397	0.410	-3.3	98	0.00	13.01
98	M	ethylbenzene	1.860	1.876	-0.9	97	0.00	13.00
99	M	m,p-xylene	0.729	0.717	1.6	95	0.00	13.13
100	M	o-xylene	0.730	0.745	-2.1	95	0.00	13.57
101	M	styrene	1.276	1.244	2.5	94	0.00	13.59
		----------	True	Calc.	% Drift	----------		
102	M	bromoform	20.000	18.720	6.4	100	0.00	13.84
		----------	AvgRF	CCRF	% Dev	----------		
103	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	93	0.00	15.48
104	M	isopropylbenzene	3.278	3.375	-3.0	95	0.00	13.95
105	S	4-bromofluorobenzene (s)	0.819	0.817	0.2	93	0.00	14.18
106		cyclohexanone	0.161	0.123	23.6#	70	0.00	14.10
107	M	bromobenzene	0.950	0.959	-0.9	96	0.00	14.39
108	M	1,1,2,2-tetrachloroethane	0.899	0.871	3.1	90	0.00	14.27
		----------	True	Calc.	% Drift	----------		
109	M	trans-1,4-dichloro-2-bute	20.000	19.386	3.1	107	0.00	14.30
		----------	AvgRF	CCRF	% Dev	----------		
110	M	1,2,3-trichloropropane	0.225	0.215	4.4	87	0.00	14.36
111	M	n-propylbenzene	3.774	4.081	-8.1	98	0.00	14.41
112		4-ETHYLTOLUENE		----------NA----------				
113	M	2-chlorotoluene	0.823	0.863	-4.9	97	0.00	14.56
114	M	4-chlorotoluene	2.343	2.464	-5.2	97	0.00	14.69
115	M	1,3,5-trimethylbenzene	2.688	2.820	-4.9	96	0.00	14.58
116	M	tert-butylbenzene	2.480	2.616	-5.5	96	0.00	14.97
117	M	pentachloroethane	0.526	0.591	-12.4	97	0.00	15.04
118	M	1,2,4-trimethylbenzene	2.735	2.926	-7.0	95	0.00	15.02
119	M	sec-butylbenzene	3.680	3.950	-7.3	96	0.00	15.21
120	M	1,3-dichlorobenzene	1.776	1.878	-5.7	97	0.00	15.40
121	M	p-isopropyltoluene	3.201	3.477	-8.6	95	0.00	15.36
122	M	1,4-dichlorobenzene	1.730	1.786	-3.2	94	0.00	15.51
123		benzyl chloride	1.530	1.556	-1.7	86	0.00	15.61
124	M	1,2-dichlorobenzene	1.724	1.807	-4.8	93	0.00	15.92
125		1,4-DIETHYLBENZENE		----------NA----------				
126	M	n-butylbenzene	1.695	1.861	-9.8	96	0.00	15.81
127		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------				
128	M	1,2-dibromo-3-chloropropa	0.153	0.157	-2.6	94	0.00	16.77
129		1,3,5-TRICHLOROBENZENE	1.523	1.685	-10.6	94	0.00	16.97
130	M	1,2,4-trichlorobenzene	1.356	1.419	-4.6	89	0.00	17.65
131	M	hexachlorobutadiene	0.795	0.839	-5.5	93	0.00	17.77
132	M	naphthalene	2.451	2.335	4.7	85	0.00	17.97
133	M	1,2,3-trichlorobenzene	1.193	1.190	0.3	88	0.00	18.21
134	m	hexachloroethane	0.599	0.666	-11.2	100	0.00	16.25
		----------	True	Calc.	% Drift	----------		
135		2-ethylhexyl acrylate	4.000	4.086	-2.2	113	0.00	17.66
		----------	AvgRF	CCRF	% Dev	----------		
136		2-methylnaphthalene	0.593	0.468	21.1#	75	0.00	19.27
137	I	pentafluorobenzene(a)	1.000	1.000	0.0	101	0.00	8.84
		----------	True	Calc.	% Drift	----------		
138		Freon 142B		----------NA----------				

6.9.4 6

Continuing Calibration Summary

Job Number: JC37024
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B2850-CC2825
Lab FileID: 4B69259.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 4B68757.D  M4B2825.M         Wed Feb 15 10:28:13 2017   11
```

6.9.4

6

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69310.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4B\v4b2853-2854\4B69310.D Vial: 6
Acq On : 15 Feb 2017 11:00 am Operator: Hueanht
Sample : cc2825-20 Inst : MS4B
Misc : MS12524,V4B2853,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Tue Jan 31 16:58:58 2017
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	103	0.00	6.81
2	M	tertiary butyl alcohol	1.304	1.198	8.1	96	0.00	6.91
3	M	1,4-dioxane	0.113	0.119	-5.3	107	0.00	10.34
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	8.84
6		CHLOROTRIFLUOROETHENE		----------NA----------				
7	M	chlorodifluoromethane	0.791	0.701	11.4	88	0.00	3.87
8	M	dichlorodifluoromethane	0.686	0.583	15.0	83	0.00	3.83
9		Freon 114		----------NA----------				
10	M	chloromethane	0.343	0.267	22.2#	77	0.00	4.17
11	M	vinyl chloride	0.914	0.732	19.9	80	0.00	4.40
12	M	bromomethane	0.423	0.430	-1.7	104	0.00	4.98
13	M	chloroethane	0.408	0.393	3.7	94	0.00	5.15
14		vinyl bromide	0.571	0.509	10.9	86	0.00	5.44
15	M	trichlorofluoromethane	0.785	0.692	11.8	87	0.00	5.53
16		1,3-butadiene	0.751	0.896	-19.3	105	0.00	4.46
17		Pentane		----------NA----------				
18		freon 123a		----------NA----------				
19	M	ethyl ether	0.282	0.276	2.1	91	0.00	5.88
20		2-chloropropane	0.191	0.180	5.8	88	0.00	6.08
21	M	acrolein	0.113	0.102	9.7	92	0.00	6.09
22	M	1,1-dichloroethene	0.463	0.439	5.2	90	0.00	6.25
23	M	acetone	0.055	0.051	7.3	85	0.00	6.26
		----------	True	Calc.	% Drift	----------		
24	M	allyl chloride	20.000	16.003	20.0	95	0.00	6.71
		----------	AvgRF	CCRF	% Dev	----------		
25	M	acetonitrile	0.032	0.032	0.0	102	0.00	6.62
26	M	iodomethane	0.952	0.953	-0.1	95	-0.03	6.48
27	M	carbon disulfide	1.467	1.508	-2.8	91	0.00	6.61
28	M	methylene chloride	0.521	0.512	1.7	95	0.00	6.87
29	M	methyl acetate	0.078	0.074	5.1	92	0.00	6.65
30		1-chloropropane		----------NA----------				
31	M	methyl tert butyl ether	1.421	1.334	6.1	91	0.00	7.17
32	M	trans-1,2-dichloroethene	0.466	0.461	1.1	95	0.00	7.21
33	M	di-isopropyl ether	1.974	1.827	7.4	92	0.00	7.70
34	M	2-butanone	0.060	0.060	0.0	94	0.00	8.31
35	M	1,1-dichloroethane	0.941	0.918	2.4	95	0.00	7.73
36	M	chloroprene	0.762	0.696	8.7	88	0.00	7.82
37	M	acrylonitrile	0.201	0.195	3.0	93	0.00	7.13

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69310.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38	M	vinyl acetate	0.093	0.087	6.5	92	0.00	7.66
39	M	ethyl tert-butyl ether	1.674	1.517	9.4	89	0.00	8.11
40	M	ethyl acetate	0.086	0.085	1.2	96	0.00	8.31
41	M	2,2-dichloropropane	0.467	0.500	-7.1	99	0.00	8.40
42	M	cis-1,2-dichloroethene	0.521	0.525	-0.8	97	0.00	8.37
43		methylacrylate	0.075	0.073	2.7	94	0.00	8.39
44	M	propionitrile	0.074	0.074	0.0	97	0.00	8.39
45	M	bromochloromethane	0.260	0.267	-2.7	95	0.00	8.64
46	M	tetrahydrofuran	0.176	0.161	8.5	89	0.00	8.66
47	M	chloroform	0.568	0.544	4.2	96	0.00	8.71
48	M	T-BUTYL FORMATE	0.410	0.374	8.8	85	0.00	8.74
49	S	dibromofluoromethane (s)	0.422	0.432	-2.4	102	0.00	8.89
50	S	1,2-dichloroethane-d4 (s)	0.457	0.462	-1.1	102	0.00	9.29
51	M	freon 113	0.397	0.361	9.1	86	0.00	6.25
52	M	methacrylonitrile	0.369	0.338	8.4	94	0.00	8.56
53	M	1,1,1-trichloroethane	0.659	0.649	1.5	94	0.00	8.96
54	M	cyclohexane	0.676	0.623	7.8	86	0.00	9.06
55		iso-butyl alcohol		----------NA----------				
56	I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	9.71
57	M	epichlorohydrin	0.038	0.037	2.6	92	0.00	10.87
58	M	n-butyl alcohol	0.012	0.012	0.0	101	0.00	9.75
59	M	carbon tetrachloride	0.420	0.417	0.7	93	0.00	9.13
60	M	1,1-dichloropropene	0.490	0.463	5.5	91	0.00	9.11
61	M	hexane	0.574	0.525	8.5	85	0.00	7.52
62		Tert Amyl alcohol	0.019	0.018	5.3	96	0.00	9.21
63	M	benzene	1.432	1.347	5.9	94	0.00	9.34
64	m	iso-octane	1.526	1.418	7.1	89	0.00	9.42
65	M	tert-amyl methyl ether	0.223	0.213	4.5	91	0.00	9.40
66	M	heptane	0.361	0.315	12.7	85	0.00	9.55
67	M	isopropyl acetate	0.148	0.136	8.1	88	0.00	9.23
68	M	1,2-dichloroethane	0.458	0.456	0.4	97	0.00	9.37
69	M	trichloroethene	0.359	0.357	0.6	95	0.00	10.01
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate	0.467	0.420	10.1	89	0.00	9.99
72	M	2-nitropropane	0.144	0.137	4.9	92	0.00	10.75
73	M	2-chloroethyl vinyl ether	0.242	0.225	7.0	92	0.00	10.77
74	M	methyl methacrylate	0.100	0.095	5.0	91	0.00	10.24
75	M	1,2-dichloropropane	0.389	0.390	-0.3	95	0.00	10.30
76	M	dibromomethane	0.231	0.228	1.3	98	0.00	10.41
77	M	methylcyclohexane	0.600	0.548	8.7	86	0.00	10.30
78	M	bromodichloromethane	0.467	0.485	-3.9	99	0.00	10.55
79	M	cis-1,3-dichloropropene	0.624	0.611	2.1	92	0.00	11.00
80	S	toluene-d8 (s)	1.155	1.149	0.5	100	0.00	11.31
81	M	4-methyl-2-pentanone	0.159	0.149	6.3	93	0.00	11.09
82	M	toluene	0.907	0.837	7.7	93	0.00	11.39
83	M	3-methyl-1-butanol	0.016	0.018	-12.5	107	0.00	11.09
84	M	trans-1,3-dichloropropene	0.540	0.521	3.5	92	0.00	11.58
85	M	ethyl methacrylate	0.495	0.450	9.1	88	0.00	11.55
86	M	1,1,2-trichloroethane	0.290	0.283	2.4	97	0.00	11.81
87	M	2-hexanone	0.163	0.155	4.9	92	0.00	11.97
88	I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	12.91
89	M	tetrachloroethene	0.411	0.371	9.7	94	0.00	11.96
90	M	1,3-dichloropropane	0.631	0.582	7.8	96	0.00	12.00
91	M	butyl acetate	0.291	0.262	10.0	89	0.00	12.05
92	M	3,3-DIMETHYL-1-BUTANOL	0.036	0.038	-5.6	105	0.00	12.15
93	M	dibromochloromethane	0.394	0.404	-2.5	97	0.00	12.26
94	M	1,2-dibromoethane	0.414	0.385	7.0	95	0.00	12.43
95		n-butyl ether	1.882	1.617	14.1	87	0.00	12.88

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69310.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

96	M	chlorobenzene	1.116	1.026	8.1	94	0.00	12.94
97	M	1,1,1,2-tetrachloroethane	0.397	0.382	3.8	96	0.00	13.01
98	M	ethylbenzene	1.860	1.703	8.4	93	0.00	13.00
99	M	m,p-xylene	0.729	0.665	8.8	93	0.00	13.14
100	M	o-xylene	0.730	0.684	6.3	93	0.00	13.57
101	M	styrene	1.276	1.160	9.1	93	0.00	13.59
		----------	True	Calc.	% Drift	----------		
102	M	bromoform	20.000	17.049	14.8	96	0.00	13.85
		----------	AvgRF	CCRF	% Dev	----------		
103	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	15.48
104	M	isopropylbenzene	3.278	3.045	7.1	91	0.00	13.95
105	S	4-bromofluorobenzene (s)	0.819	0.816	0.4	99	0.00	14.18
106		cyclohexanone	0.161	0.131	18.6	80	0.00	14.11
107	M	bromobenzene	0.950	0.898	5.5	96	0.00	14.39
108	M	1,1,2,2-tetrachloroethane	0.899	0.860	4.3	94	0.00	14.27
		----------	True	Calc.	% Drift	----------		
109	M	trans-1,4-dichloro-2-bute		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
110	M	1,2,3-trichloropropane	0.225	0.217	3.6	93	0.00	14.36
111	M	n-propylbenzene	3.774	3.606	4.5	92	0.00	14.41
112		4-ETHYLTOLUENE		----------NA----------				
113	M	2-chlorotoluene	0.823	0.775	5.8	93	0.00	14.56
114	M	4-chlorotoluene	2.343	2.257	3.7	94	0.00	14.69
115	M	1,3,5-trimethylbenzene	2.688	2.552	5.1	92	0.00	14.58
116	M	tert-butylbenzene	2.480	2.310	6.9	91	0.00	14.97
117	M	pentachloroethane	0.526	0.538	-2.3	94	0.00	15.04
118	M	1,2,4-trimethylbenzene	2.735	2.670	2.4	93	0.00	15.02
119	M	sec-butylbenzene	3.680	3.489	5.2	90	0.00	15.21
120	M	1,3-dichlorobenzene	1.776	1.724	2.9	95	0.00	15.40
121	M	p-isopropyltoluene	3.201	3.099	3.2	91	0.00	15.36
122	M	1,4-dichlorobenzene	1.730	1.666	3.7	94	0.00	15.51
123		benzyl chloride	1.530	1.367	10.7	80	0.00	15.61
124	M	1,2-dichlorobenzene	1.724	1.697	1.6	93	0.00	15.92
125		1,4-DIETHYLBENZENE		----------NA----------				
126	M	n-butylbenzene	1.695	1.648	2.8	90	0.00	15.81
127		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------				
128	M	1,2-dibromo-3-chloropropa	0.153	0.153	0.0	97	0.00	16.77
129		1,3,5-TRICHLOROBENZENE	1.523	1.553	-2.0	93	0.00	16.97
130	M	1,2,4-trichlorobenzene	1.356	1.318	2.8	88	0.00	17.65
131	M	hexachlorobutadiene	0.795	0.762	4.2	90	0.00	17.77
132	M	naphthalene	2.451	2.280	7.0	88	0.00	17.97
133	M	1,2,3-trichlorobenzene	1.193	1.119	6.2	88	0.00	18.21
134	m	hexachloroethane	0.599	0.520	13.2	84	0.00	16.25
		----------	True	Calc.	% Drift	----------		
135		2-ethylhexyl acrylate	4.000	3.386	15.3	90	0.00	17.66
		----------	AvgRF	CCRF	% Dev	----------		
136		2-methylnaphthalene	0.593	0.425	28.3#	73	0.00	19.28
137	I	pentafluorobenzene(a)	1.000	1.000	0.0	109	0.00	8.84
		----------	True	Calc.	% Drift	----------		
138		Freon 142B		----------NA----------				

6.9.5 6

Continuing Calibration Summary

Job Number: JC37024
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B2853-CC2825
Lab FileID: 4B69310.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 4B68757.D  M4B2825.M         Thu Feb 16 12:14:12 2017
```

6.9.5

6

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69311.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4B\v4b2853-2854\4B69311.D Vial: 7
Acq On : 15 Feb 2017 11:28 am Operator: Hueanht
Sample : cc2825-20 Inst : MS4B
Misc : MS12524,V4B2853,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Tue Jan 31 16:58:58 2017
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	104	0.00	6.81
2	M	tertiary butyl alcohol	1.304	1.247	4.4	101	0.00	6.91
3	M	1,4-dioxane	0.113	0.110	2.7	100	0.00	10.35
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	8.84
6		CHLOROTRIFLUOROETHENE		----------NA----------				
7	M	chlorodifluoromethane	0.791	0.686	13.3	86	0.00	3.87
8	M	dichlorodifluoromethane	0.686	0.585	14.7	84	0.00	3.83
9		Freon 114		----------NA----------				
10	M	chloromethane	0.343	0.270	21.3#	78	0.00	4.17
11	M	vinyl chloride	0.914	0.728	20.4#	79	0.00	4.40
12	M	bromomethane	0.423	0.427	-0.9	103	0.00	4.98
13	M	chloroethane	0.408	0.388	4.9	93	0.00	5.15
14		vinyl bromide	0.571	0.514	10.0	87	0.00	5.45
15	M	trichlorofluoromethane	0.785	0.680	13.4	86	0.00	5.53
16		1,3-butadiene	0.751	0.909	-21.0#	106	0.00	4.47
17		Pentane		----------NA----------				
18		freon 123a		----------NA----------				
19	M	ethyl ether	0.282	0.288	-2.1	95	0.00	5.88
20		2-chloropropane	0.191	0.180	5.8	88	0.00	6.08
21	M	acrolein	0.113	0.107	5.3	97	0.00	6.08
22	M	1,1-dichloroethene	0.463	0.440	5.0	90	0.00	6.25
23	M	acetone	0.055	0.052	5.5	88	0.00	6.26
		----------	True	Calc.	% Drift	----------		
24	M	allyl chloride	20.000	15.487	22.6#	92	0.00	6.71
		----------	AvgRF	CCRF	% Dev	----------		
25	M	acetonitrile	0.032	0.033	-3.1	106	0.00	6.63
26	M	iodomethane	0.952	0.955	-0.3	96	-0.03	6.48
27	M	carbon disulfide	1.467	1.530	-4.3	93	0.00	6.61
28	M	methylene chloride	0.521	0.510	2.1	95	0.00	6.87
29	M	methyl acetate	0.078	0.082	-5.1	102	0.00	6.65
30		1-chloropropane		----------NA----------				
31	M	methyl tert butyl ether	1.421	1.367	3.8	93	0.00	7.17
32	M	trans-1,2-dichloroethene	0.466	0.459	1.5	94	0.00	7.21
33	M	di-isopropyl ether	1.974	1.835	7.0	92	0.00	7.70
34	M	2-butanone	0.060	0.061	-1.7	96	0.00	8.31
35	M	1,1-dichloroethane	0.941	0.922	2.0	95	0.00	7.73
36	M	chloroprene	0.762	0.696	8.7	88	0.00	7.82
37	M	acrylonitrile	0.201	0.201	0.0	96	0.00	7.13

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69311.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38	M	vinyl acetate	0.093	0.091	2.2	96	0.00	7.66
39	M	ethyl tert-butyl ether	1.674	1.533	8.4	90	0.00	8.11
40	M	ethyl acetate	0.086	0.086	0.0	97	0.00	8.31
41	M	2,2-dichloropropane	0.467	0.497	-6.4	99	0.00	8.40
42	M	cis-1,2-dichloroethene	0.521	0.527	-1.2	97	0.00	8.37
43		methylacrylate	0.075	0.075	0.0	97	0.00	8.39
44	M	propionitrile	0.074	0.076	-2.7	100	0.00	8.39
45	M	bromochloromethane	0.260	0.270	-3.8	96	0.00	8.64
46	M	tetrahydrofuran	0.176	0.178	-1.1	99	0.00	8.66
47	M	chloroform	0.568	0.557	1.9	98	0.00	8.72
48	M	T-BUTYL FORMATE	0.410	0.383	6.6	87	0.00	8.74
49	S	dibromofluoromethane (s)	0.422	0.432	-2.4	103	0.00	8.89
50	S	1,2-dichloroethane-d4 (s)	0.457	0.468	-2.4	103	0.00	9.29
51	M	freon 113	0.397	0.364	8.3	87	0.00	6.26
52	M	methacrylonitrile	0.369	0.348	5.7	97	0.00	8.56
53	M	1,1,1-trichloroethane	0.659	0.652	1.1	94	0.00	8.96
54	M	cyclohexane	0.676	0.635	6.1	87	0.00	9.06
55		iso-butyl alcohol		----------NA----------				
56	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.72
57	M	epichlorohydrin	0.038	0.039	-2.6	96	0.00	10.87
58	M	n-butyl alcohol	0.012	0.013	-8.3	105	0.00	9.75
59	M	carbon tetrachloride	0.420	0.420	0.0	94	0.00	9.13
60	M	1,1-dichloropropene	0.490	0.469	4.3	93	0.00	9.11
61	M	hexane	0.574	0.523	8.9	85	0.00	7.52
62		Tert Amyl alcohol	0.019	0.019	0.0	101	0.00	9.21
63	M	benzene	1.432	1.354	5.4	95	0.00	9.34
64	m	iso-octane	1.526	1.424	6.7	90	0.00	9.42
65	M	tert-amyl methyl ether	0.223	0.219	1.8	94	0.00	9.40
66	M	heptane	0.361	0.316	12.5	86	0.00	9.55
67	M	isopropyl acetate	0.148	0.139	6.1	91	0.00	9.23
68	M	1,2-dichloroethane	0.458	0.466	-1.7	99	0.00	9.37
69	M	trichloroethene	0.359	0.362	-0.8	96	0.00	10.01
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate	0.467	0.441	5.6	93	0.00	9.99
72	M	2-nitropropane	0.144	0.141	2.1	95	0.00	10.75
73	M	2-chloroethyl vinyl ether	0.242	0.228	5.8	93	0.00	10.77
74	M	methyl methacrylate	0.100	0.099	1.0	95	0.00	10.24
75	M	1,2-dichloropropane	0.389	0.397	-2.1	97	0.00	10.30
76	M	dibromomethane	0.231	0.230	0.4	99	0.00	10.41
77	M	methylcyclohexane	0.600	0.546	9.0	86	0.00	10.30
78	M	bromodichloromethane	0.467	0.489	-4.7	100	0.00	10.55
79	M	cis-1,3-dichloropropene	0.624	0.618	1.0	93	0.00	11.00
80	S	toluene-d8 (s)	1.155	1.149	0.5	100	0.00	11.31
81	M	4-methyl-2-pentanone	0.159	0.158	0.6	99	0.00	11.10
82	M	toluene	0.907	0.839	7.5	94	0.00	11.39
83	M	3-methyl-1-butanol	0.016	0.019	-18.7	109	0.00	11.09
84	M	trans-1,3-dichloropropene	0.540	0.525	2.8	93	0.00	11.58
85	M	ethyl methacrylate	0.495	0.469	5.3	92	0.00	11.55
86	M	1,1,2-trichloroethane	0.290	0.288	0.7	98	0.00	11.81
87	M	2-hexanone	0.163	0.164	-0.6	98	0.00	11.97
88	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	12.91
89	M	tetrachloroethene	0.411	0.379	7.8	97	0.00	11.96
90	M	1,3-dichloropropane	0.631	0.590	6.5	99	0.00	12.00
91	M	butyl acetate	0.291	0.269	7.6	92	0.00	12.05
92	M	3,3-DIMETHYL-1-BUTANOL	0.036	0.038	-5.6	109	0.00	12.15
93	M	dibromochloromethane	0.394	0.409	-3.8	99	0.00	12.26
94	M	1,2-dibromoethane	0.414	0.394	4.8	98	0.00	12.43
95		n-butyl ether	1.882	1.637	13.0	89	0.00	12.88

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69311.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

96	M	chlorobenzene	1.116	1.027	8.0	95	0.00	12.94
97	M	1,1,1,2-tetrachloroethane	0.397	0.382	3.8	97	0.00	13.01
98	M	ethylbenzene	1.860	1.703	8.4	94	0.00	13.00
99	M	m,p-xylene	0.729	0.666	8.6	94	0.00	13.13
100	M	o-xylene	0.730	0.692	5.2	95	0.00	13.57
101	M	styrene	1.276	1.174	8.0	95	0.00	13.59
		----------	True	Calc.	% Drift	----------		
102	M	bromoform	20.000	17.242	13.8	98	0.00	13.85
		----------	AvgRF	CCRF	% Dev	----------		
103	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	15.48
104	M	isopropylbenzene	3.278	3.074	6.2	92	0.00	13.95
105	S	4-bromofluorobenzene (s)	0.819	0.824	-0.6	100	0.00	14.18
106		cyclohexanone	0.161	0.134	16.8	81	0.00	14.11
107	M	bromobenzene	0.950	0.923	2.8	98	0.00	14.39
108	M	1,1,2,2-tetrachloroethane	0.899	0.902	-0.3	99	0.00	14.27
		----------	True	Calc.	% Drift	----------		
109	M	trans-1,4-dichloro-2-bute		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
110	M	1,2,3-trichloropropane	0.225	0.223	0.9	96	0.00	14.36
111	M	n-propylbenzene	3.774	3.694	2.1	94	0.00	14.41
112		4-ETHYLTOLUENE		----------NA----------				
113	M	2-chlorotoluene	0.823	0.794	3.5	95	0.00	14.56
114	M	4-chlorotoluene	2.343	2.300	1.8	96	0.00	14.69
115	M	1,3,5-trimethylbenzene	2.688	2.581	4.0	93	0.00	14.59
116	M	tert-butylbenzene	2.480	2.365	4.6	93	0.00	14.97
117	M	pentachloroethane	0.526	0.552	-4.9	97	0.00	15.04
118	M	1,2,4-trimethylbenzene	2.735	2.715	0.7	94	0.00	15.02
119	M	sec-butylbenzene	3.680	3.561	3.2	92	0.00	15.21
120	M	1,3-dichlorobenzene	1.776	1.750	1.5	96	0.00	15.41
121	M	p-isopropyltoluene	3.201	3.138	2.0	91	0.00	15.36
122	M	1,4-dichlorobenzene	1.730	1.684	2.7	95	0.00	15.51
123		benzyl chloride	1.530	1.402	8.4	82	0.00	15.61
124	M	1,2-dichlorobenzene	1.724	1.722	0.1	95	0.00	15.92
125		1,4-DIETHYLBENZENE		----------NA----------				
126	M	n-butylbenzene	1.695	1.662	1.9	91	0.00	15.81
127		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------				
128	M	1,2-dibromo-3-chloropropa	0.153	0.158	-3.3	100	0.00	16.78
129		1,3,5-TRICHLOROBENZENE	1.523	1.553	-2.0	92	0.00	16.97
130	M	1,2,4-trichlorobenzene	1.356	1.346	0.7	90	0.00	17.65
131	M	hexachlorobutadiene	0.795	0.760	4.4	90	0.00	17.77
132	M	naphthalene	2.451	2.368	3.4	91	0.00	17.97
133	M	1,2,3-trichlorobenzene	1.193	1.158	2.9	91	0.00	18.21
134	m	hexachloroethane	0.599	0.514	14.2	82	0.00	16.25
		----------	True	Calc.	% Drift	----------		
135		2-ethylhexyl acrylate	4.000	3.208	19.8	82	0.00	17.66
		----------	AvgRF	CCRF	% Dev	----------		
136		2-methylnaphthalene	0.593	0.436	26.5#	75	0.00	19.27
137	I	pentafluorobenzene(a)	1.000	1.000	0.0	109	0.00	8.84
		----------	True	Calc.	% Drift	----------		
138		Freon 142B		----------NA----------				

Continuing Calibration Summary

Job Number: JC37024
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B2853-CC2825
Lab FileID: 4B69311.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 4B68757.D  M4B2825.M        Thu Feb 16 12:14:14 2017
```

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69312.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

sensitivity check for vinyl chloride

Data File : C:\msdchem\1\data\4B\v4b2853-2854\4B69312.D Vial: 8
Acq On : 15 Feb 2017 12:02 pm Operator: Hueanht
Sample : cc2825-0.5 Inst : MS4B
Misc : MS12524,V4B2853,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Tue Jan 31 16:58:58 2017
Response via : Multiple Level Calibration

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		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	103	0.00	6.81
2	M	tertiary butyl alcohol		----------NA----------				
3	M	1,4-dioxane		----------NA----------				
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	8.84
6		CHLOROTRIFLUOROETHENE		----------NA----------				
7	M	chlorodifluoromethane		----------NA----------				
8	M	dichlorodifluoromethane		----------NA----------				
9		Freon 114		----------NA----------				
10	M	chloromethane		----------NA----------				
11	M	vinyl chloride	0.914	0.696	23.9	76	0.00	4.40
12	M	bromomethane		----------NA----------				
13	M	chloroethane		----------NA----------				
14		vinyl bromide		----------NA----------				
15	M	trichlorofluoromethane		----------NA----------				
16		1,3-butadiene		----------NA----------				
17		Pentane		----------NA----------				
18		freon 123a		----------NA----------				
19	M	ethyl ether		----------NA----------				
20		2-chloropropane		----------NA----------				
21	M	acrolein		----------NA----------				
22	M	1,1-dichloroethene		----------NA----------				
23	M	acetone		----------NA----------				
		----------	True	Calc.	% Drift	----------		
24	M	allyl chloride		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
25	M	acetonitrile		----------NA----------				
26	M	iodomethane		----------NA----------				
27	M	carbon disulfide		----------NA----------				
28	M	methylene chloride		----------NA----------				
29	M	methyl acetate		----------NA----------				
30		1-chloropropane		----------NA----------				
31	M	methyl tert butyl ether		----------NA----------				
32	M	trans-1,2-dichloroethene		----------NA----------				
33	M	di-isopropyl ether		----------NA----------				
34	M	2-butanone		----------NA----------				
35	M	1,1-dichloroethane		----------NA----------				
36	M	chloroprene		----------NA----------				
37	M	acrylonitrile		----------NA----------				
38	M	vinyl acetate		----------NA----------				

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69312.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

39	M	ethyl tert-butyl ether		----------NA----------				
40	M	ethyl acetate		----------NA----------				
41	M	2,2-dichloropropane		----------NA----------				
42	M	cis-1,2-dichloroethene		----------NA----------				
43		methylacrylate		----------NA----------				
44	M	propionitrile		----------NA----------				
45	M	bromochloromethane		----------NA----------				
46	M	tetrahydrofuran		----------NA----------				
47	M	chloroform		----------NA----------				
48	M	T-BUTYL FORMATE		----------NA----------				
49	S	dibromofluoromethane (s)	0.422	0.427	-1.2	104	0.00	8.89
50	S	1,2-dichloroethane-d4 (s)	0.457	0.466	-2.0	103	0.00	9.29
51	M	freon 113		----------NA----------				
52	M	methacrylonitrile		----------NA----------				
53	M	1,1,1-trichloroethane		----------NA----------				
54	M	cyclohexane		----------NA----------				
55		iso-butyl alcohol		----------NA----------				
56	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.71
57	M	epichlorohydrin		----------NA----------				
58	M	n-butyl alcohol		----------NA----------				
59	M	carbon tetrachloride		----------NA----------				
60	M	1,1-dichloropropene		----------NA----------				
61	M	hexane		----------NA----------				
62		Tert Amyl alcohol		----------NA----------				
63	M	benzene		----------NA----------				
64	m	iso-octane		----------NA----------				
65	M	tert-amyl methyl ether		----------NA----------				
66	M	heptane		----------NA----------				
67	M	isopropyl acetate		----------NA----------				
68	M	1,2-dichloroethane		----------NA----------				
69	M	trichloroethene		----------NA----------				
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate		----------NA----------				
72	M	2-nitropropane		----------NA----------				
73	M	2-chloroethyl vinyl ether		----------NA----------				
74	M	methyl methacrylate		----------NA----------				
75	M	1,2-dichloropropane		----------NA----------				
76	M	dibromomethane		----------NA----------				
77	M	methylcyclohexane		----------NA----------				
78	M	bromodichloromethane		----------NA----------				
79	M	cis-1,3-dichloropropene		----------NA----------				
80	S	toluene-d8 (s)	1.155	1.151	0.3	101	0.00	11.31
81	M	4-methyl-2-pentanone		----------NA----------				
82	M	toluene		----------NA----------				
83	M	3-methyl-1-butanol		----------NA----------				
84	M	trans-1,3-dichloropropene		----------NA----------				
85	M	ethyl methacrylate		----------NA----------				
86	M	1,1,2-trichloroethane		----------NA----------				
87	M	2-hexanone		----------NA----------				
88	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	12.91
89	M	tetrachloroethene		----------NA----------				
90	M	1,3-dichloropropane		----------NA----------				
91	M	butyl acetate		----------NA----------				
92	M	3,3-DIMETHYL-1-BUTANOL		----------NA----------				
93	M	dibromochloromethane		----------NA----------				
94	M	1,2-dibromoethane		----------NA----------				
95		n-butyl ether		----------NA----------				
96	M	chlorobenzene		----------NA----------				

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Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69312.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

97	M	1,1,1,2-tetrachloroethane		----------NA----------			
98	M	ethylbenzene		----------NA----------			
99	M	m,p-xylene		----------NA----------			
100	M	o-xylene		----------NA----------			
101	M	styrene		----------NA----------			
		----------	True	Calc.	% Drift	----------	
102	M	bromoform		----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------	
103	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	97	0.00 15.48
104	M	isopropylbenzene		----------NA----------			
105	S	4-bromofluorobenzene (s)	0.819	0.839	-2.4	99	0.00 14.18
106		cyclohexanone		----------NA----------			
107	M	bromobenzene		----------NA----------			
108	M	1,1,2,2-tetrachloroethane		----------NA----------			
		----------	True	Calc.	% Drift	----------	
109	M	trans-1,4-dichloro-2-bute		----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------	
110	M	1,2,3-trichloropropane		----------NA----------			
111	M	n-propylbenzene		----------NA----------			
112		4-ETHYLTOLUENE		----------NA----------			
113	M	2-chlorotoluene		----------NA----------			
114	M	4-chlorotoluene		----------NA----------			
115	M	1,3,5-trimethylbenzene		----------NA----------			
116	M	tert-butylbenzene		----------NA----------			
117	M	pentachloroethane		----------NA----------			
118	M	1,2,4-trimethylbenzene		----------NA----------			
119	M	sec-butylbenzene		----------NA----------			
120	M	1,3-dichlorobenzene		----------NA----------			
121	M	p-isopropyltoluene		----------NA----------			
122	M	1,4-dichlorobenzene		----------NA----------			
123		benzyl chloride		----------NA----------			
124	M	1,2-dichlorobenzene		----------NA----------			
125		1,4-DIETHYLBENZENE		----------NA----------			
126	M	n-butylbenzene		----------NA----------			
127		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------			
128	M	1,2-dibromo-3-chloropropa		----------NA----------			
129		1,3,5-TRICHLOROBENZENE		----------NA----------			
130	M	1,2,4-trichlorobenzene		----------NA----------			
131	M	hexachlorobutadiene		----------NA----------			
132	M	naphthalene		----------NA----------			
133	M	1,2,3-trichlorobenzene		----------NA----------			
134	m	hexachloroethane		----------NA----------			
		----------	True	Calc.	% Drift	----------	
135		2-ethylhexyl acrylate		----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------	
136		2-methylnaphthalene		----------NA----------			
137	I	pentafluorobenzene(a)	1.000	1.000	0.0	0#	0.00 8.84
		----------	True	Calc.	% Drift	----------	
138		Freon 142B		----------NA----------			

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Continuing Calibration Summary

Job Number: JC37024
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B2853-CC2825
Lab FileID: 4B69312.D

```
(#) = Out of Range                    SPCC's out = 0  CCC's out = 0
 4B68763.D  M4B2825.M          Thu Feb 16 12:16:27 2017
```

6.9.7

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Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69313.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

sensitivity check for chloromethane

Data File : C:\msdchem\1\data\4B\v4b2853-2854\4B69313.D Vial: 9
Acq On : 15 Feb 2017 12:30 pm Operator: Hueanht
Sample : cc2825-1 Inst : MS4B
Misc : MS12524,V4B2853,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Tue Jan 31 16:58:58 2017
Response via : Multiple Level Calibration

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		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	104	0.00	6.81
2	M	tertiary butyl alcohol		----------NA----------				
3	M	1,4-dioxane		----------NA----------				
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	8.84
6		CHLOROTRIFLUOROETHENE		----------NA----------				
7	M	chlorodifluoromethane		----------NA----------				
8	M	dichlorodifluoromethane		----------NA----------				
9		Freon 114		----------NA----------				
10	M	chloromethane	0.343	0.309	9.9	94	0.00	4.18
11	M	vinyl chloride		----------NA----------				
12	M	bromomethane		----------NA----------				
13	M	chloroethane		----------NA----------				
14		vinyl bromide		----------NA----------				
15	M	trichlorofluoromethane		----------NA----------				
16		1,3-butadiene		----------NA----------				
17		Pentane		----------NA----------				
18		freon 123a		----------NA----------				
19	M	ethyl ether		----------NA----------				
20		2-chloropropane		----------NA----------				
21	M	acrolein		----------NA----------				
22	M	1,1-dichloroethene		----------NA----------				
23	M	acetone		----------NA----------				
		----------	True	Calc.	% Drift	----------		
24	M	allyl chloride		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
25	M	acetonitrile		----------NA----------				
26	M	iodomethane		----------NA----------				
27	M	carbon disulfide		----------NA----------				
28	M	methylene chloride		----------NA----------				
29	M	methyl acetate		----------NA----------				
30		1-chloropropane		----------NA----------				
31	M	methyl tert butyl ether		----------NA----------				
32	M	trans-1,2-dichloroethene		----------NA----------				
33	M	di-isopropyl ether		----------NA----------				
34	M	2-butanone		----------NA----------				
35	M	1,1-dichloroethane		----------NA----------				
36	M	chloroprene		----------NA----------				
37	M	acrylonitrile		----------NA----------				
38	M	vinyl acetate		----------NA----------				

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69313.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

39	M	ethyl tert-butyl ether		----------NA----------				
40	M	ethyl acetate		----------NA----------				
41	M	2,2-dichloropropane		----------NA----------				
42	M	cis-1,2-dichloroethene		----------NA----------				
43		methylacrylate		----------NA----------				
44	M	propionitrile		----------NA----------				
45	M	bromochloromethane		----------NA----------				
46	M	tetrahydrofuran		----------NA----------				
47	M	chloroform		----------NA----------				
48	M	T-BUTYL FORMATE		----------NA----------				
49	S	dibromofluoromethane (s)	0.422	0.431	-2.1	105	0.00	8.89
50	S	1,2-dichloroethane-d4 (s)	0.457	0.473	-3.5	102	0.00	9.29
51	M	freon 113		----------NA----------				
52	M	methacrylonitrile		----------NA----------				
53	M	1,1,1-trichloroethane		----------NA----------				
54	M	cyclohexane		----------NA----------				
55		iso-butyl alcohol		----------NA----------				
56	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.71
57	M	epichlorohydrin		----------NA----------				
58	M	n-butyl alcohol		----------NA----------				
59	M	carbon tetrachloride		----------NA----------				
60	M	1,1-dichloropropene		----------NA----------				
61	M	hexane		----------NA----------				
62		Tert Amyl alcohol		----------NA----------				
63	M	benzene		----------NA----------				
64	m	iso-octane		----------NA----------				
65	M	tert-amyl methyl ether		----------NA----------				
66	M	heptane		----------NA----------				
67	M	isopropyl acetate		----------NA----------				
68	M	1,2-dichloroethane		----------NA----------				
69	M	trichloroethene		----------NA----------				
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate		----------NA----------				
72	M	2-nitropropane		----------NA----------				
73	M	2-chloroethyl vinyl ether		----------NA----------				
74	M	methyl methacrylate		----------NA----------				
75	M	1,2-dichloropropane		----------NA----------				
76	M	dibromomethane		----------NA----------				
77	M	methylcyclohexane		----------NA----------				
78	M	bromodichloromethane		----------NA----------				
79	M	cis-1,3-dichloropropene		----------NA----------				
80	S	toluene-d8 (s)	1.155	1.160	-0.4	102	0.00	11.31
81	M	4-methyl-2-pentanone		----------NA----------				
82	M	toluene		----------NA----------				
83	M	3-methyl-1-butanol		----------NA----------				
84	M	trans-1,3-dichloropropene		----------NA----------				
85	M	ethyl methacrylate		----------NA----------				
86	M	1,1,2-trichloroethane		----------NA----------				
87	M	2-hexanone		----------NA----------				
88	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	12.91
89	M	tetrachloroethene		----------NA----------				
90	M	1,3-dichloropropane		----------NA----------				
91	M	butyl acetate		----------NA----------				
92	M	3,3-DIMETHYL-1-BUTANOL		----------NA----------				
93	M	dibromochloromethane		----------NA----------				
94	M	1,2-dibromoethane		----------NA----------				
95		n-butyl ether		----------NA----------				
96	M	chlorobenzene		----------NA----------				

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Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69313.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

97	M	1,1,1,2-tetrachloroethane		----------NA----------			
98	M	ethylbenzene		----------NA----------			
99	M	m,p-xylene		----------NA----------			
100	M	o-xylene		----------NA----------			
101	M	styrene		----------NA----------			
		----------	True	Calc.	% Drift	----------	
102	M	bromoform		----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------	
103	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00 15.48
104	M	isopropylbenzene		----------NA----------			
105	S	4-bromofluorobenzene (s)	0.819	0.836	-2.1	99	0.00 14.18
106		cyclohexanone		----------NA----------			
107	M	bromobenzene		----------NA----------			
108	M	1,1,2,2-tetrachloroethane		----------NA----------			
		----------	True	Calc.	% Drift	----------	
109	M	trans-1,4-dichloro-2-bute		----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------	
110	M	1,2,3-trichloropropane		----------NA----------			
111	M	n-propylbenzene		----------NA----------			
112		4-ETHYLTOLUENE		----------NA----------			
113	M	2-chlorotoluene		----------NA----------			
114	M	4-chlorotoluene		----------NA----------			
115	M	1,3,5-trimethylbenzene		----------NA----------			
116	M	tert-butylbenzene		----------NA----------			
117	M	pentachloroethane		----------NA----------			
118	M	1,2,4-trimethylbenzene		----------NA----------			
119	M	sec-butylbenzene		----------NA----------			
120	M	1,3-dichlorobenzene		----------NA----------			
121	M	p-isopropyltoluene		----------NA----------			
122	M	1,4-dichlorobenzene		----------NA----------			
123		benzyl chloride		----------NA----------			
124	M	1,2-dichlorobenzene		----------NA----------			
125		1,4-DIETHYLBENZENE		----------NA----------			
126	M	n-butylbenzene		----------NA----------			
127		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------			
128	M	1,2-dibromo-3-chloropropa		----------NA----------			
129		1,3,5-TRICHLOROBENZENE		----------NA----------			
130	M	1,2,4-trichlorobenzene		----------NA----------			
131	M	hexachlorobutadiene		----------NA----------			
132	M	naphthalene		----------NA----------			
133	M	1,2,3-trichlorobenzene		----------NA----------			
134	m	hexachloroethane		----------NA----------			
		----------	True	Calc.	% Drift	----------	
135		2-ethylhexyl acrylate		----------NA----------			
		----------	AvgRF	CCRF	% Dev	----------	
136		2-methylnaphthalene		----------NA----------			
137	I	pentafluorobenzene(a)	1.000	1.000	0.0	111	0.00 8.84
		----------	True	Calc.	% Drift	----------	
138		Freon 142B		----------NA----------			

6.9.8

6

Continuing Calibration Summary

Job Number: JC37024
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B2853-CC2825
Lab FileID: 4B69313.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 4B68764.D  M4B2825.M          Thu Feb 16 12:19:02 2017
```

6.9.8

6

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69333.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4B\v4b2853-2854\4B69333.D Vial: 29
Acq On : 15 Feb 2017 9:35 pm Operator: Hueanht
Sample : cc2825-50 Inst : MS4B
Misc : MS12524,V4B2853,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Tue Jan 31 16:58:58 2017
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	105	0.00	6.80
2 M	tertiary butyl alcohol	1.304	1.348	-3.4	109	0.00	6.91
3 M	1,4-dioxane	0.113	0.111	1.8	100	0.00	10.34
4	Ethanol		----------NA----------				
5 I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	8.84
6	CHLOROTRIFLUOROETHENE		----------NA----------				
7 M	chlorodifluoromethane	0.791	0.838	-5.9	98	0.00	3.87
8 M	dichlorodifluoromethane	0.686	0.639	6.9	81	0.00	3.83
9	Freon 114		----------NA----------				
10 M	chloromethane	0.343	0.307	10.5	83	0.00	4.17
11 M	vinyl chloride	0.914	0.828	9.4	83	0.00	4.40
12 M	bromomethane	0.423	0.465	-9.9	101	0.00	4.98
13 M	chloroethane	0.408	0.434	-6.4	95	0.00	5.15
14	vinyl bromide	0.571	0.577	-1.1	91	0.00	5.45
15 M	trichlorofluoromethane	0.785	0.774	1.4	88	0.00	5.53
16	1,3-butadiene	0.751	0.182	75.8#	21#	-0.03	4.44
17	Pentane		----------NA----------				
18	freon 123a		----------NA----------				
19 M	ethyl ether	0.282	0.290	-2.8	92	0.00	5.88
20	2-chloropropane	0.191	0.179	6.3	87	0.00	6.07
21 M	acrolein	0.113	0.114	-0.9	97	0.00	6.09
22 M	1,1-dichloroethene	0.463	0.470	-1.5	91	0.00	6.25
23 M	acetone	0.055	0.044	20.0#	73	0.00	6.26
	----------	True	Calc.	% Drift	----------		
24 M	allyl chloride	50.000	47.775	4.5	97	0.00	6.71
	----------	AvgRF	CCRF	% Dev	----------		
25 M	acetonitrile	0.032	0.035	-9.4	108	0.00	6.62
26 M	iodomethane	0.952	0.976	-2.5	93	0.00	6.51
27 M	carbon disulfide	1.467	1.574	-7.3	90	0.00	6.62
28 M	methylene chloride	0.521	0.541	-3.8	96	0.00	6.87
29 M	methyl acetate	0.078	0.084	-7.7	98	0.00	6.65
30	1-chloropropane		----------NA----------				
31 M	methyl tert butyl ether	1.421	1.383	2.7	90	0.00	7.17
32 M	trans-1,2-dichloroethene	0.466	0.472	-1.3	93	0.00	7.21
33 M	di-isopropyl ether	1.974	1.937	1.9	95	0.00	7.70
34 M	2-butanone	0.060	0.057	5.0	87	0.00	8.31
35 M	1,1-dichloroethane	0.941	0.943	-0.2	94	0.00	7.73
36 M	chloroprene	0.762	0.773	-1.4	93	0.00	7.82
37 M	acrylonitrile	0.201	0.208	-3.5	97	0.00	7.13

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69333.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38	M	vinyl acetate	0.093	0.098	-5.4	95	0.00	7.66
39	M	ethyl tert-butyl ether	1.674	1.648	1.6	92	0.00	8.11
40	M	ethyl acetate	0.086	0.092	-7.0	96	0.00	8.31
41	M	2,2-dichloropropane	0.467	0.456	2.4	89	0.00	8.39
42	M	cis-1,2-dichloroethene	0.521	0.536	-2.9	93	0.00	8.37
43		methylacrylate	0.075	0.079	-5.3	96	0.00	8.39
44	M	propionitrile	0.074	0.076	-2.7	102	0.00	8.39
45	M	bromochloromethane	0.260	0.281	-8.1	95	0.00	8.65
46	M	tetrahydrofuran	0.176	0.179	-1.7	98	0.00	8.66
47	M	chloroform	0.568	0.564	0.7	96	0.00	8.72
48	M	T-BUTYL FORMATE	0.410	0.421	-2.7	90	0.00	8.74
49	S	dibromofluoromethane (s)	0.422	0.443	-5.0	98	0.00	8.89
50	S	1,2-dichloroethane-d4 (s)	0.457	0.481	-5.3	101	0.00	9.29
51	M	freon 113	0.397	0.384	3.3	85	0.00	6.26
52	M	methacrylonitrile	0.369	0.366	0.8	95	0.00	8.56
53	M	1,1,1-trichloroethane	0.659	0.701	-6.4	94	0.00	8.96
54	M	cyclohexane	0.676	0.675	0.1	83	0.00	9.06
55		iso-butyl alcohol		----------NA----------				
56	I	1,4-difluorobenzene	1.000	1.000	0.0	96	0.00	9.71
57	M	epichlorohydrin	0.038	0.041	-7.9	104	0.00	10.87
58	M	n-butyl alcohol	0.012	0.012	0.0	116	0.00	9.75
59	M	carbon tetrachloride	0.420	0.436	-3.8	93	0.00	9.13
60	M	1,1-dichloropropene	0.490	0.475	3.1	91	0.00	9.11
61	M	hexane	0.574	0.513	10.6	78	0.00	7.52
62		Tert Amyl alcohol	0.019	0.018	5.3	102	0.00	9.21
63	M	benzene	1.432	1.369	4.4	93	0.00	9.34
64	m	iso-octane	1.526	1.356	11.1	82	0.00	9.42
65	M	tert-amyl methyl ether	0.223	0.225	-0.9	94	0.00	9.40
66	M	heptane	0.361	0.313	13.3	79	0.00	9.55
67	M	isopropyl acetate	0.148	0.159	-7.4	97	0.00	9.23
68	M	1,2-dichloroethane	0.458	0.463	-1.1	96	0.00	9.37
69	M	trichloroethene	0.359	0.365	-1.7	94	0.00	10.01
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate	0.467	0.467	0.0	94	0.00	9.99
72	M	2-nitropropane	0.144	0.153	-6.3	101	0.00	10.75
73	M	2-chloroethyl vinyl ether	0.242	0.250	-3.3	99	0.00	10.77
74	M	methyl methacrylate	0.100	0.102	-2.0	91	0.00	10.24
75	M	1,2-dichloropropane	0.389	0.392	-0.8	95	0.00	10.30
76	M	dibromomethane	0.231	0.237	-2.6	97	0.00	10.41
77	M	methylcyclohexane	0.600	0.549	8.5	82	0.00	10.30
78	M	bromodichloromethane	0.467	0.514	-10.1	99	0.00	10.55
79	M	cis-1,3-dichloropropene	0.624	0.643	-3.0	92	0.00	11.00
80	S	toluene-d8 (s)	1.155	1.159	-0.3	96	0.00	11.31
81	M	4-methyl-2-pentanone	0.159	0.146	8.2	93	0.00	11.09
82	M	toluene	0.907	0.860	5.2	92	0.00	11.39
83	M	3-methyl-1-butanol	0.016	0.019	-18.7	118	0.00	11.09
84	M	trans-1,3-dichloropropene	0.540	0.564	-4.4	95	0.00	11.58
85	M	ethyl methacrylate	0.495	0.499	-0.8	93	0.00	11.55
86	M	1,1,2-trichloroethane	0.290	0.305	-5.2	99	0.00	11.81
87	M	2-hexanone	0.163	0.146	10.4	88	0.00	11.97
88	I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	12.91
89	M	tetrachloroethene	0.411	0.379	7.8	91	0.00	11.96
90	M	1,3-dichloropropane	0.631	0.598	5.2	97	0.00	12.00
91	M	butyl acetate	0.291	0.299	-2.7	99	0.00	12.05
92	M	3,3-DIMETHYL-1-BUTANOL	0.036	0.039	-8.3	114	0.00	12.15
93	M	dibromochloromethane	0.394	0.461	-17.0	100	0.00	12.26
94	M	1,2-dibromoethane	0.414	0.418	-1.0	97	0.00	12.43
95		n-butyl ether	1.882	1.742	7.4	89	0.00	12.88

Continuing Calibration Summary

Job Number: JC37024 **Sample:** V4B2853-CC2825
Account: UTC United Technologies Corporation **Lab FileID:** 4B69333.D
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

96	M	chlorobenzene	1.116	1.067	4.4	94	0.00	12.94
97	M	1,1,1,2-tetrachloroethane	0.397	0.404	-1.8	96	0.00	13.01
98	M	ethylbenzene	1.860	1.751	5.9	93	0.00	13.00
99	M	m,p-xylene	0.729	0.688	5.6	92	0.00	13.13
100	M	o-xylene	0.730	0.726	0.5	93	0.00	13.57
101	M	styrene	1.276	1.209	5.3	93	0.00	13.59
		----------	True	Calc.	% Drift	----------		
102	M	bromoform	50.000	51.166	-2.3	100	0.00	13.84
		----------	AvgRF	CCRF	% Dev	----------		
103	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	15.48
104	M	isopropylbenzene	3.278	3.065	6.5	92	0.00	13.95
105	S	4-bromofluorobenzene (s)	0.819	0.816	0.4	99	0.00	14.18
106		cyclohexanone	0.161	0.043	73.3#	28#	0.00	14.11
107	M	bromobenzene	0.950	0.914	3.8	96	0.00	14.39
108	M	1,1,2,2-tetrachloroethane	0.899	0.939	-4.4	101	0.00	14.27
		----------	True	Calc.	% Drift	----------		
109	M	trans-1,4-dichloro-2-bute	50.000	36.484	27.0#	74	0.00	14.30
		----------	AvgRF	CCRF	% Dev	----------		
110	M	1,2,3-trichloropropane	0.225	0.232	-3.1	101	0.00	14.36
111	M	n-propylbenzene	3.774	3.585	5.0	92	0.00	14.41
112		4-ETHYLTOLUENE		----------NA----------				
113	M	2-chlorotoluene	0.823	0.787	4.4	92	0.00	14.56
114	M	4-chlorotoluene	2.343	2.266	3.3	94	0.00	14.69
115	M	1,3,5-trimethylbenzene	2.688	2.532	5.8	92	0.00	14.59
116	M	tert-butylbenzene	2.480	2.362	4.8	91	0.00	14.97
117	M	pentachloroethane	0.526	0.563	-7.0	98	0.00	15.04
118	M	1,2,4-trimethylbenzene	2.735	2.661	2.7	93	0.00	15.02
119	M	sec-butylbenzene	3.680	3.529	4.1	90	0.00	15.21
120	M	1,3-dichlorobenzene	1.776	1.717	3.3	95	0.00	15.41
121	M	p-isopropyltoluene	3.201	3.119	2.6	91	0.00	15.36
122	M	1,4-dichlorobenzene	1.730	1.699	1.8	94	0.00	15.51
123		benzyl chloride	1.530	1.430	6.5	80	0.00	15.61
124	M	1,2-dichlorobenzene	1.724	1.706	1.0	95	0.00	15.92
125		1,4-DIETHYLBENZENE		----------NA----------				
126	M	n-butylbenzene	1.695	1.647	2.8	89	0.00	15.81
127		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------				
128	M	1,2-dibromo-3-chloropropa	0.153	0.176	-15.0	104	0.00	16.77
129		1,3,5-TRICHLOROBENZENE	1.523	1.517	0.4	92	0.00	16.97
130	M	1,2,4-trichlorobenzene	1.356	1.347	0.7	90	0.00	17.65
131	M	hexachlorobutadiene	0.795	0.685	13.8	84	0.00	17.77
132	M	naphthalene	2.451	2.448	0.1	93	0.00	17.97
133	M	1,2,3-trichlorobenzene	1.193	1.160	2.8	90	0.00	18.21
134	m	hexachloroethane	0.599	0.590	1.5	87	0.00	16.25
		----------	True	Calc.	% Drift	----------		
135		2-ethylhexyl acrylate	10.000	8.598	14.0	96	0.00	17.66
		----------	AvgRF	CCRF	% Dev	----------		
136		2-methylnaphthalene	0.593	0.548	7.6	82	0.00	19.27
137	I	pentafluorobenzene(a)	1.000	1.000	0.0	99	0.00	8.84
		----------	True	Calc.	% Drift	----------		
138		Freon 142B		----------NA----------				

Continuing Calibration Summary

Job Number: JC37024
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B2853-CC2825
Lab FileID: 4B69333.D

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 4B68758.D  M4B2825.M         Thu Feb 16 15:45:46 2017
```

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69264.D
Acq On : 14 Feb 2017 11:59 am
Operator : Hueanht
Sample : jc37024-1
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 15 10:31:43 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) tert butyl alcohol-d9	6.807	65	107157	500.00 ug/L	0.00
5) pentafluorobenzene	8.841	168	295550	50.00 ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	405249	50.00 ug/L	0.00
88) chlorobenzene-d5	12.905	117	379029	50.00 ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	208153	50.00 ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	295550	50.00 ug/L	# 0.00
System Monitoring Compounds					
49) dibromofluoromethane (s)	8.889	113	125800	50.40 ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.80%		
50) 1,2-dichloroethane-d4 (s)	9.286	65	138668	51.29 ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.58%		
80) toluene-d8 (s)	11.310	98	469166	50.13 ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.26%		
105) 4-bromofluorobenzene (s)	14.182	95	178520	52.38 ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 104.76%		
Target Compounds					Qvalue
35) 1,1-dichloroethane	7.727	63	1429	0.26 ug/L	89

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

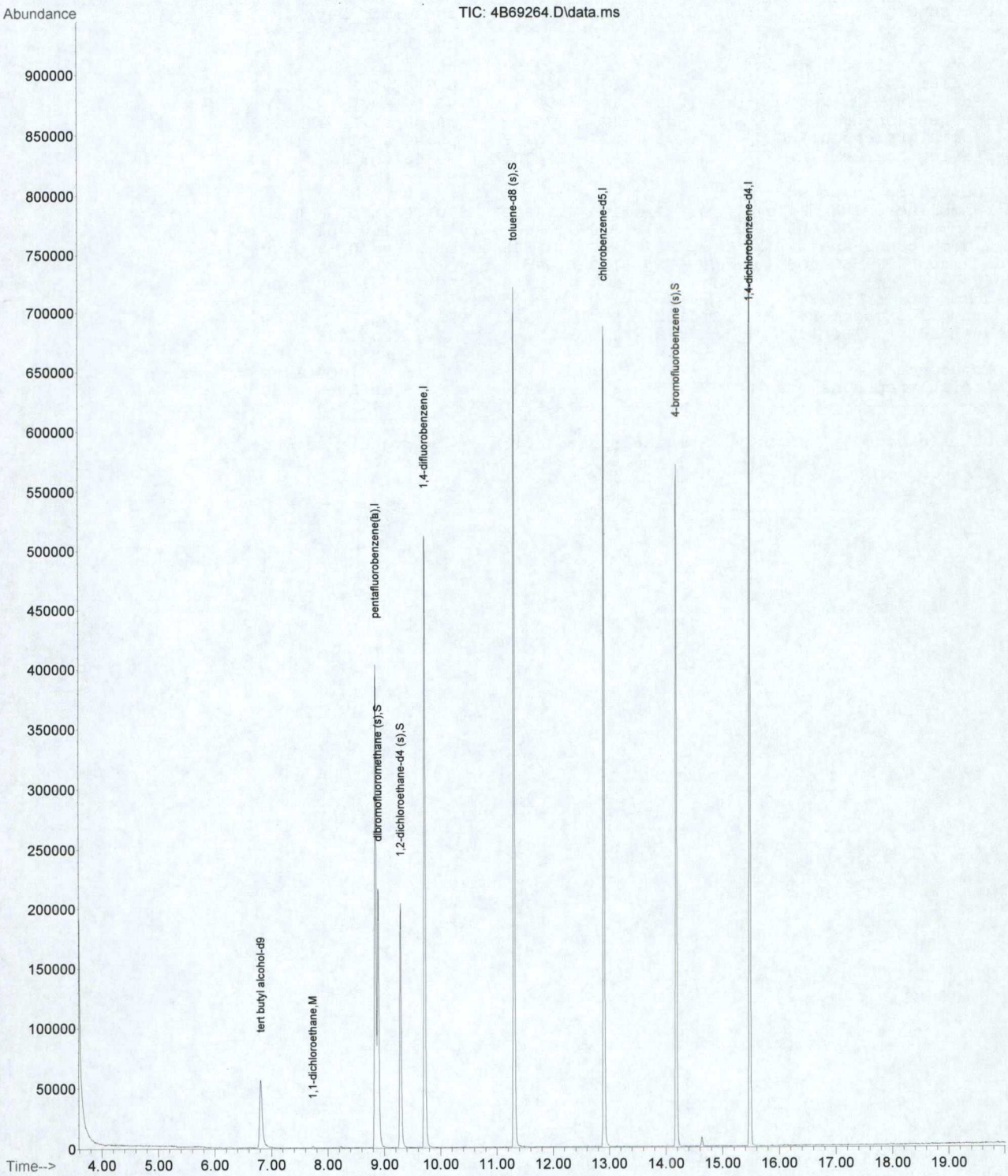
7.1.1

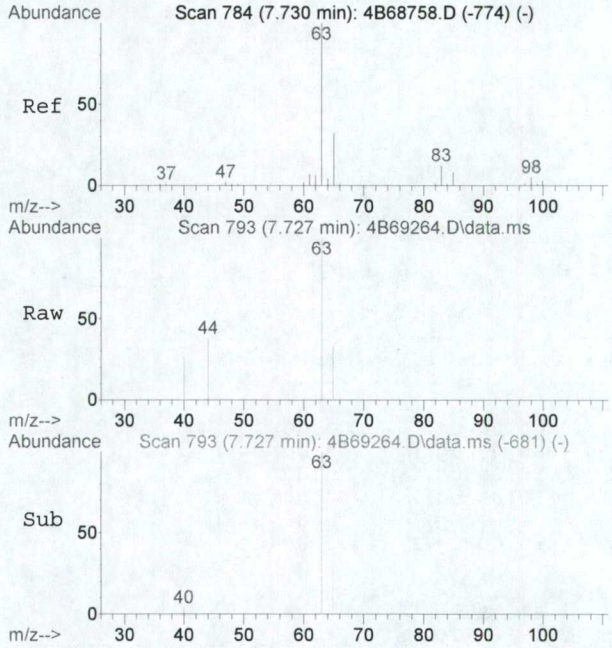
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69264.D
Acq On : 14 Feb 2017 11:59 am
Operator : Hueanht
Sample : jc37024-1
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 15 10:31:43 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

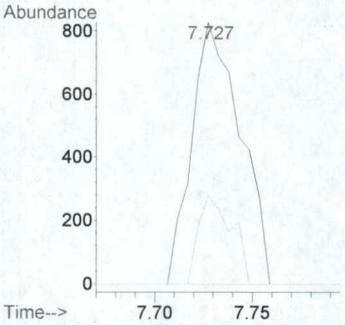




#35
1,1-dichloroethane
Concen: 0.26 ug/L
RT: 7.727 min Scan# 793
Delta R.T. -0.003 min
Lab File: 4B69264.D
Acq: 14 Feb 2017 11:59 am

Tgt Ion: 63 Resp: 1429

Ion	Ratio	Lower	Upper
63	100		
65	33.4	1.8	61.8
83	0.0	0.0	42.3



7.1.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69266.D
Acq On : 14 Feb 2017 12:55 pm
Operator : Hueanht
Sample : jc37024-2
Misc : MS12540,V4B2850,5,,,,5
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 15 10:33:18 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.807	65	114356	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	293956	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	398678	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	379938	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	213743	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	293956	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	127055	51.18	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.36%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	137513	51.14	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.28%			
80) toluene-d8 (s)	11.310	98	469047	50.94	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 101.88%			
105) 4-bromofluorobenzene (s)	14.181	95	181196	51.77	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.54%			
Target Compounds						Qvalue
22) 1,1-dichloroethene	6.273	96	17241	6.34	ug/L	97
35) 1,1-dichloroethane	7.733	63	42377	7.66	ug/L	99
42) cis-1,2-dichloroethene	8.371	96	41824	13.66	ug/L	99
53) 1,1,1-trichloroethane	8.951	97	702034	181.12	ug/L	98
89) tetrachloroethene	11.959	164	747	0.24	ug/L #	86
99) m,p-xylene	13.120	106	5814	1.05	ug/L	100
100) o-xylene	13.570	106	12370	2.23	ug/L	93

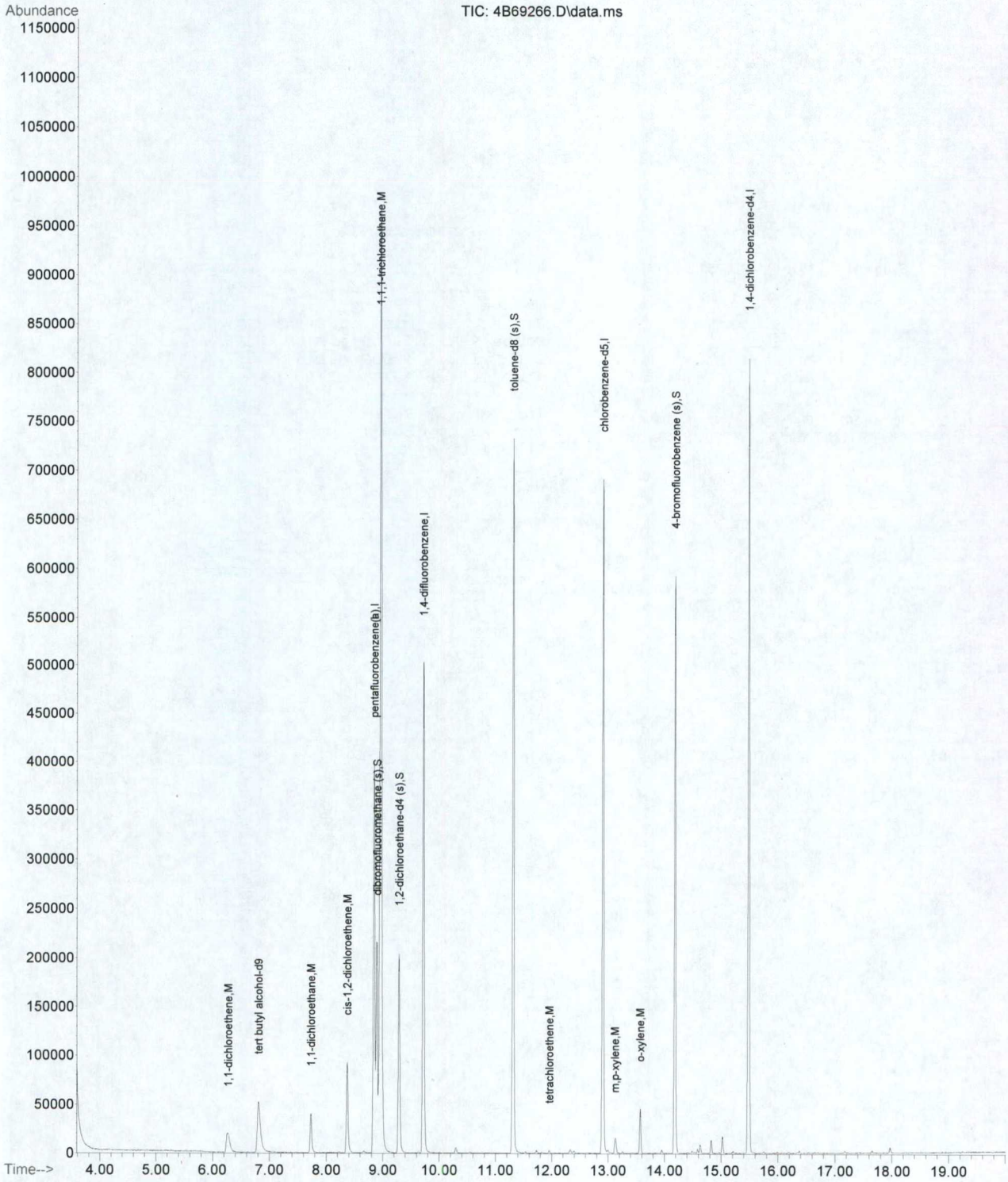
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.2 7

Quantitation Report (QT Reviewed)

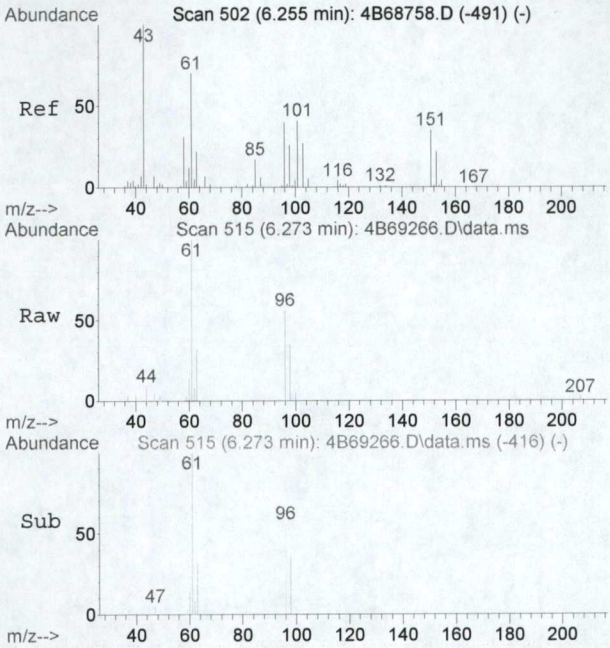
Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69266.D
Acq On : 14 Feb 2017 12:55 pm
Operator : Hueanht
Sample : jc37024-2
Misc : MS12540,V4B2850,5,,,,5
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 15 10:33:18 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



M4B2825.M Wed Feb 15 10:43:54 2017 11

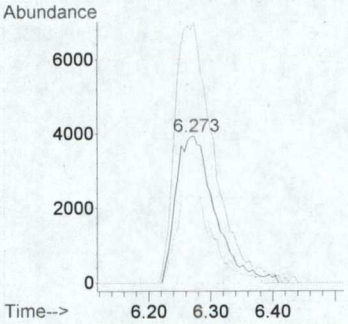
Page: 2

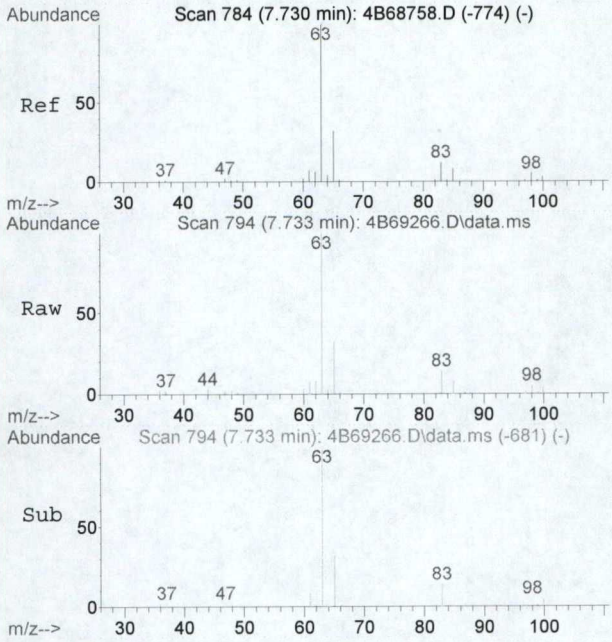


#22
1,1-dichloroethene
Concen: 6.34 ug/L
RT: 6.273 min Scan# 515
Delta R.T. 0.018 min
Lab File: 4B69266.D
Acq: 14 Feb 2017 12:55 pm

Tgt Ion: 96 Resp: 17241

Ion	Ratio	Lower	Upper
96	100		
61	178.4	144.5	204.5
63	58.0	24.8	84.8

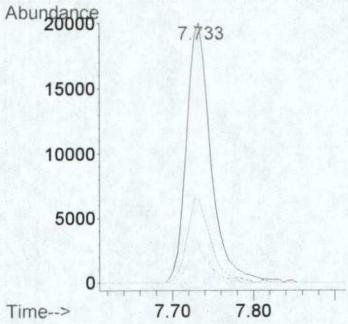




#35
1,1-dichloroethane
Concen: 7.66 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69266.D
Acq: 14 Feb 2017 12:55 pm

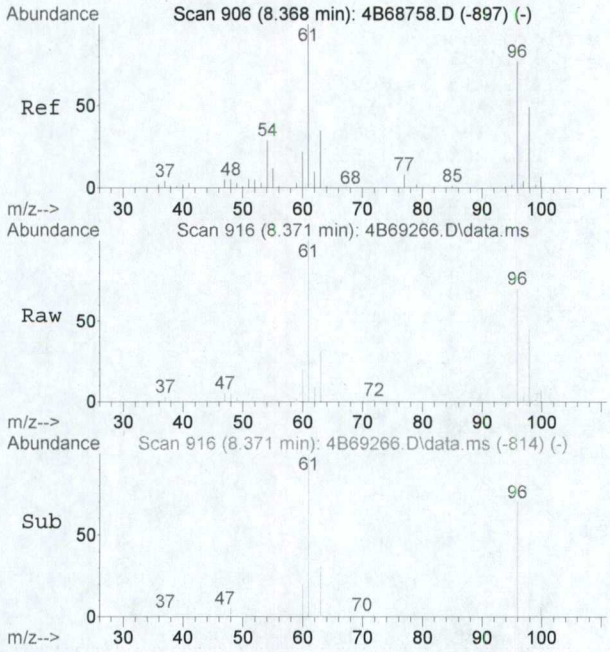
Tgt Ion: 63 Resp: 42377

Ion	Ratio	Lower	Upper
63	100		
65	32.1	1.8	61.8
83	13.7	0.0	42.3



7.1.2

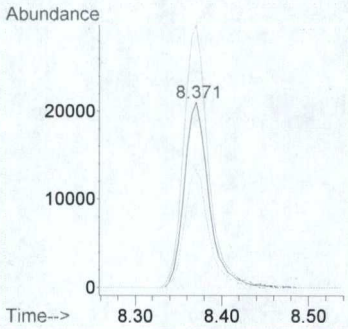
7

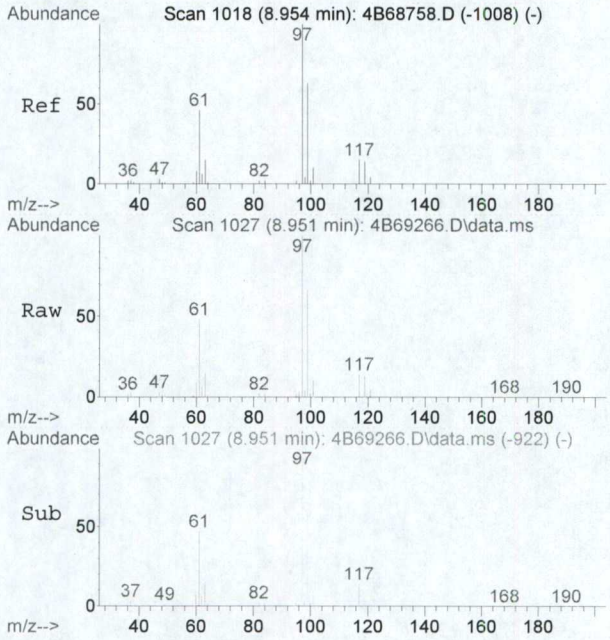


#42
cis-1,2-dichloroethene
Concen: 13.66 ug/L
RT: 8.371 min Scan# 916
Delta R.T. 0.002 min
Lab File: 4B69266.D
Acq: 14 Feb 2017 12:55 pm

Tgt Ion: 96 Resp: 41824

Ion	Ratio	Lower	Upper
96	100		
61	142.2	110.8	170.8
98	63.7	34.1	94.1

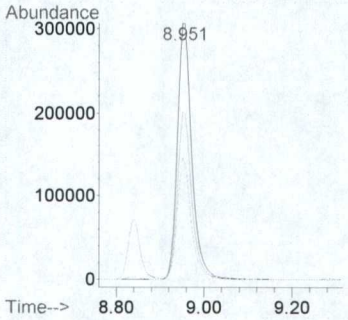




#53
1,1,1-trichloroethane
Concen: 181.12 ug/L
RT: 8.951 min Scan# 1027
Delta R.T. -0.003 min
Lab File: 4B69266.D
Acq: 14 Feb 2017 12:55 pm

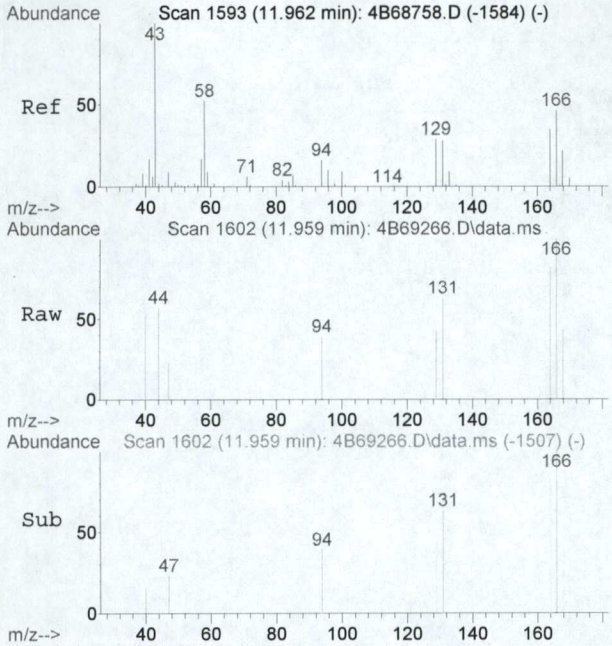
Tgt Ion: 97 Resp: 702034

Ion	Ratio	Lower	Upper
97	100		
99	65.8	34.3	94.3
61	47.5	15.9	75.9



7.1.2

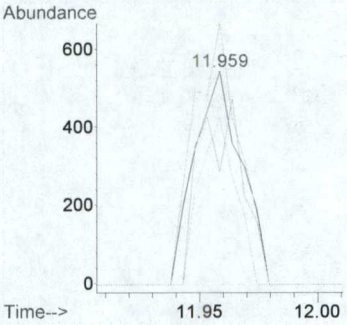
7

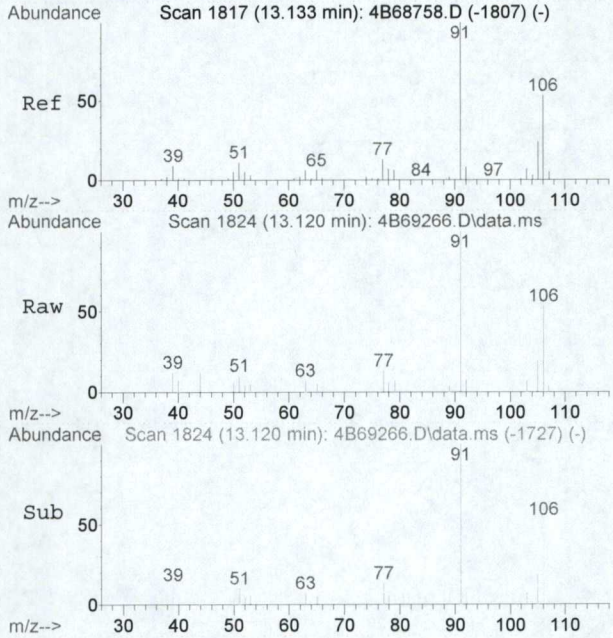


#89
tetrachloroethene
Concen: 0.24 ug/L
RT: 11.959 min Scan# 1602
Delta R.T. -0.003 min
Lab File: 4B69266.D
Acq: 14 Feb 2017 12:55 pm

Tgt Ion:164 Resp: 747

Ion	Ratio	Lower	Upper
164	100		
129	52.8	53.9	113.9#
131	77.8	50.4	110.4
166	122.6	101.4	161.4

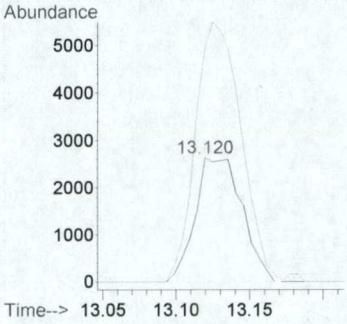


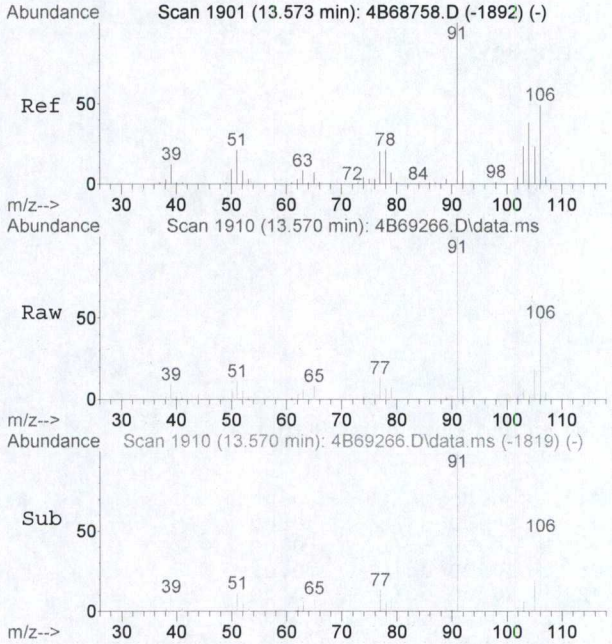


#99
m,p-xylene
Concen: 1.05 ug/L
RT: 13.120 min Scan# 1824
Delta R.T. -0.013 min
Lab File: 4B69266.D
Acq: 14 Feb 2017 12:55 pm

Tgt Ion:106 Resp: 5814

Ion	Ratio	Lower	Upper
106	100		
91	188.8	159.1	219.1

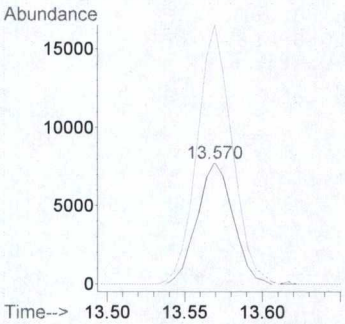




#100
o-xylene
Concen: 2.23 ug/L
RT: 13.570 min Scan# 1910
Delta R.T. -0.003 min
Lab File: 4B69266.D
Acq: 14 Feb 2017 12:55 pm

Tgt Ion:106 Resp: 12370

Ion	Ratio	Lower	Upper
106	100		
91	213.2	172.3	232.3



7.1.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69317.D
Acq On : 15 Feb 2017 2:25 pm
Operator : Hueanht
Sample : jc37024-3
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 16 15:33:15 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

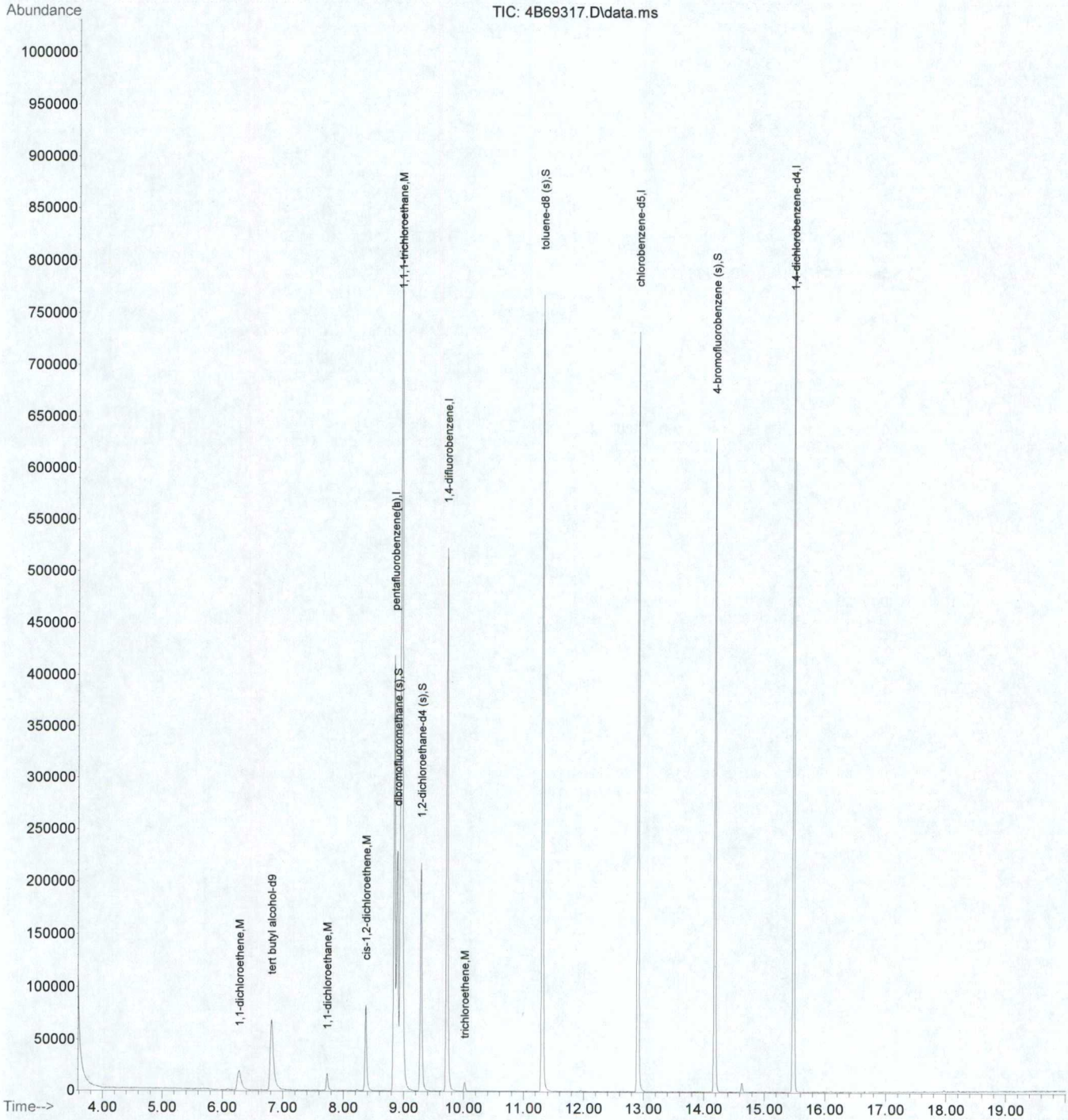
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	152264	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	318906	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	430236	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	409968	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	230542	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	318906	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	136134	50.55	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.10%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	150830	51.70	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 103.40%			
80) toluene-d8 (s)	11.310	98	502598	50.58	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 101.16%			
105) 4-bromofluorobenzene (s)	14.181	95	192640	51.03	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.06%			
Target Compounds						Qvalue
22) 1,1-dichloroethene	6.279	96	18095	6.13	ug/L	91
35) 1,1-dichloroethane	7.733	63	18600	3.10	ug/L	96
42) cis-1,2-dichloroethene	8.371	96	37746	11.36	ug/L	98
53) 1,1,1-trichloroethane	8.956	97	652372	155.14	ug/L	98
69) trichloroethene	10.013	95	3246	1.05	ug/L	77

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

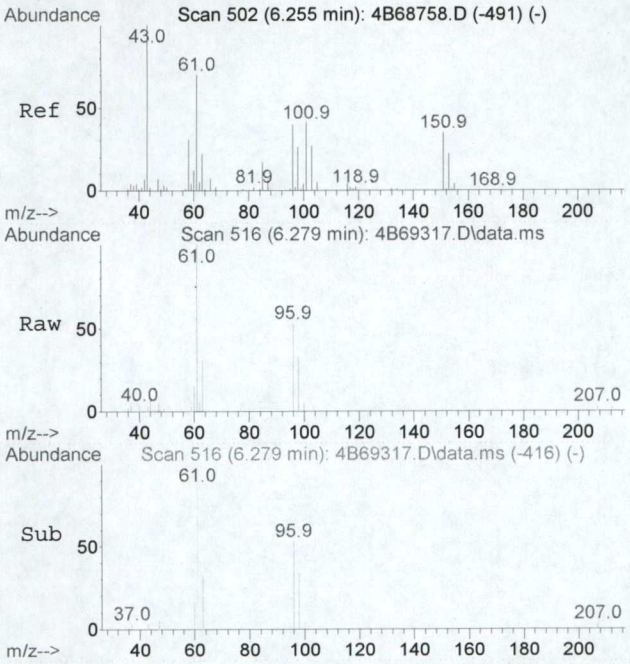
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69317.D
Acq On : 15 Feb 2017 2:25 pm
Operator : Hueanht
Sample : jc37024-3
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 16 15:33:15 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



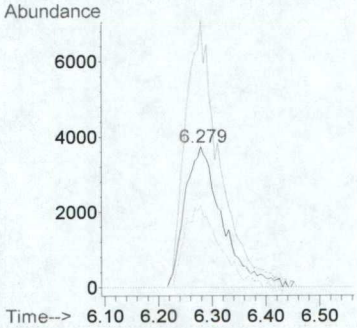
M4B2825.M Thu Feb 16 16:00:29 2017

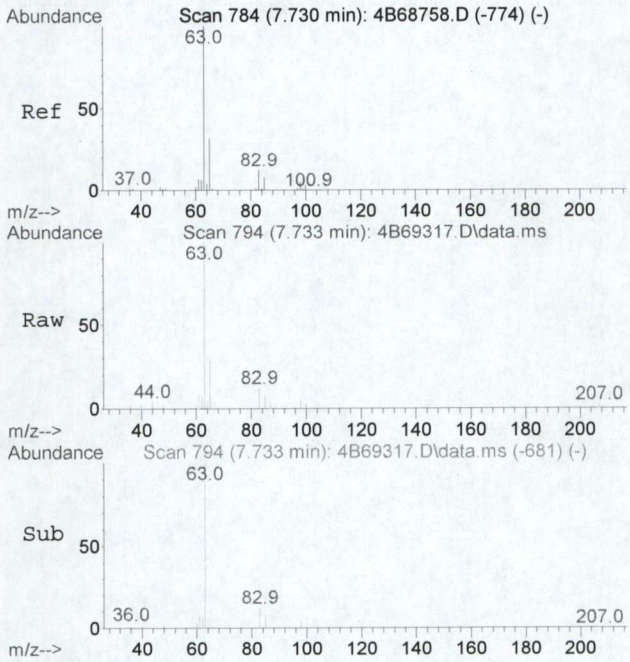


#22
1,1-dichloroethene
Concen: 6.13 ug/L
RT: 6.279 min Scan# 516
Delta R.T. 0.023 min
Lab File: 4B69317.D
Acq: 15 Feb 2017 2:25 pm

Tgt Ion: 96 Resp: 18095

Ion	Ratio	Lower	Upper
96	100		
61	188.7	144.5	204.5
63	57.7	24.8	84.8

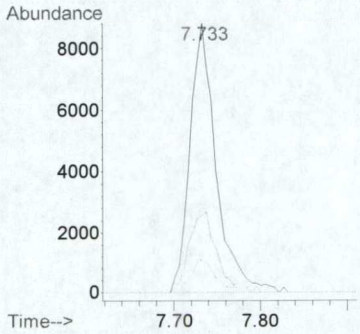




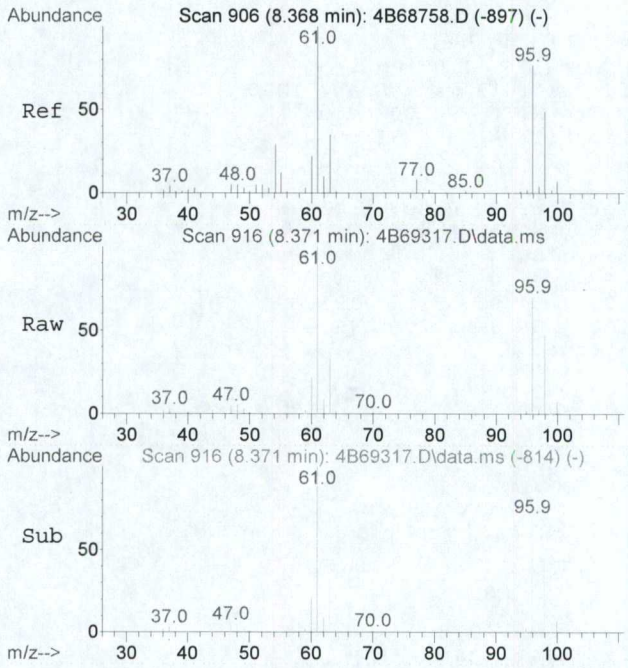
#35
1,1-dichloroethane
Concen: 3.10 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69317.D
Acq: 15 Feb 2017 2:25 pm

Tgt Ion: 63 Resp: 18600

Ion	Ratio	Lower	Upper
63	100		
65	29.1	1.8	61.8
83	12.2	0.0	42.3



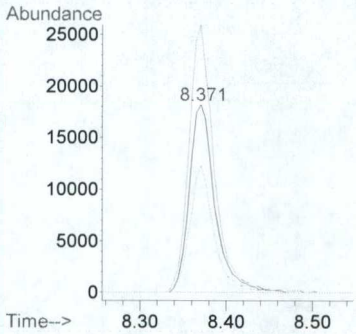
SGS ACCUTEST JC37024

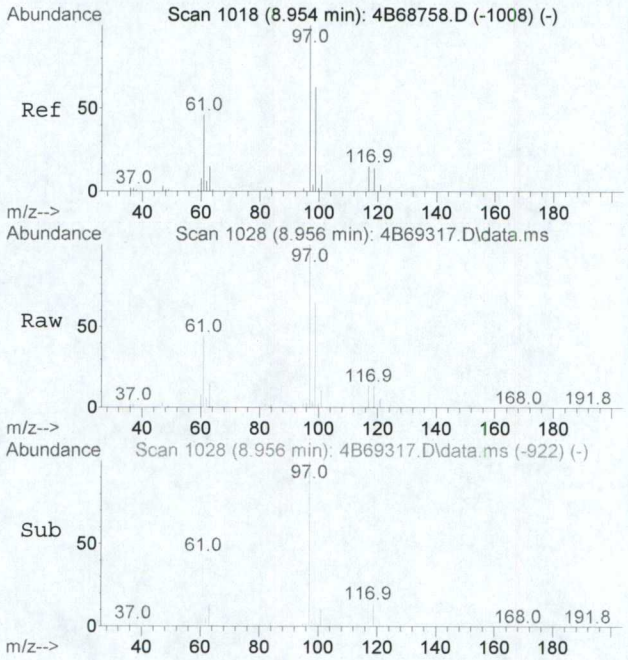


#42
cis-1,2-dichloroethene
Concen: 11.36 ug/L
RT: 8.371 min Scan# 916
Delta R.T. 0.002 min
Lab File: 4B69317.D
Acq: 15 Feb 2017 2:25 pm

Tgt Ion: 96 Resp: 37746

Ion	Ratio	Lower	Upper
96	100		
61	142.5	110.8	170.8
98	67.6	34.1	94.1

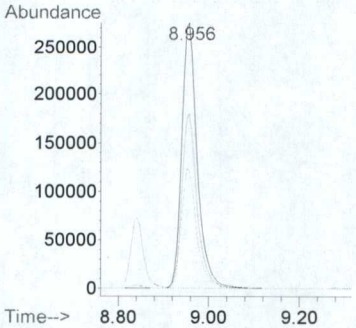




#53
1,1,1-trichloroethane
Concen: 155.14 ug/L
RT: 8.956 min Scan# 1028
Delta R.T. 0.002 min
Lab File: 4B69317.D
Acq: 15 Feb 2017 2:25 pm

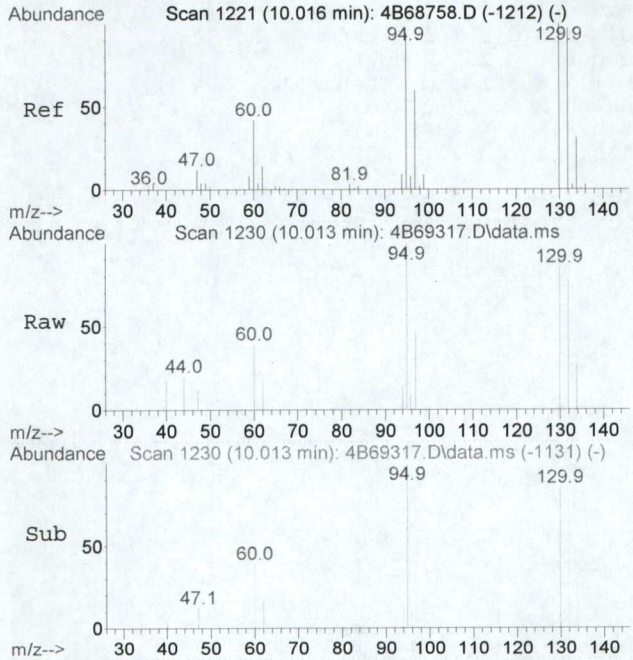
Tgt Ion: 97 Resp: 652372

Ion	Ratio	Lower	Upper
97	100		
99	65.5	34.3	94.3
61	44.2	15.9	75.9



7.1.3

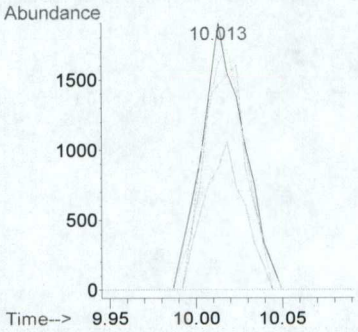
7



#69
trichloroethene
Concen: 1.05 ug/L
RT: 10.013 min Scan# 1230
Delta R.T. -0.003 min
Lab File: 4B69317.D
Acq: 15 Feb 2017 2:25 pm

Tgt Ion: 95 Resp: 3246

Ion	Ratio	Lower	Upper
95	100		
97	46.0	33.7	93.7
130	84.9	75.9	135.9
132	76.9	72.9	132.9



7.1.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69318.D
Acq On : 15 Feb 2017 2:53 pm
Operator : Hueanht
Sample : jc37024-4
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 16 15:34:01 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	148693	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	314387	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.720	114	426371	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	403726	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.484	152	229864	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	314387	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	136120	51.27	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.54%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	149362	51.94	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 103.88%			
80) toluene-d8 (s)	11.310	98	495363	50.30	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.60%			
105) 4-bromofluorobenzene (s)	14.182	95	192657	51.18	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.36%			
Target Compounds						Qvalue
22) 1,1-dichloroethene	6.279	96	4497	1.55	ug/L	90
35) 1,1-dichloroethane	7.733	63	17930	3.03	ug/L	97
42) cis-1,2-dichloroethene	8.371	96	23653	7.22	ug/L	99
53) 1,1,1-trichloroethane	8.956	97	290950	70.19	ug/L	99
69) trichloroethene	10.018	95	4535	1.48	ug/L	94

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

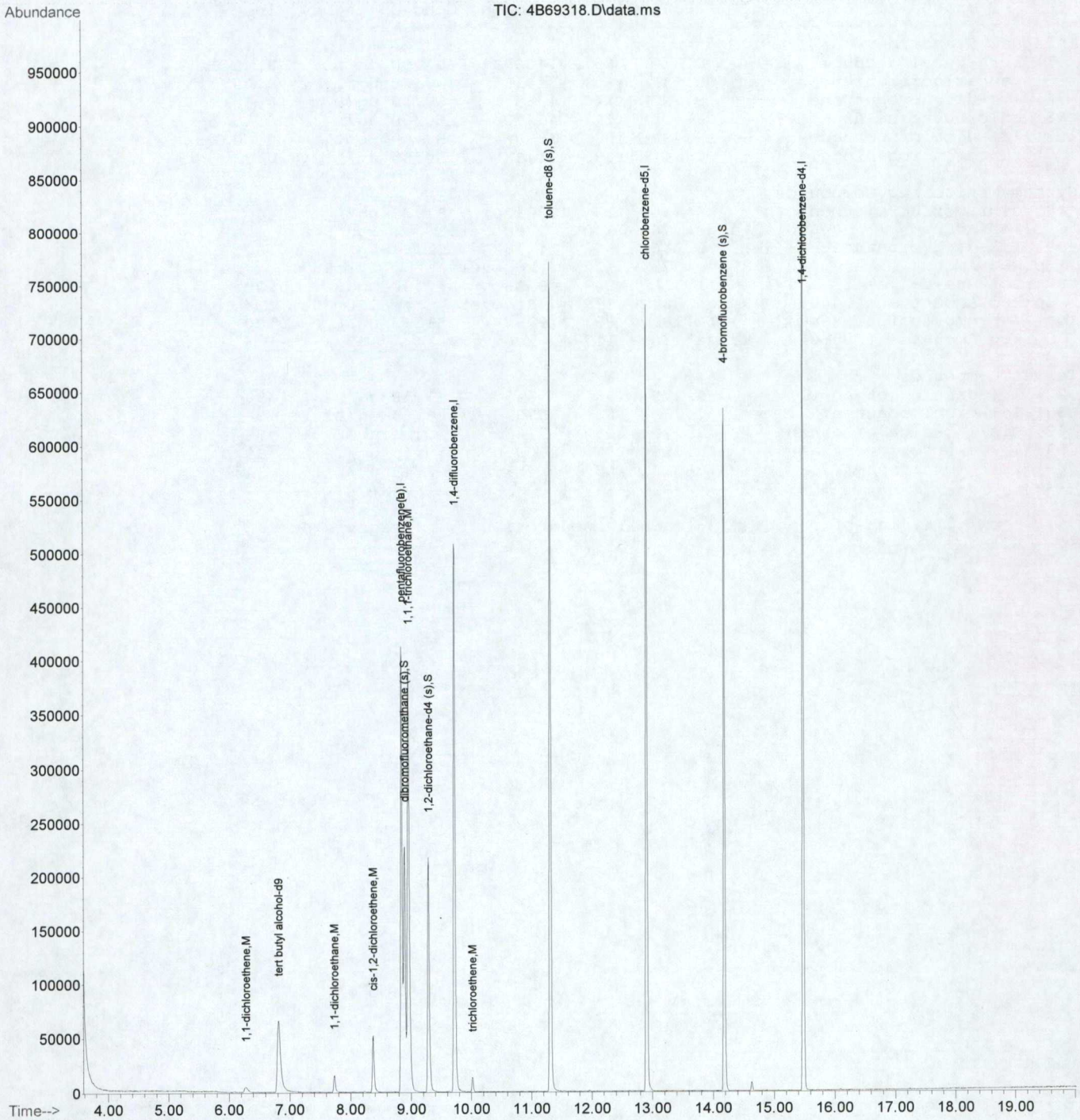
7.1.4

7

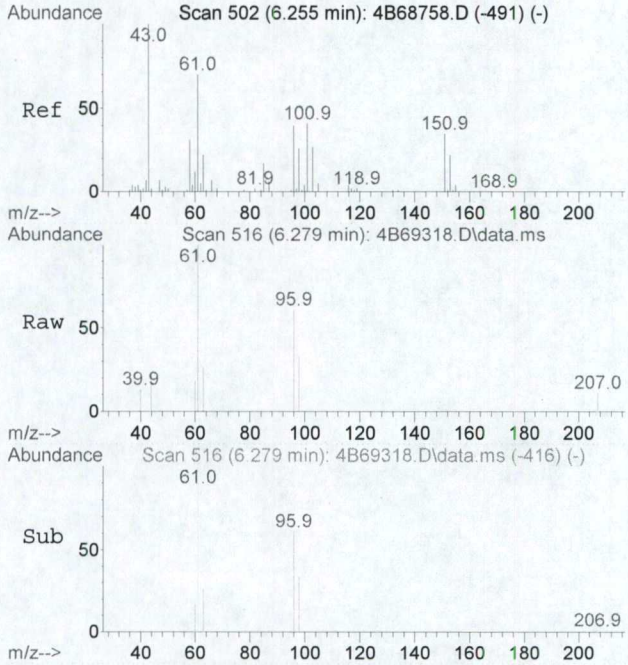
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69318.D
Acq On : 15 Feb 2017 2:53 pm
Operator : Hueanht
Sample : jc37024-4
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 16 15:34:01 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



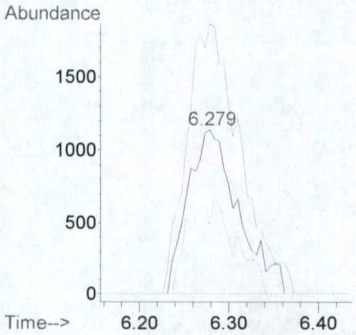
M4B2825.M Thu Feb 16 16:00:31 2017

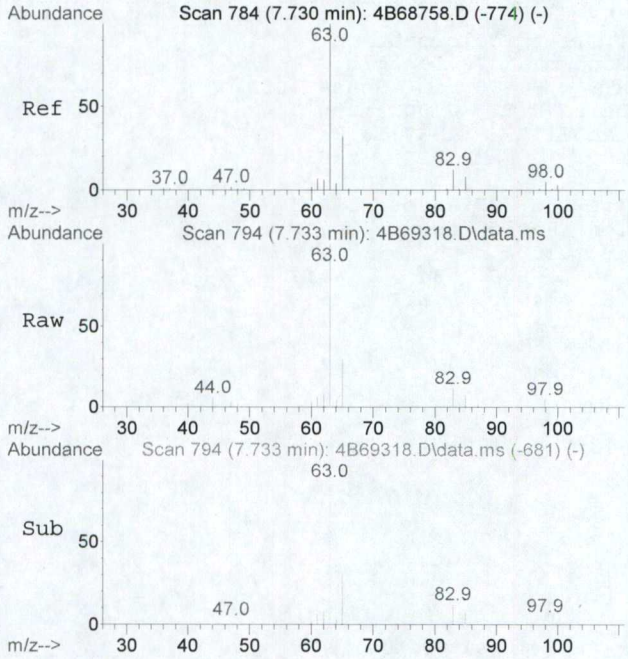


#22
1,1-dichloroethene
Concen: 1.55 ug/L
RT: 6.279 min Scan# 516
Delta R.T. 0.023 min
Lab File: 4B69318.D
Acq: 15 Feb 2017 2:53 pm

Tgt Ion: 96 Resp: 4497

Ion	Ratio	Lower	Upper
96	100		
61	163.9	144.5	204.5
63	42.9	24.8	84.8

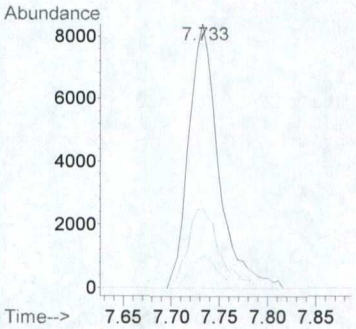




#35
1,1-dichloroethane
Concen: 3.03 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69318.D
Acq: 15 Feb 2017 2:53 pm

Tgt Ion: 63 Resp: 17930

Ion	Ratio	Lower	Upper
63	100		
65	29.8	1.8	61.8
83	11.7	0.0	42.3



7.1.4

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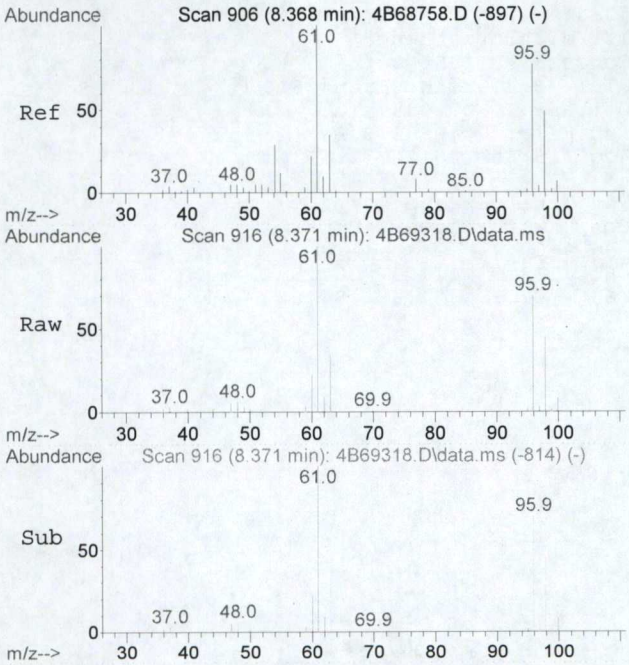
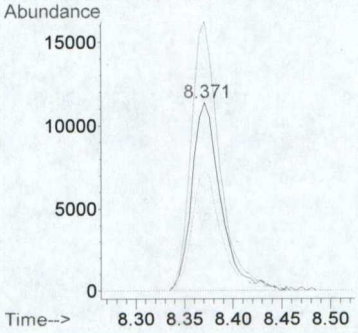
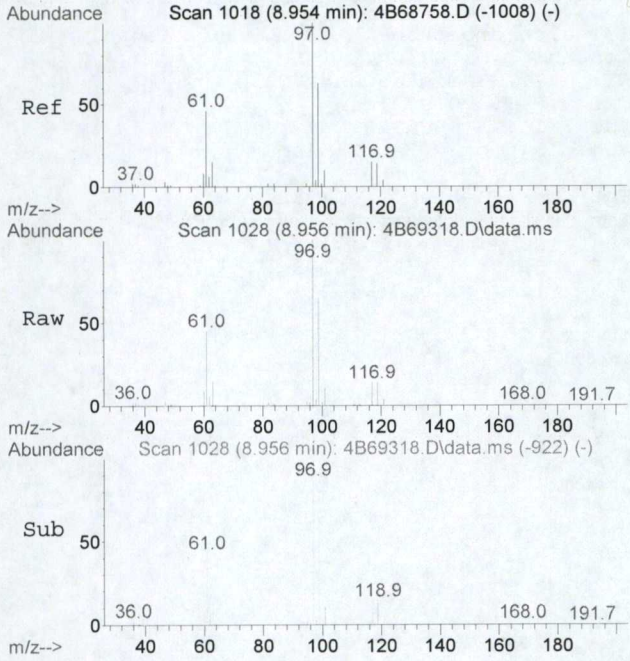


#42
cis-1,2-dichloroethene
Concen: 7.22 ug/L
RT: 8.371 min Scan# 916
Delta R.T. 0.002 min
Lab File: 4B69318.D
Acq: 15 Feb 2017 2:53 pm

Tgt Ion: 96 Resp: 23653

Ion	Ratio	Lower	Upper
96	100		
61	143.0	110.8	170.8
98	63.8	34.1	94.1

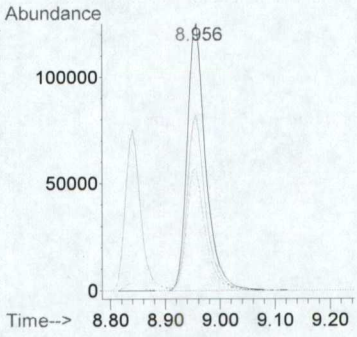




#53
1,1,1-trichloroethane
Concen: 70.19 ug/L
RT: 8.956 min Scan# 1028
Delta R.T. 0.002 min
Lab File: 4B69318.D
Acq: 15 Feb 2017 2:53 pm

Tgt Ion: 97 Resp: 290950

Ion	Ratio	Lower	Upper
97	100		
99	65.5	34.3	94.3
61	45.0	15.9	75.9



7.1.4

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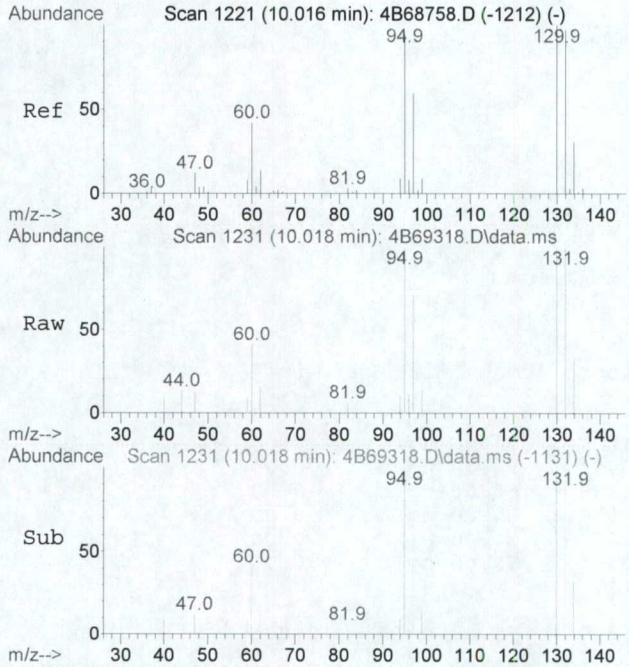
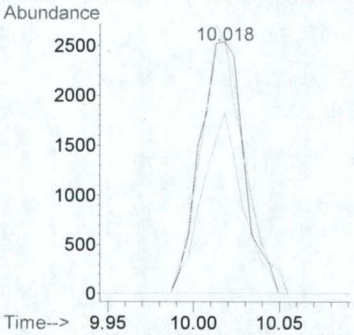


#69
trichloroethene
Concen: 1.48 ug/L
RT: 10.018 min Scan# 1231
Delta R.T. 0.002 min
Lab File: 4B69318.D
Acq: 15 Feb 2017 2:53 pm

Tgt Ion: 95 Resp: 4535

Ion	Ratio	Lower	Upper
95	100		
97	71.7	33.7	93.7
130	99.5	75.9	135.9
132	100.8	72.9	132.9



7.1.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69325.D
Acq On : 15 Feb 2017 6:15 pm
Operator : Hueanht
Sample : jc37024-5
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 16 15:41:37 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) tert butyl alcohol-d9	6.812	65	141227	500.00 ug/L	0.00
5) pentafluorobenzene	8.841	168	320491	50.00 ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	436295	50.00 ug/L	0.00
88) chlorobenzene-d5	12.905	117	413916	50.00 ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.478	152	234052	50.00 ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	320491	50.00 ug/L	# 0.00
System Monitoring Compounds					
49) dibromofluoromethane (s)	8.888	113	139850	51.67 ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.34%		
50) 1,2-dichloroethane-d4 (s)	9.286	65	153698	52.43 ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 104.86%		
80) toluene-d8 (s)	11.310	98	506788	50.29 ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.58%		
105) 4-bromofluorobenzene (s)	14.181	95	194760	50.82 ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 101.64%		

Target Compounds Qvalue

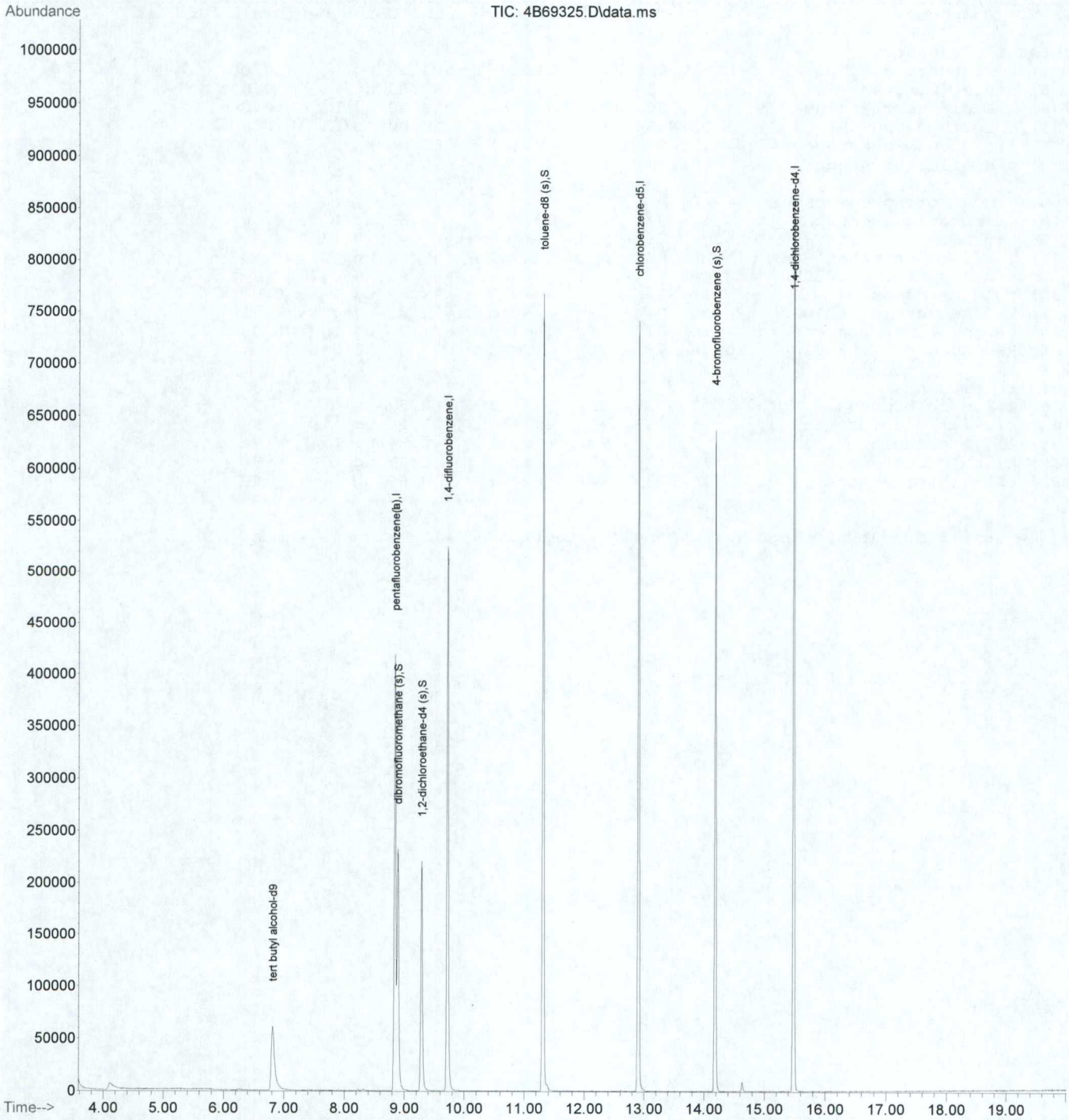
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.5 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69325.D
Acq On : 15 Feb 2017 6:15 pm
Operator : Hueanht
Sample : jc37024-5
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 16 15:41:37 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



M4B2825.M Thu Feb 16 16:00:42 2017

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69319.D
Acq On : 15 Feb 2017 3:24 pm
Operator : Hueanht
Sample : jc37024-6
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 16 15:34:49 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.807	65	145206	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	312078	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.720	114	425068	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	398667	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.484	152	222471	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	312078	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	133598	50.69	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.38%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	150033	52.56	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 105.12%			
80) toluene-d8 (s)	11.310	98	489777	49.89	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.78%			
105) 4-bromofluorobenzene (s)	14.182	95	188462	51.73	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.46%			
Target Compounds						Qvalue
35) 1,1-dichloroethane	7.733	63	3353	0.57	ug/L	90
42) cis-1,2-dichloroethene	8.365	96	453	0.14	ug/L #	56
53) 1,1,1-trichloroethane	8.951	97	2223	0.54	ug/L	76
69) trichloroethene	10.013	95	1120	0.37	ug/L	86
89) tetrachloroethene	11.953	164	2911	0.89	ug/L	89

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

7.1.6

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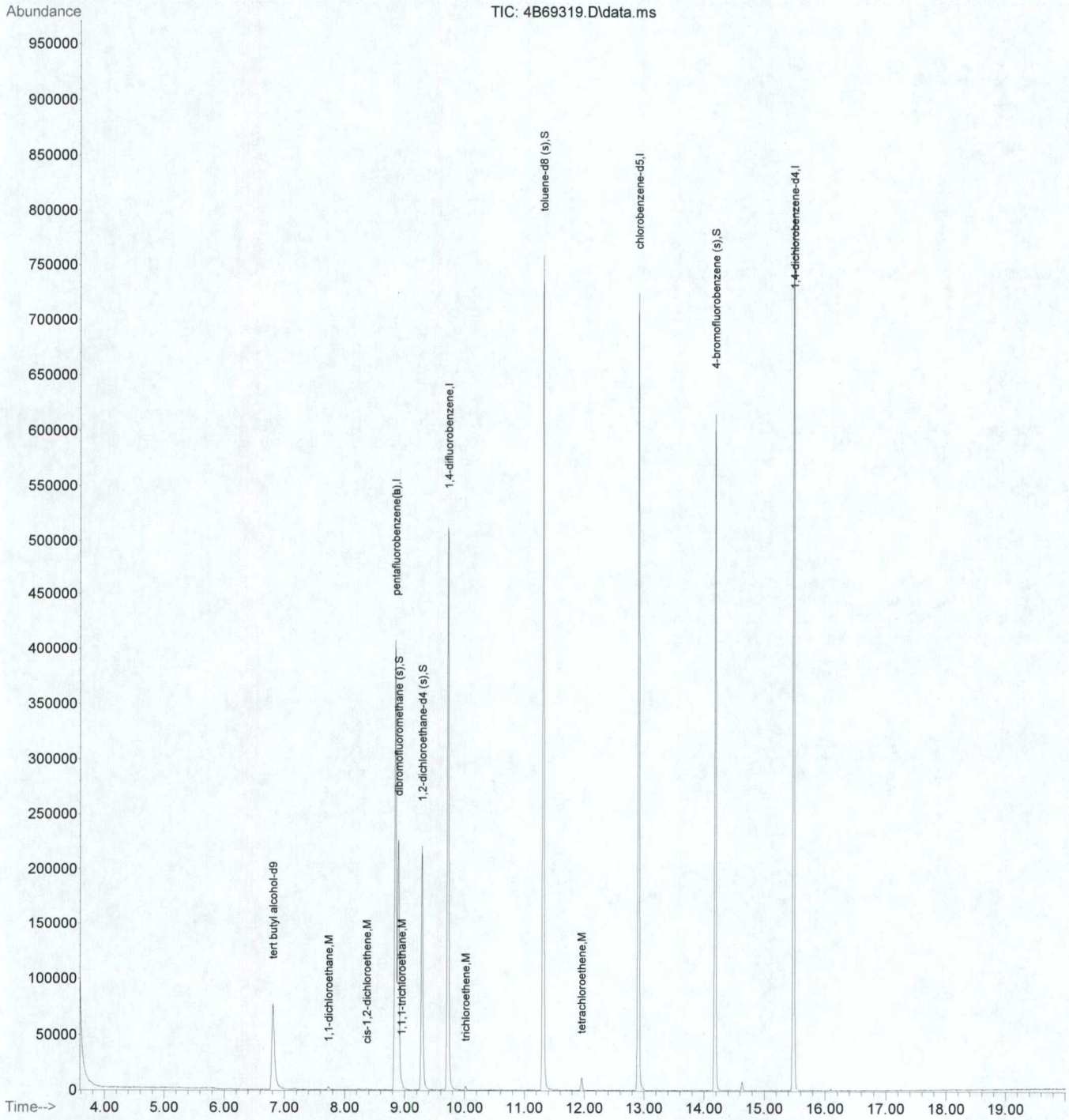
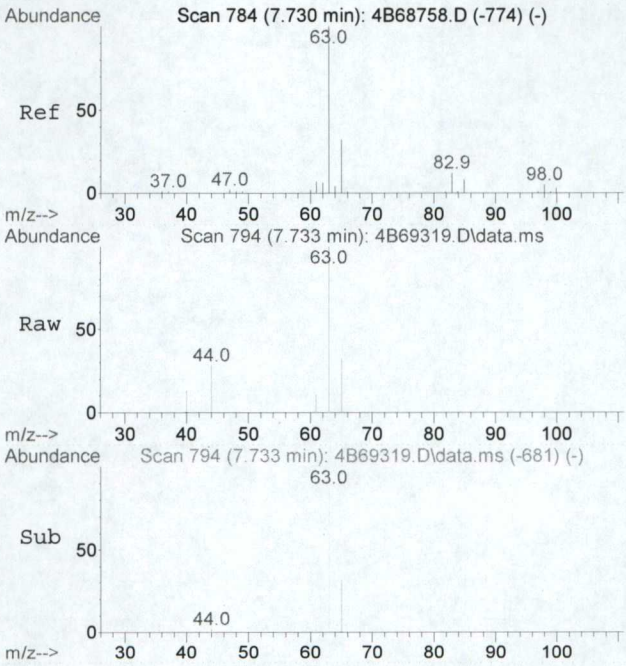
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69319.D
Acq On : 15 Feb 2017 3:24 pm
Operator : Hueanht
Sample : jc37024-6
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 16 15:34:49 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



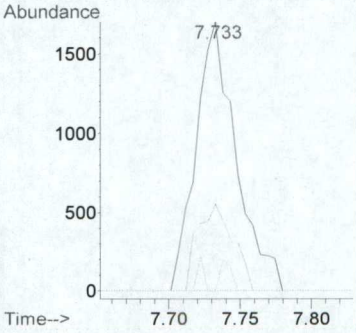
M4B2825.M Thu Feb 16 16:00:33 2017

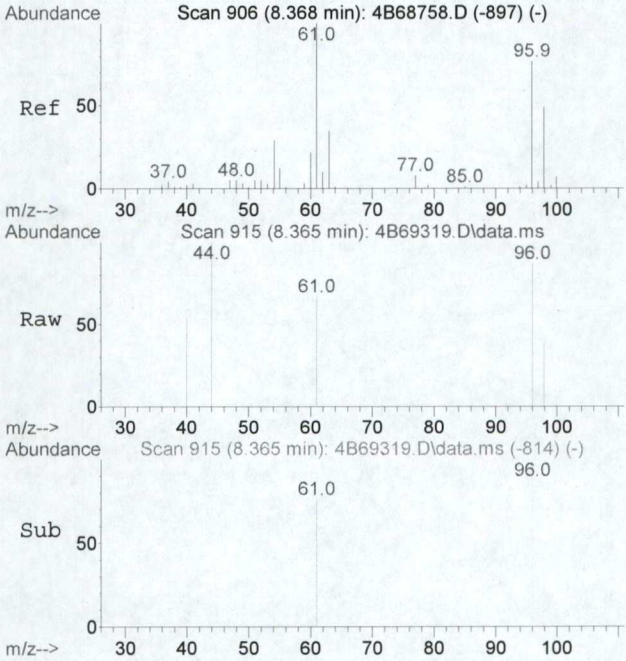


#35
1,1-dichloroethane
Concen: 0.57 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69319.D
Acq: 15 Feb 2017 3:24 pm

Tgt Ion: 63 Resp: 3353

Ion	Ratio	Lower	Upper
63	100		
65	32.4	1.8	61.8
83	0.0	0.0	42.3

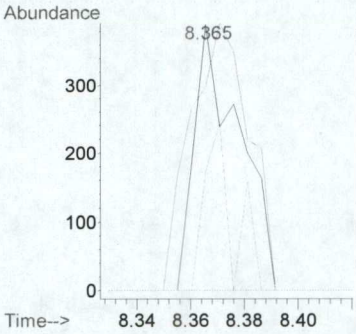




#42
cis-1,2-dichloroethene
Concen: 0.14 ug/L
RT: 8.365 min Scan# 915
Delta R.T. -0.003 min
Lab File: 4B69319.D
Acq: 15 Feb 2017 3:24 pm

Tgt Ion: 96 Resp: 453

Ion	Ratio	Lower	Upper
96	100		
61	76.4	110.8	170.8#
98	44.1	34.1	94.1



7.1.6

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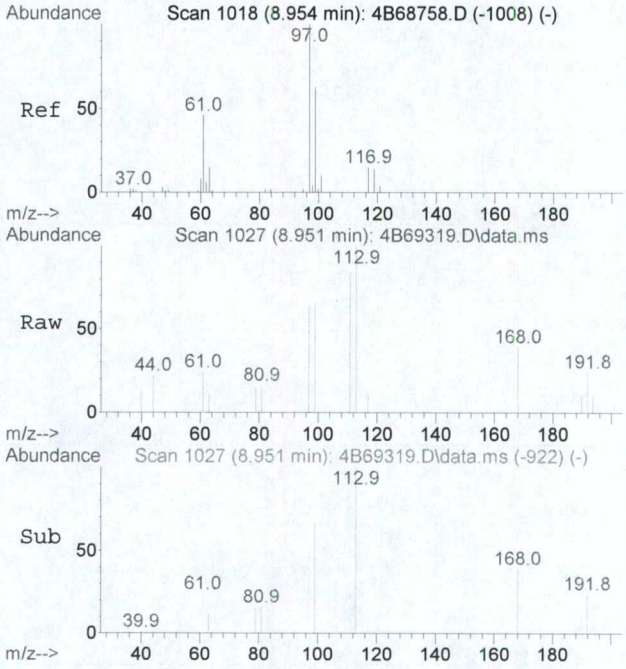
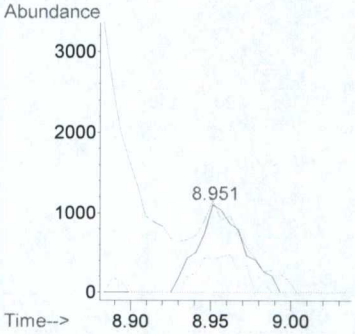
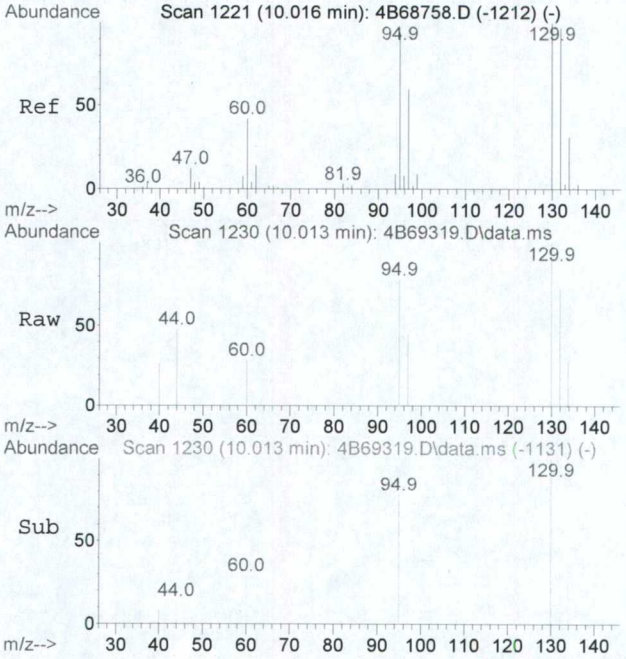


#53
1,1,1-trichloroethane
Concen: 0.54 ug/L
RT: 8.951 min Scan# 1027
Delta R.T. -0.003 min
Lab File: 4B69319.D
Acq: 15 Feb 2017 3:24 pm

Tgt Ion: 97 Resp: 2223

Ion	Ratio	Lower	Upper
97	100		
99	89.4	34.3	94.3
61	37.7	15.9	75.9

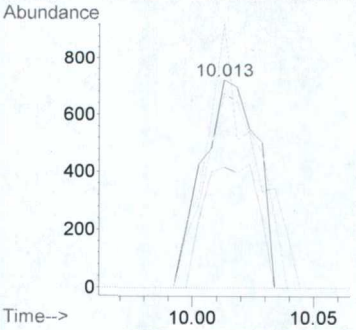




#69
trichloroethene
Concen: 0.37 ug/L
RT: 10.013 min Scan# 1230
Delta R.T. -0.003 min
Lab File: 4B69319.D
Acq: 15 Feb 2017 3:24 pm

Tgt Ion: 95 Resp: 1120

Ion	Ratio	Lower	Upper
95	100		
97	57.8	33.7	93.7
130	128.7	75.9	135.9
132	93.5	72.9	132.9



7.1.6

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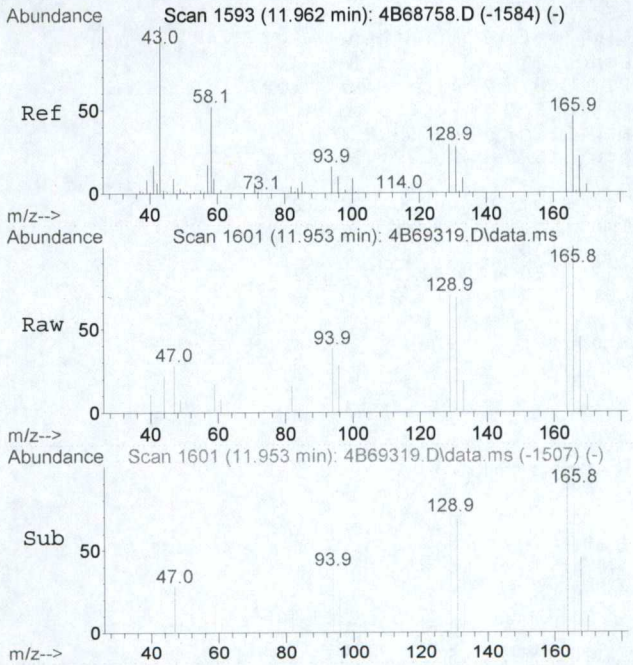
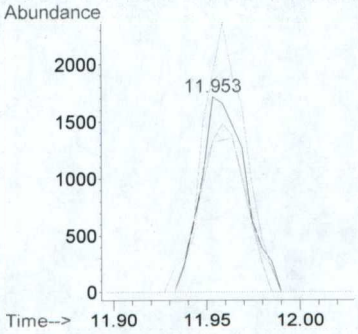


#89
tetrachloroethene
Concen: 0.89 ug/L
RT: 11.953 min Scan# 1601
Delta R.T. -0.008 min
Lab File: 4B69319.D
Acq: 15 Feb 2017 3:24 pm

Tgt Ion:164 Resp: 2911

Ion	Ratio	Lower	Upper
164	100		
129	77.5	53.9	113.9
131	77.3	50.4	110.4
166	111.4	101.4	161.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69320.D
Acq On : 15 Feb 2017 3:52 pm
Operator : Hueanht
Sample : jc37024-7
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 16 15:35:30 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	158322	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	313143	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.720	114	426870	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	400068	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	226450	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	313143	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	135047	51.07	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.14%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	151972	53.05	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 106.10%			
80) toluene-d8 (s)	11.310	98	494723	50.18	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.36%			
105) 4-bromofluorobenzene (s)	14.182	95	191813	51.73	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.46%			
Target Compounds						Qvalue
35) 1,1-dichloroethane	7.733	63	3208	0.54	ug/L	91
53) 1,1,1-trichloroethane	8.957	97	5389	1.31	ug/L	94
69) trichloroethene	10.013	95	1300	0.42	ug/L	83
89) tetrachloroethene	11.959	164	3218	0.98	ug/L	93

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

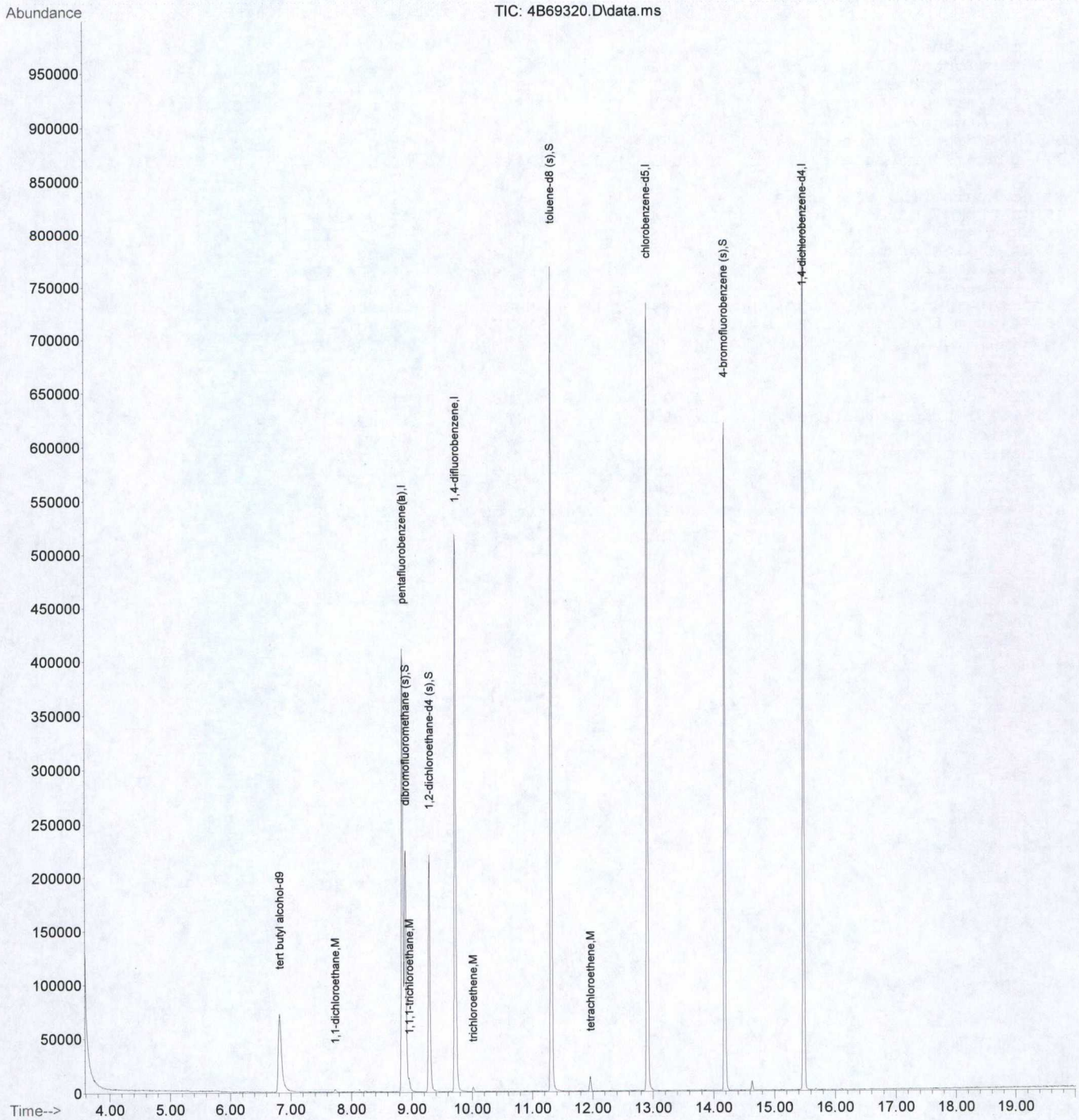
7.1.7

7

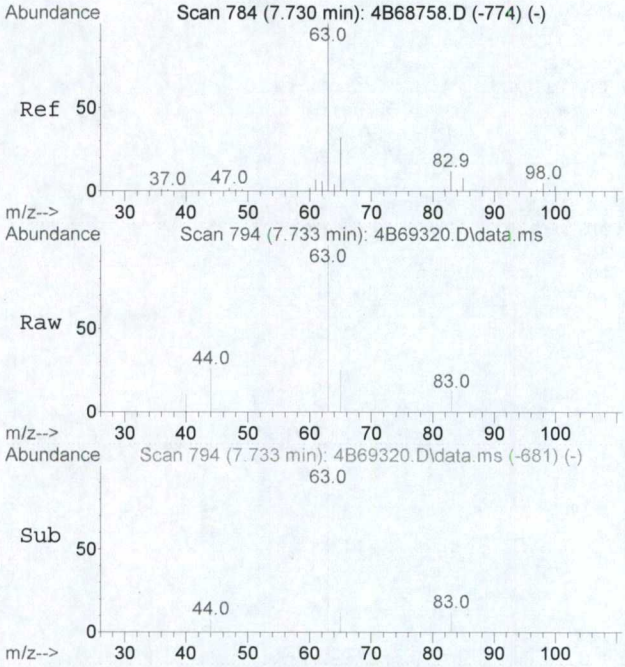
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69320.D
Acq On : 15 Feb 2017 3:52 pm
Operator : Hueanht
Sample : jc37024-7
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 16 15:35:30 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



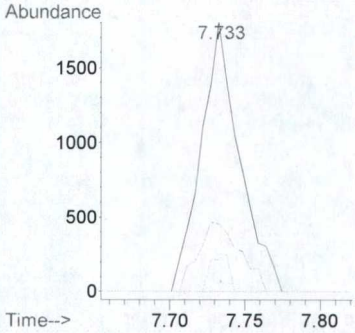
M4B2825.M Thu Feb 16 16:00:35 2017

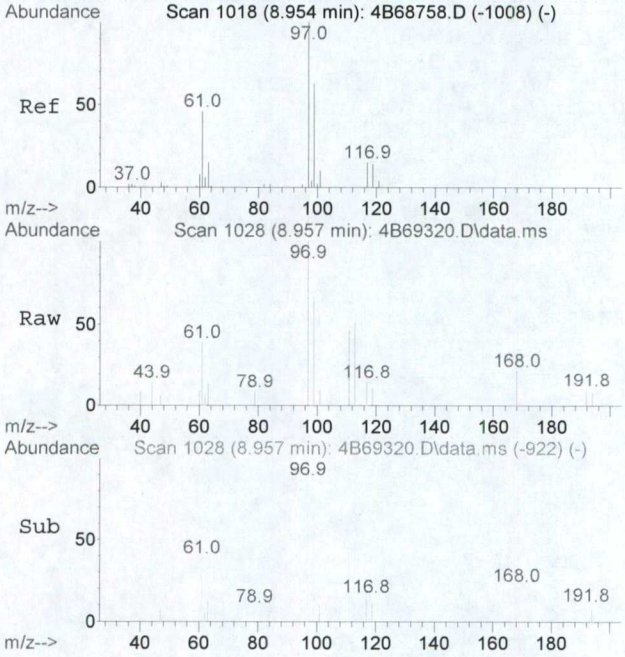


#35
1,1-dichloroethane
Concen: 0.54 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69320.D
Acq: 15 Feb 2017 3:52 pm

Tgt Ion: 63 Resp: 3208

Ion	Ratio	Lower	Upper
63	100		
65	25.2	1.8	61.8
83	11.9	0.0	42.3

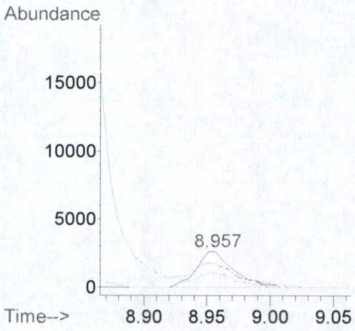




#53
1,1,1-trichloroethane
Concen: 1.31 ug/L
RT: 8.957 min Scan# 1028
Delta R.T. 0.002 min
Lab File: 4B69320.D
Acq: 15 Feb 2017 3:52 pm

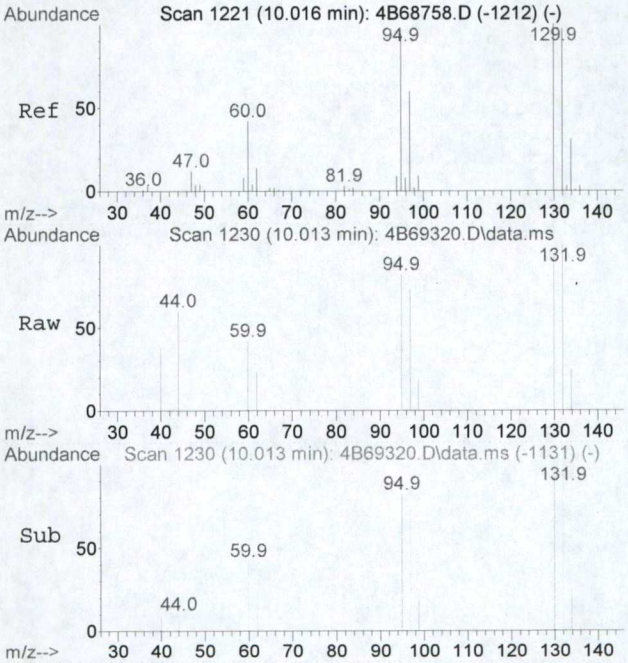
Tgt Ion: 97 Resp: 5389

Ion	Ratio	Lower	Upper
97	100		
99	66.8	34.3	94.3
61	38.9	15.9	75.9



7.1.7

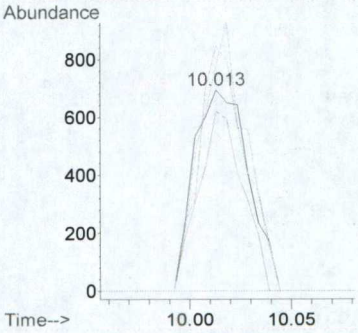
7

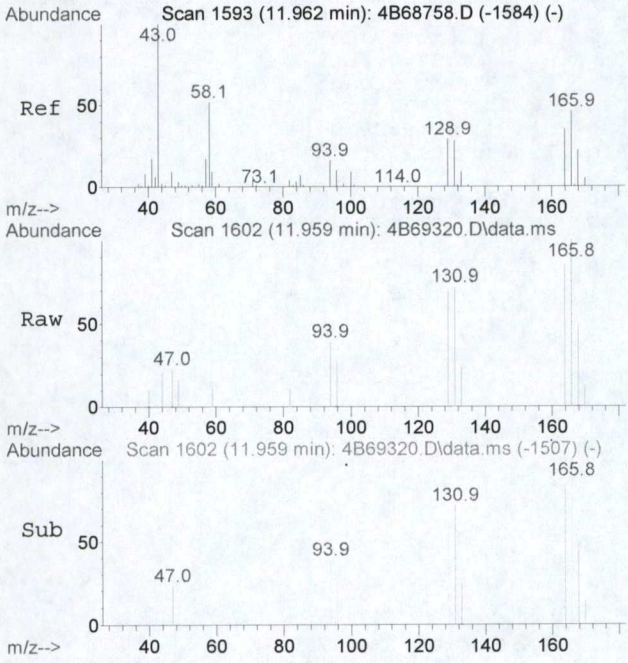


#69
trichloroethene
Concen: 0.42 ug/L
RT: 10.013 min Scan# 1230
Delta R.T. -0.003 min
Lab File: 4B69320.D
Acq: 15 Feb 2017 3:52 pm

Tgt Ion: 95 Resp: 1300

Ion	Ratio	Lower	Upper
95	100		
97	89.3	33.7	93.7
130	112.1	75.9	135.9
132	121.9	72.9	132.9

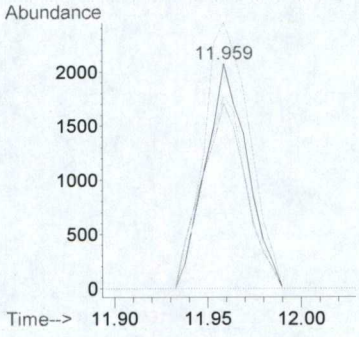




#89
tetrachloroethene
Concen: 0.98 ug/L
RT: 11.959 min Scan# 1602
Delta R.T. -0.003 min
Lab File: 4B69320.D
Acq: 15 Feb 2017 3:52 pm

Tgt Ion:164 Resp: 3218

Ion	Ratio	Lower	Upper
164	100		
129	82.1	53.9	113.9
131	85.5	50.4	110.4
166	118.0	101.4	161.4



7.1.7

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69263.D
Acq On : 14 Feb 2017 11:28 am
Operator : Hueanht
Sample : jc37024-8
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 15 10:31:13 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) tert butyl alcohol-d9	6.812	65	121965	500.00 ug/L	0.00
5) pentafluorobenzene	8.841	168	306190	50.00 ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	420100	50.00 ug/L	0.00
88) chlorobenzene-d5	12.905	117	394879	50.00 ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	224199	50.00 ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	306190	50.00 ug/L	# 0.00
System Monitoring Compounds					
49) dibromofluoromethane (s)	8.888	113	131771	50.96 ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.92%		
50) 1,2-dichloroethane-d4 (s)	9.286	65	146448	52.29 ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 104.58%		
80) toluene-d8 (s)	11.310	98	488656	50.36 ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.72%		
105) 4-bromofluorobenzene (s)	14.181	95	186654	50.84 ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 101.68%		
Target Compounds					Qvalue
35) 1,1-dichloroethane	7.733	63	10611	1.84 ug/L	94
53) 1,1,1-trichloroethane	8.951	97	5407	1.34 ug/L	95
69) trichloroethene	10.013	95	828	0.27 ug/L	79
89) tetrachloroethene	11.959	164	6698	2.06 ug/L	95

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

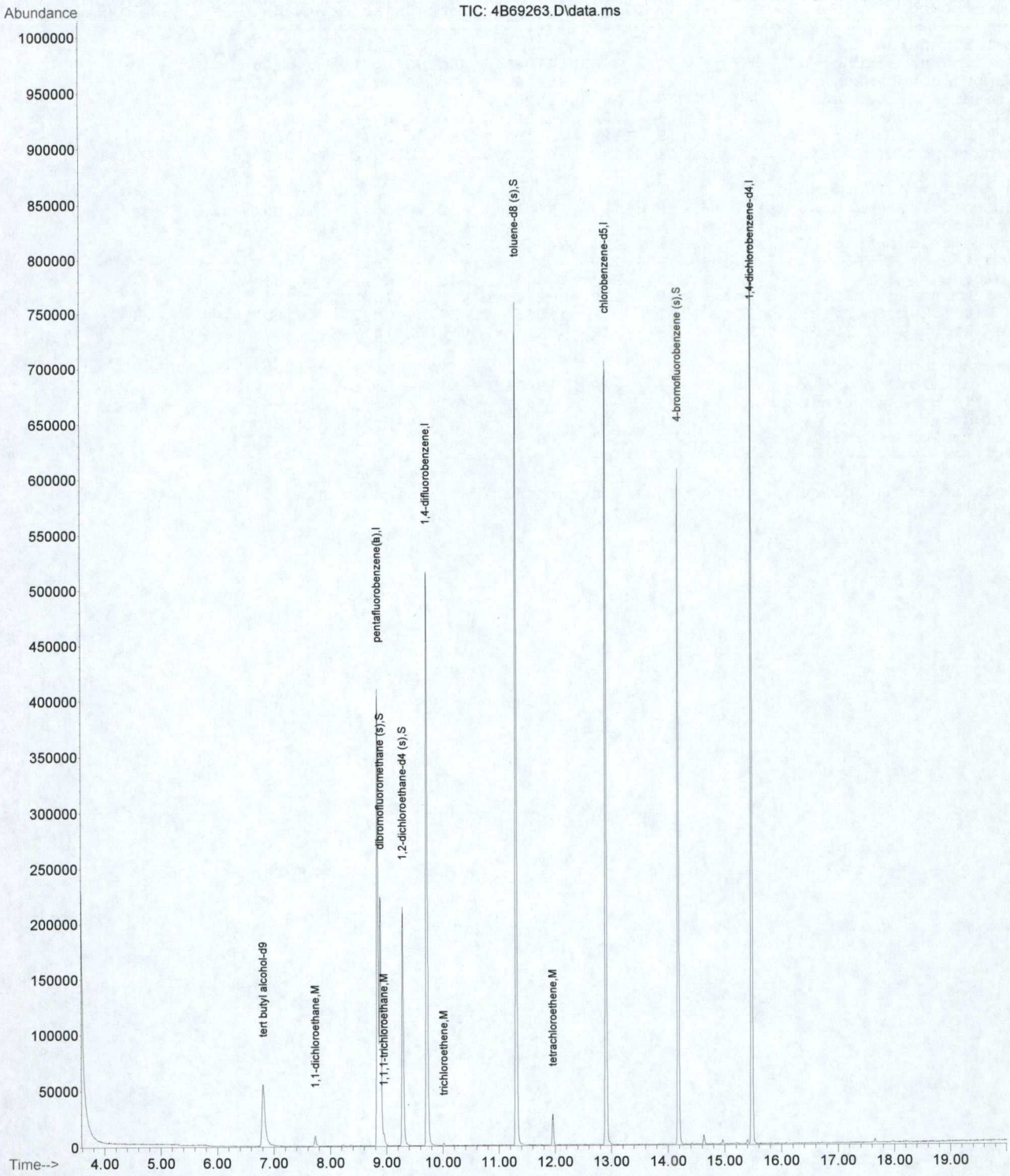
7.1.8

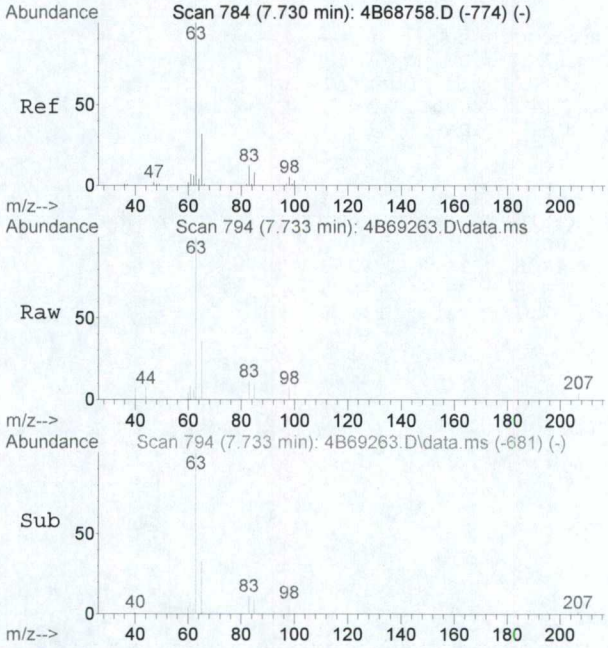
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69263.D
Acq On : 14 Feb 2017 11:28 am
Operator : Hueanht
Sample : jc37024-8
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 15 10:31:13 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

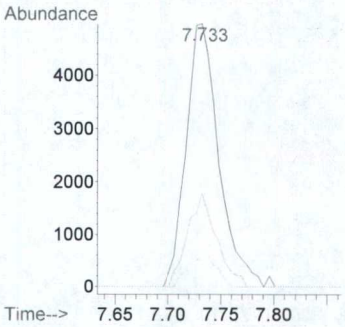


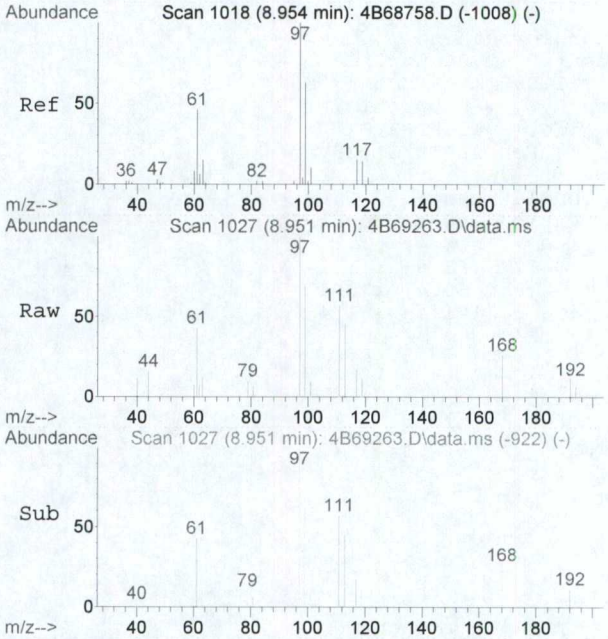


#35
1,1-dichloroethane
Concen: 1.84 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69263.D
Acq: 14 Feb 2017 11:28 am

Tgt Ion: 63 Resp: 10611

Ion	Ratio	Lower	Upper
63	100		
65	35.7	1.8	61.8
83	10.7	0.0	42.3

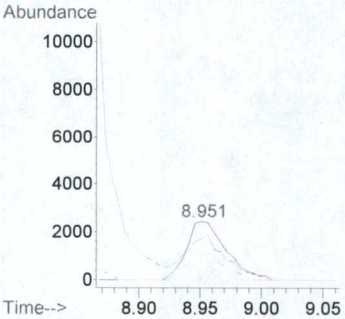




#53
1,1,1-trichloroethane
Concen: 1.34 ug/L
RT: 8.951 min Scan# 1027
Delta R.T. -0.003 min
Lab File: 4B69263.D
Acq: 14 Feb 2017 11:28 am

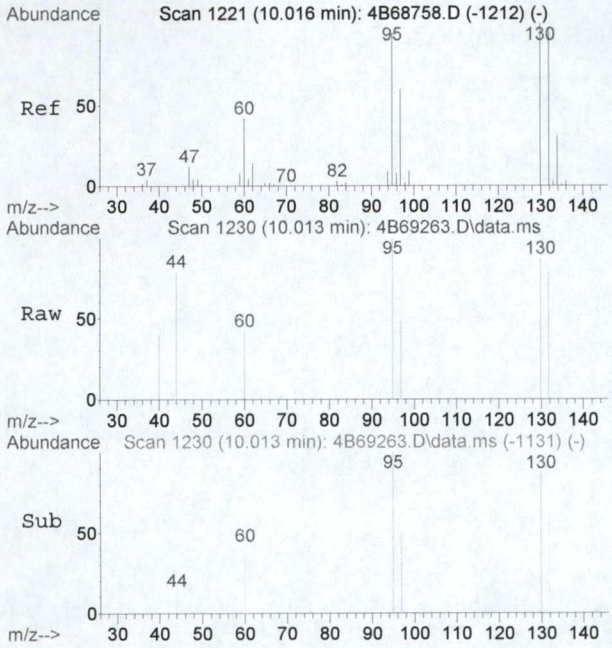
Tgt Ion: 97 Resp: 5407

Ion	Ratio	Lower	Upper
97	100		
99	69.3	34.3	94.3
61	43.5	15.9	75.9



7.1.8

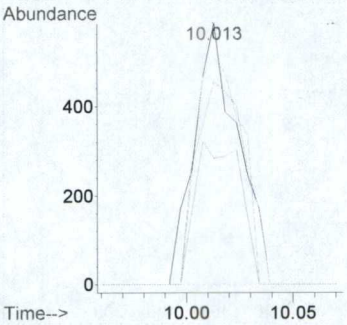
7

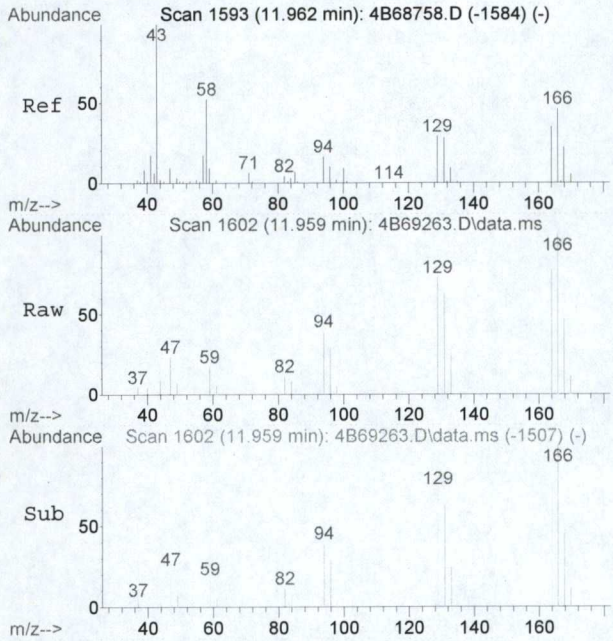


#69
trichloroethene
Concen: 0.27 ug/L
RT: 10.013 min Scan# 1230
Delta R.T. -0.003 min
Lab File: 4B69263.D
Acq: 14 Feb 2017 11:28 am

Tgt Ion: 95 Resp: 828

Ion	Ratio	Lower	Upper
95	100		
97	48.6	33.7	93.7
130	86.8	75.9	135.9
132	77.7	72.9	132.9

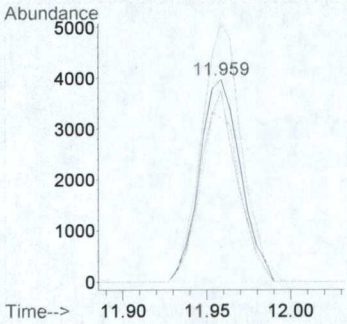




#89
tetrachloroethene
Concen: 2.06 ug/L
RT: 11.959 min Scan# 1602
Delta R.T. -0.003 min
Lab File: 4B69263.D
Acq: 14 Feb 2017 11:28 am

Tgt Ion:164 Resp: 6698

Ion	Ratio	Lower	Upper
164	100		
129	94.2	53.9	113.9
131	80.8	50.4	110.4
166	128.3	101.4	161.4



7.1.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69346.D
Acq On : 16 Feb 2017 3:18 am
Operator : Hueanht
Sample : jc37024-9
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Feb 16 15:56:07 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.807	65	144189	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	307779	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	423773	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	396464	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.484	152	217205	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	307779	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	132913	51.14	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.28%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	149616	53.14	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 106.28%			
80) toluene-d8 (s)	11.310	98	491104	50.18	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.36%			
105) 4-bromofluorobenzene (s)	14.181	95	185384	52.12	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 104.24%			
Target Compounds						Qvalue
35) 1,1-dichloroethane	7.733	63	3338	0.58	ug/L	98
53) 1,1,1-trichloroethane	8.951	97	5207	1.28	ug/L	100
69) trichloroethene	10.013	95	1354	0.45	ug/L	84
89) tetrachloroethene	11.964	164	3257	1.00	ug/L	85

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

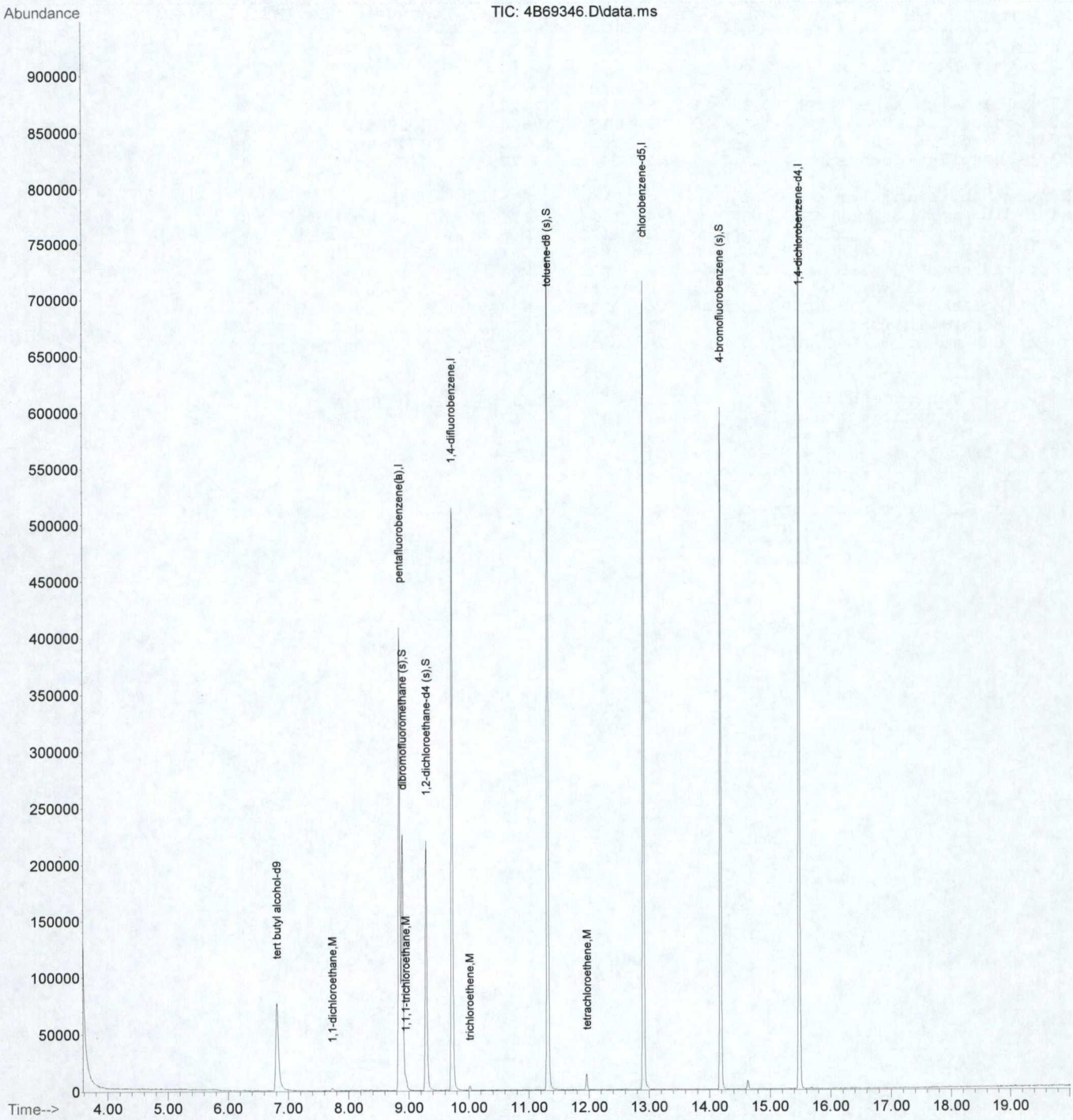
7.1.9

7

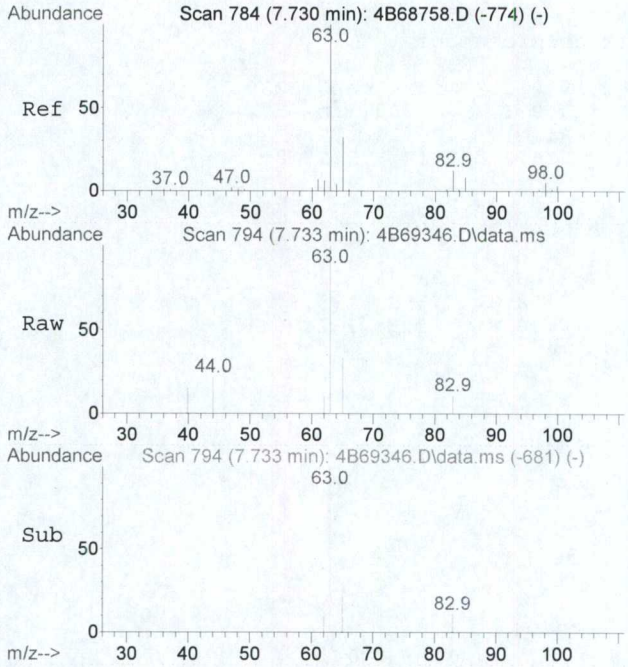
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69346.D
Acq On : 16 Feb 2017 3:18 am
Operator : Hueanht
Sample : jc37024-9
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Feb 16 15:56:07 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



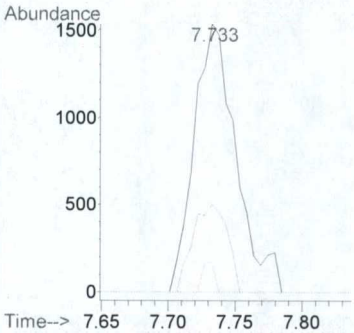
M4B2825.M Thu Feb 16 16:01:09 2017

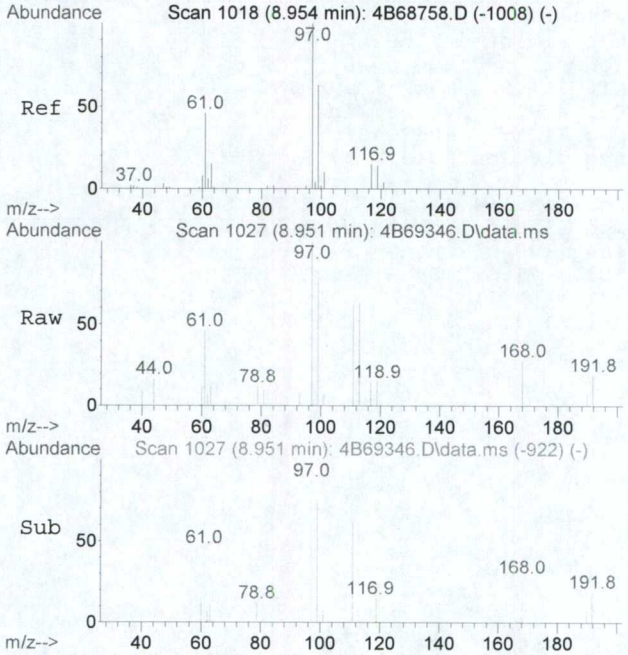


#35
1,1-dichloroethane
Concen: 0.58 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69346.D
Acq: 16 Feb 2017 3:18 am

Tgt Ion: 63 Resp: 3338

Ion	Ratio	Lower	Upper
63	100		
65	32.7	1.8	61.8
83	11.2	0.0	42.3

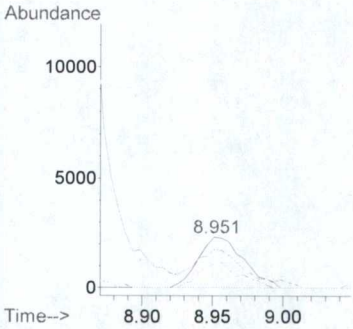




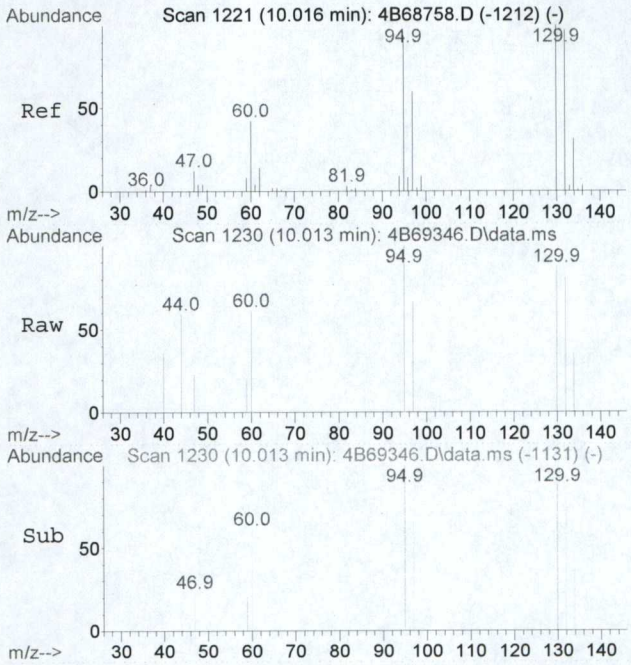
#53
1,1,1-trichloroethane
Concen: 1.28 ug/L
RT: 8.951 min Scan# 1027
Delta R.T. -0.003 min
Lab File: 4B69346.D
Acq: 16 Feb 2017 3:18 am

Tgt Ion: 97 Resp: 5207

Ion	Ratio	Lower	Upper
97	100		
99	64.5	34.3	94.3
61	46.2	15.9	75.9



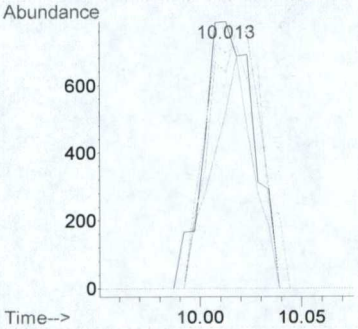
7.1.9 7

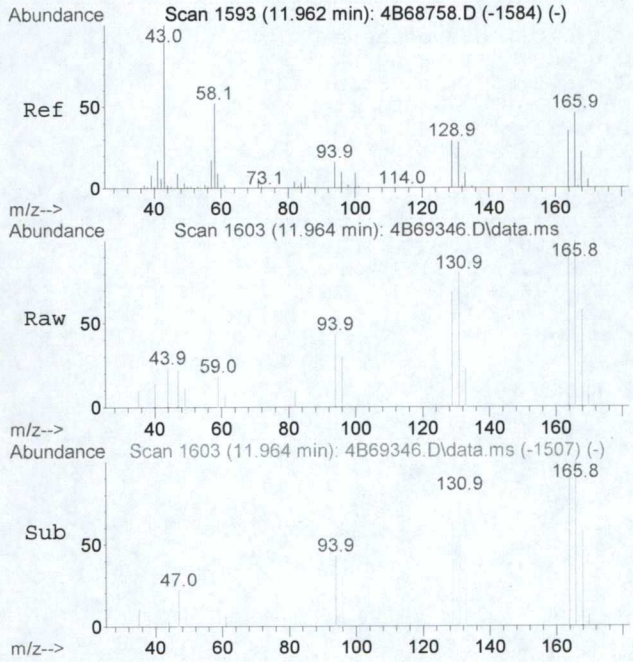


#69
trichloroethene
Concen: 0.45 ug/L
RT: 10.013 min Scan# 1230
Delta R.T. -0.003 min
Lab File: 4B69346.D
Acq: 16 Feb 2017 3:18 am

Tgt Ion: 95 Resp: 1354

Ion	Ratio	Lower	Upper
95	100		
97	66.2	33.7	93.7
130	88.3	75.9	135.9
132	80.8	72.9	132.9

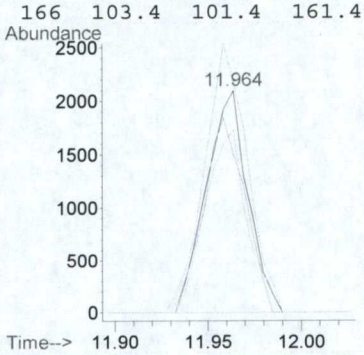




#89
tetrachloroethene
Concen: 1.00 ug/L
RT: 11.964 min Scan# 1603
Delta R.T. 0.002 min
Lab File: 4B69346.D
Acq: 16 Feb 2017 3:18 am

Tgt Ion:164 Resp: 3257

Ion	Ratio	Lower	Upper
164	100		
129	71.6	53.9	113.9
131	82.5	50.4	110.4
166	103.4	101.4	161.4



7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69326.D
Acq On : 15 Feb 2017 6:43 pm
Operator : Hueanht
Sample : jc37024-10
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 16 15:42:34 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	145086	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	317985	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.720	114	434774	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	405649	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	231889	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	317985	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.888	113	137316	51.13	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.26%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	151906	52.22	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 104.44%			
80) toluene-d8 (s)	11.310	98	499213	49.71	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.42%			
105) 4-bromofluorobenzene (s)	14.181	95	194235	51.15	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.30%			
Target Compounds						Qvalue

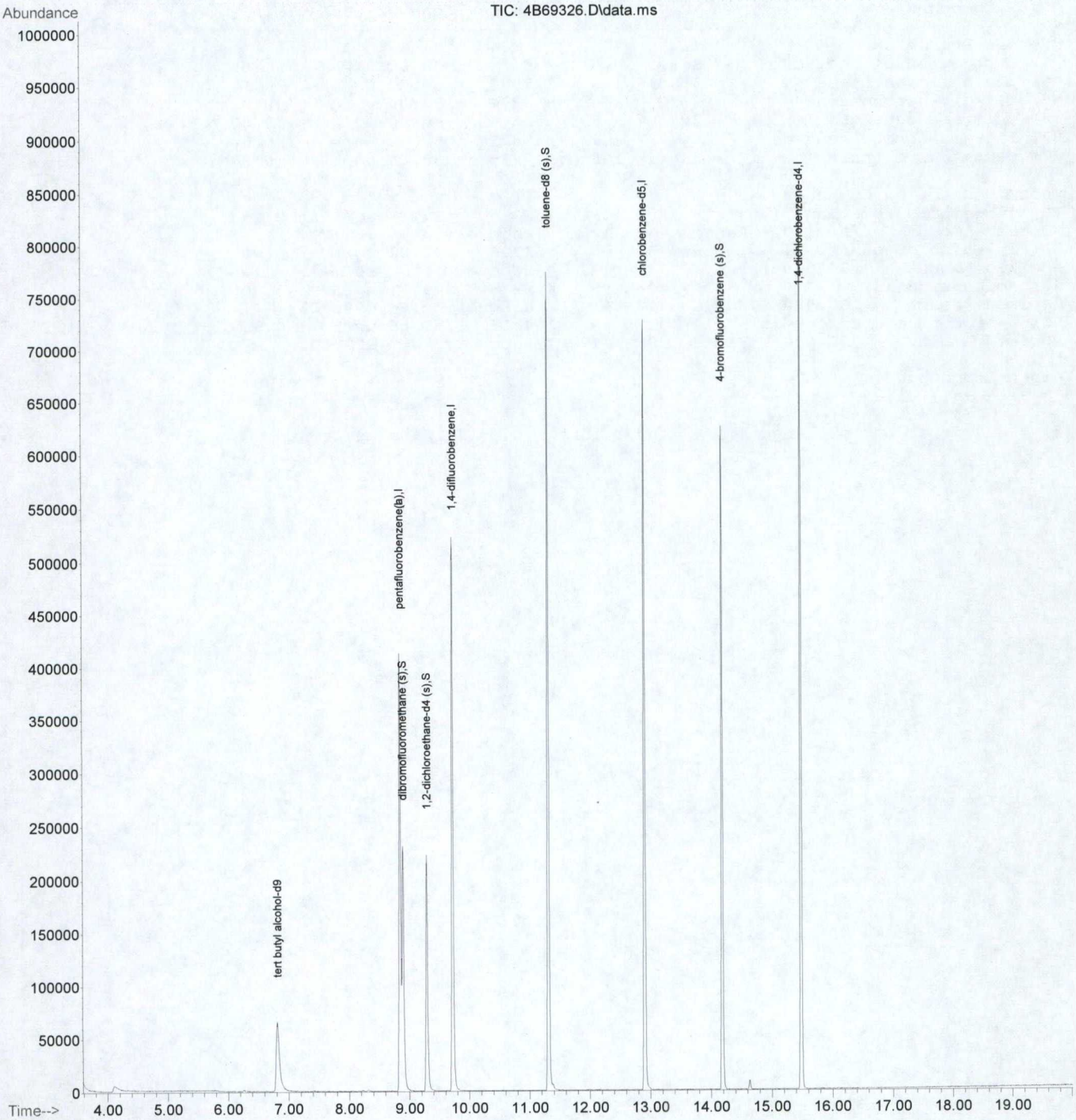
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.10 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69326.D
Acq On : 15 Feb 2017 6:43 pm
Operator : Hueanht
Sample : jc37024-10
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 16 15:42:34 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



M4B2825.M Thu Feb 16 16:00:44 2017

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69347.D
Acq On : 16 Feb 2017 3:46 am
Operator : Hueanht
Sample : jc37024-11
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Feb 16 15:56:47 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	149081	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	301342	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	413837	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	391259	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	220247	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	301342	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.888	113	131759	51.77	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.54%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	150555	54.62	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 109.24%			
80) toluene-d8 (s)	11.310	98	482122	50.44	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.88%			
105) 4-bromofluorobenzene (s)	14.181	95	186385	51.68	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.36%			
Target Compounds						Qvalue
35) 1,1-dichloroethane	7.727	63	3063	0.54	ug/L	82
42) cis-1,2-dichloroethene	8.371	96	679	0.22	ug/L #	76
53) 1,1,1-trichloroethane	8.962	97	6939	1.75	ug/L	90
69) trichloroethene	10.018	95	2225	0.75	ug/L	88
89) tetrachloroethene	11.959	164	19191	5.96	ug/L	95

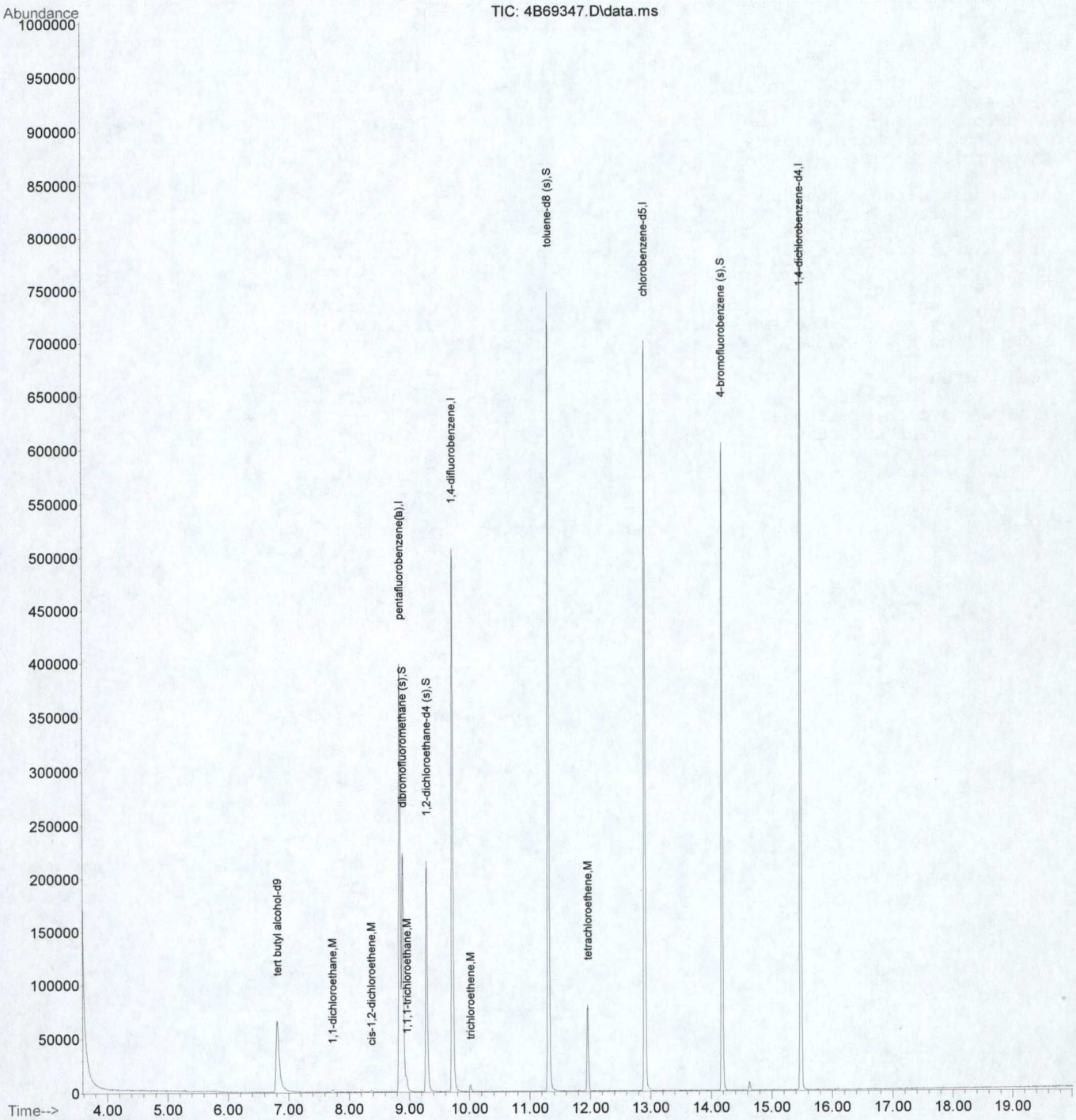
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.11 7

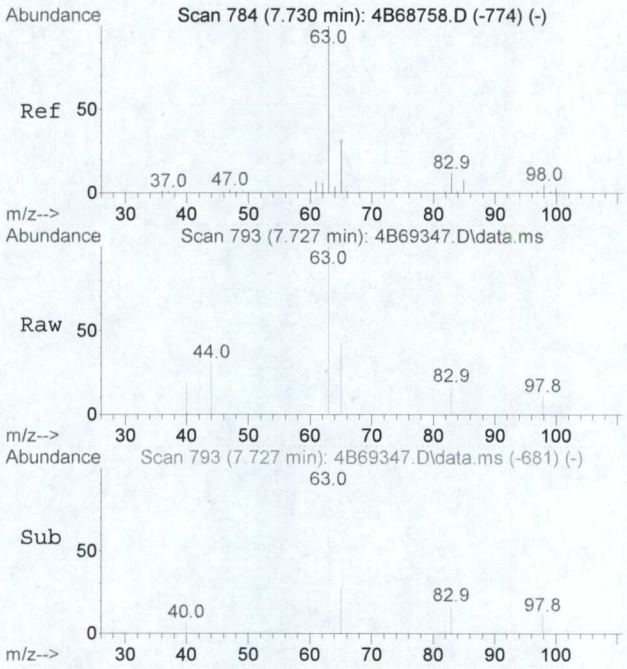
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69347.D
Acq On : 16 Feb 2017 3:46 am
Operator : Hueanht
Sample : jc37024-11
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Feb 16 15:56:47 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



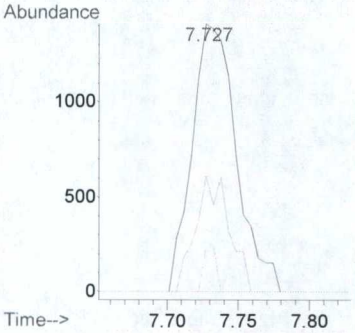
M4B2825.M Thu Feb 16 16:01:11 2017

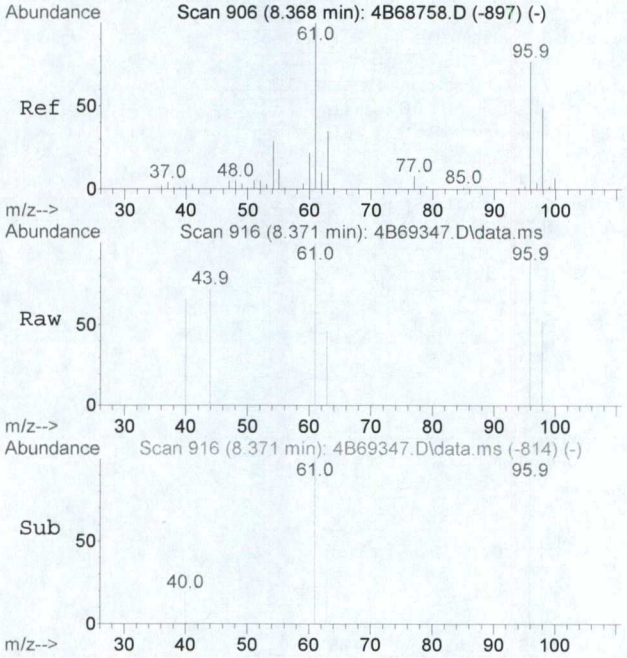


#35
1,1-dichloroethane
Concen: 0.54 ug/L
RT: 7.727 min Scan# 793
Delta R.T. -0.003 min
Lab File: 4B69347.D
Acq: 16 Feb 2017 3:46 am

Tgt Ion: 63 Resp: 3063

Ion	Ratio	Lower	Upper
63	100		
65	43.3	1.8	61.8
83	17.0	0.0	42.3

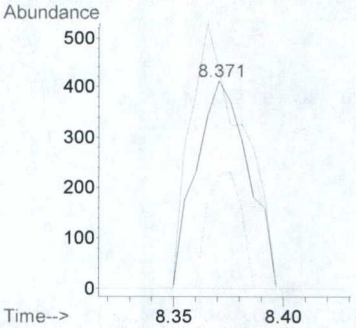




#42
cis-1,2-dichloroethene
Concen: 0.22 ug/L
RT: 8.371 min Scan# 916
Delta R.T. 0.002 min
Lab File: 4B69347.D
Acq: 16 Feb 2017 3:46 am

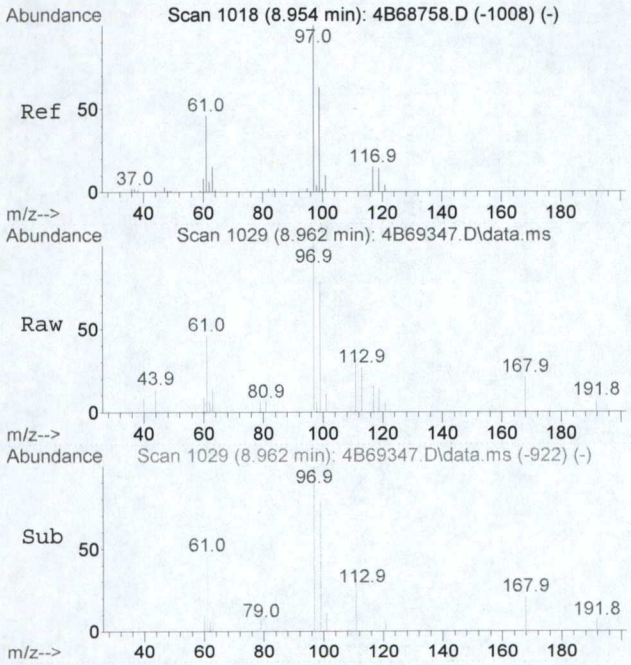
Tgt Ion: 96 Resp: 679

Ion	Ratio	Lower	Upper
96	100		
61	105.4	110.8	170.8#
98	54.5	34.1	94.1



7.1.11

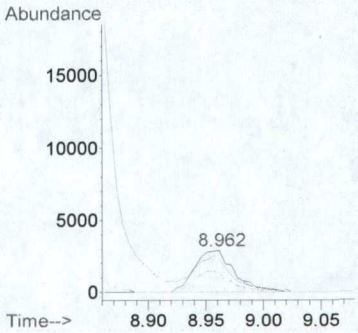
7

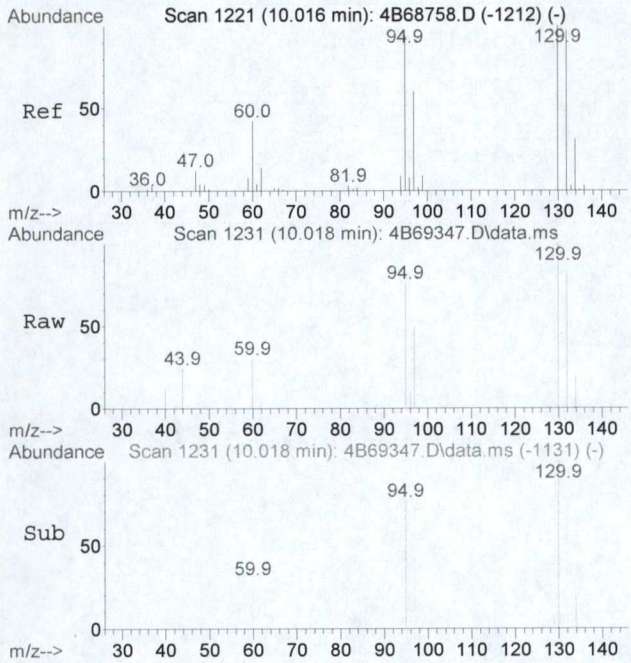


#53
1,1,1-trichloroethane
Concen: 1.75 ug/L
RT: 8.962 min Scan# 1029
Delta R.T. 0.007 min
Lab File: 4B69347.D
Acq: 16 Feb 2017 3:46 am

Tgt Ion: 97 Resp: 6939

Ion	Ratio	Lower	Upper
97	100		
99	78.1	34.3	94.3
61	45.7	15.9	75.9

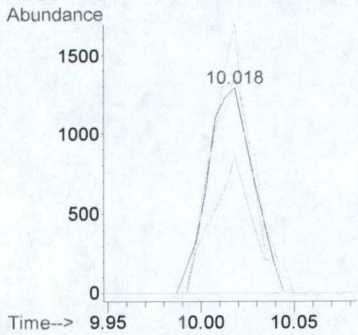




#69
trichloroethene
Concen: 0.75 ug/L
RT: 10.018 min Scan# 1231
Delta R.T. 0.002 min
Lab File: 4B69347.D
Acq: 16 Feb 2017 3:46 am

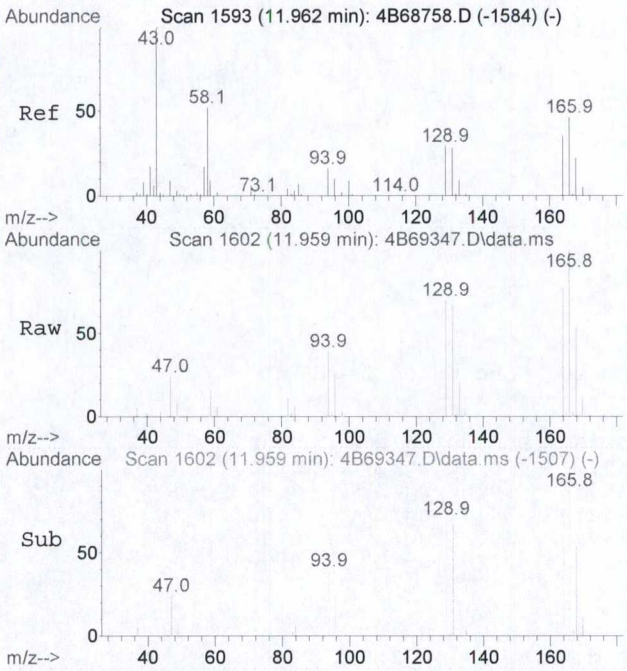
Tgt Ion: 95 Resp: 2225

Ion	Ratio	Lower	Upper
95	100		
97	66.3	33.7	93.7
130	131.6	75.9	135.9
132	107.4	72.9	132.9



7.1.11

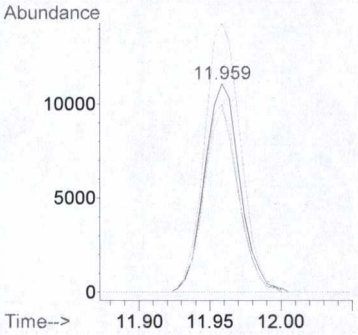
7



#89
tetrachloroethene
Concen: 5.96 ug/L
RT: 11.959 min Scan# 1602
Delta R.T. -0.003 min
Lab File: 4B69347.D
Acq: 16 Feb 2017 3:46 am

Tgt Ion:164 Resp: 19191

Ion	Ratio	Lower	Upper
164	100		
129	90.1	53.9	113.9
131	87.1	50.4	110.4
166	129.2	101.4	161.4



7.1.11

7

SGS ACCUTEST JC37024

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69327.D
Acq On : 15 Feb 2017 7:11 pm
Operator : Hueanht
Sample : jc37024-12
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 16 15:43:00 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	149870	500.00	ug/L	0.00
5) pentafluorobenzene	8.842	168	314594	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	433507	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	402404	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	228999	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.842	168	314594	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	136229	51.28	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.56%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	152553	53.01	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 106.02%			
80) toluene-d8 (s)	11.310	98	496108	49.55	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.10%			
105) 4-bromofluorobenzene (s)	14.182	95	191071	50.95	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 101.90%			

Target Compounds Qvalue

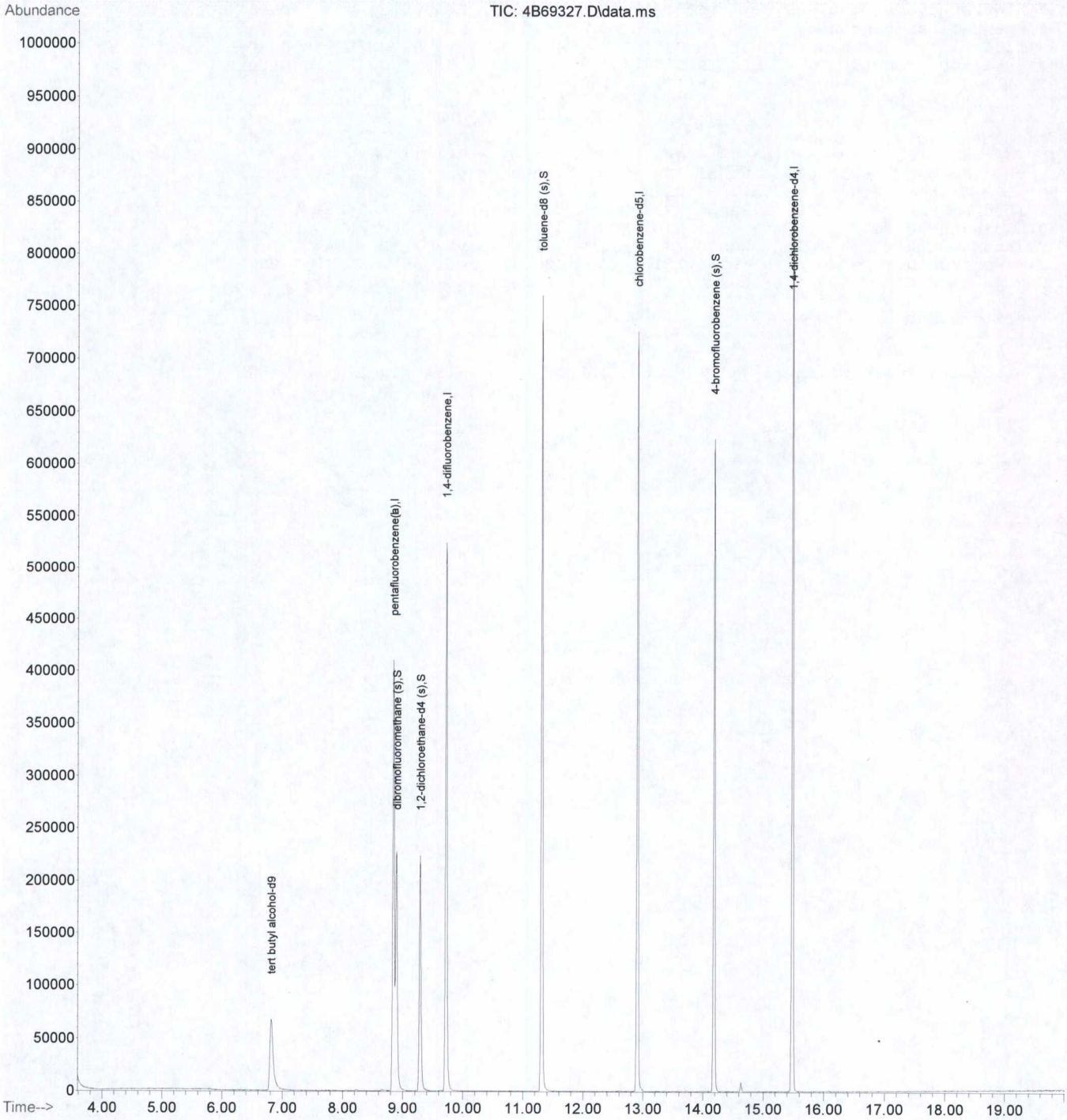
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.12 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69327.D
Acq On : 15 Feb 2017 7:11 pm
Operator : Hueanht
Sample : jc37024-12
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 16 15:43:00 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



M4B2825.M Thu Feb 16 16:00:46 2017

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69260.D
Acq On : 14 Feb 2017 10:03 am
Operator : Hueanht
Sample : mb
Misc : MS12448,V4B2850,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 15 10:28:56 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	135137	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	297050	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	409174	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	385608	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.478	152	218812	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	297050	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.888	113	128203	51.11	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.22%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	143045	52.64	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 105.28%			
80) toluene-d8 (s)	11.310	98	479467	50.74	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 101.48%			
105) 4-bromofluorobenzene (s)	14.181	95	183049	51.09	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.18%			

Target Compounds Qvalue

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

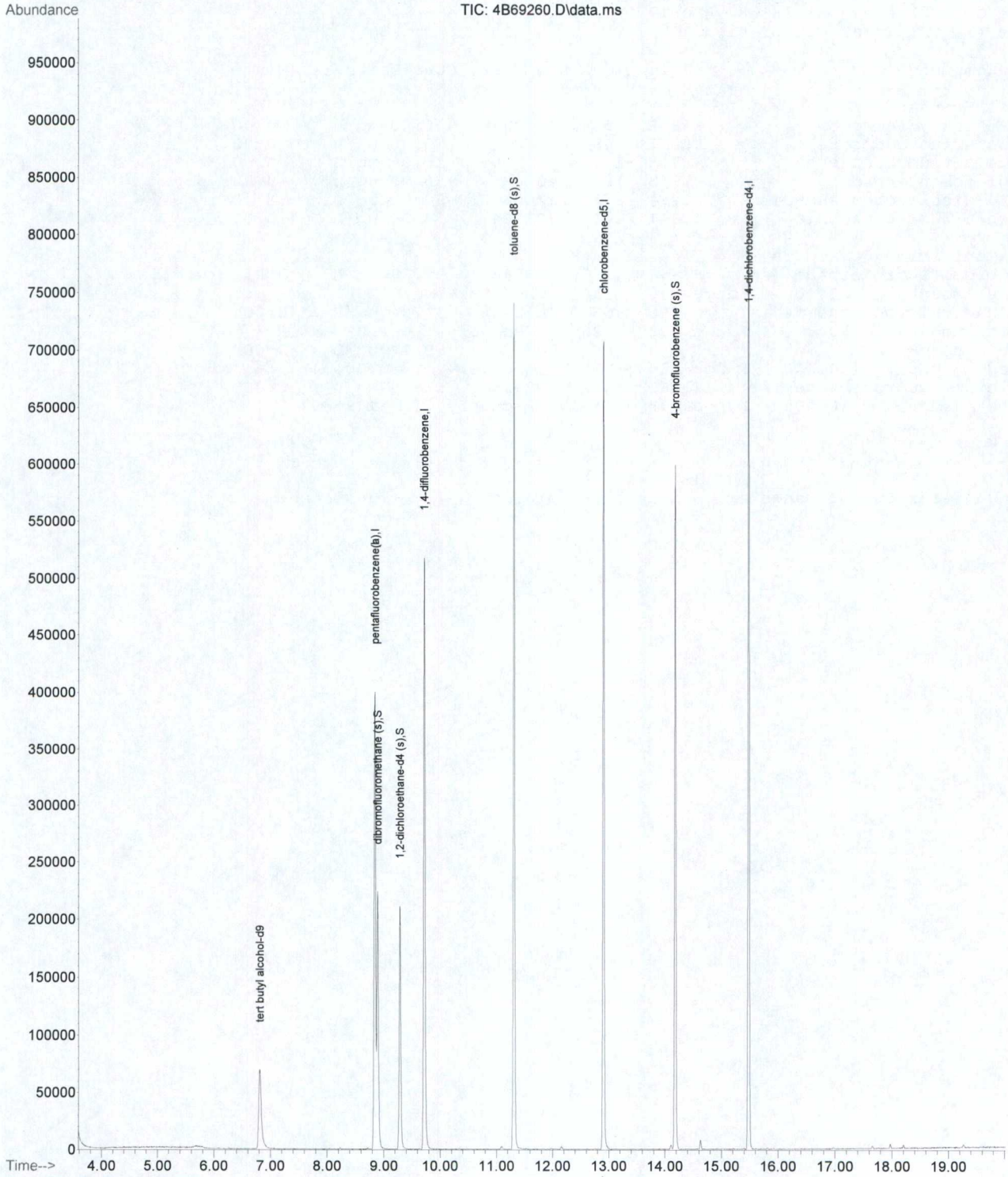
7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69260.D
Acq On : 14 Feb 2017 10:03 am
Operator : Hueanht
Sample : mb
Misc : MS12448,V4B2850,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 15 10:28:56 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69314.D
Acq On : 15 Feb 2017 1:01 pm
Operator : Hueanht
Sample : mb
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 16 12:20:33 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	163222	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	321124	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	435996	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	408085	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.484	152	224501	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	321124	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	139088	51.29	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.58%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	152274	51.84	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 103.68%			
80) toluene-d8 (s)	11.310	98	505179	50.17	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.34%			
105) 4-bromofluorobenzene (s)	14.181	95	190925	51.94	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.88%			
Target Compounds						Qvalue

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

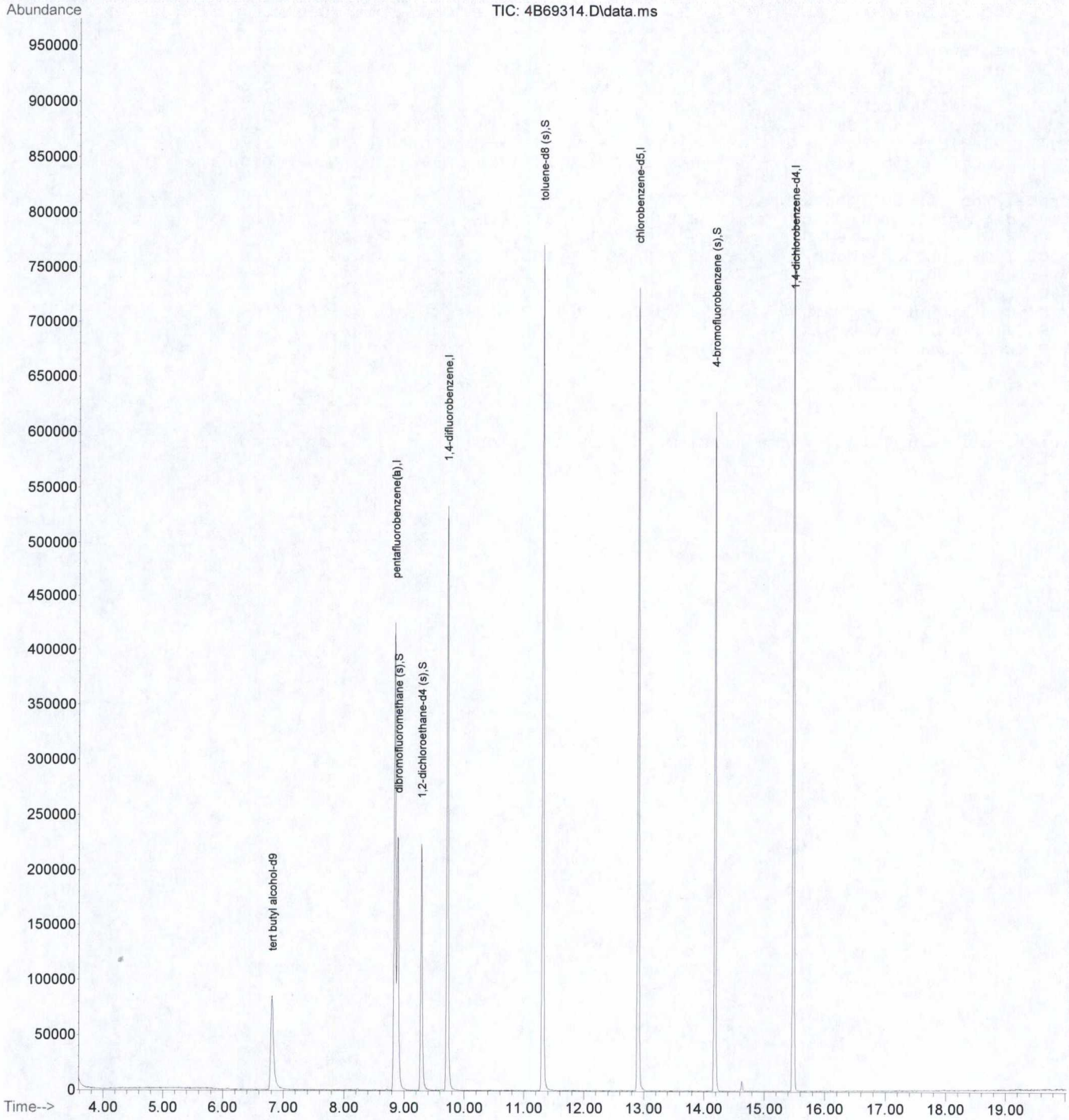
7.2.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69314.D
Acq On : 15 Feb 2017 1:01 pm
Operator : Hueanht
Sample : mb
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 16 12:20:33 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



7.2.2

7

M4B2825.M Thu Feb 16 12:20:39 2017

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69335.D
Acq On : 15 Feb 2017 10:03 pm
Operator : Hueanht
Sample : mb2
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Feb 16 15:46:42 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	157896	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	314371	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	429481	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	398682	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	229336	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	314371	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.889	113	135546	51.06	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.12%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	150104	52.20	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 104.40%			
80) toluene-d8 (s)	11.310	98	492507	49.65	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.30%			
105) 4-bromofluorobenzene (s)	14.182	95	188902	50.30	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 100.60%			
Target Compounds						Qvalue

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

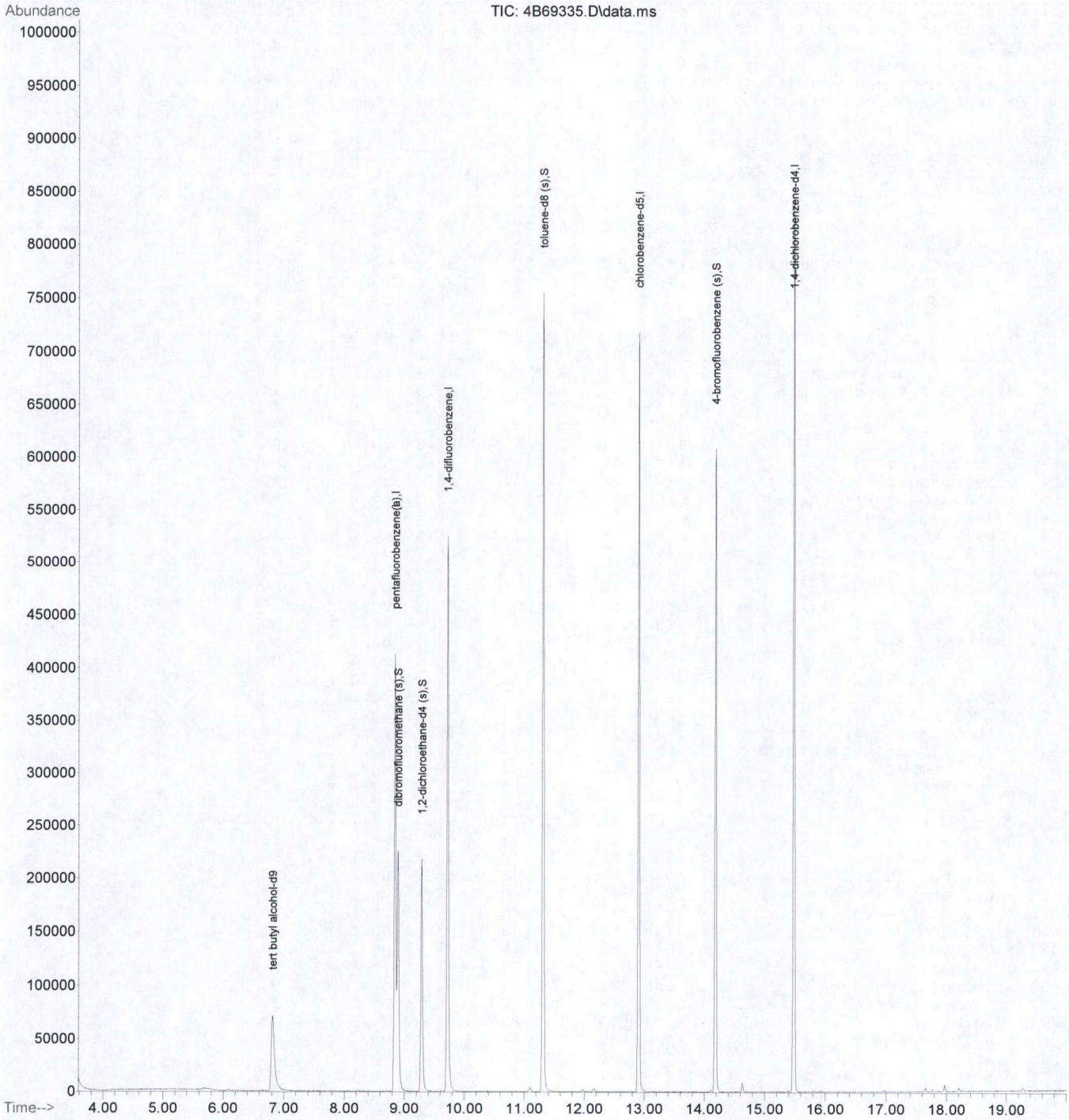
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69335.D
Acq On : 15 Feb 2017 10:03 pm
Operator : Hueanht
Sample : mb2
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Feb 16 15:46:42 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



SGS ACCUTEST JC37024

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69261.D
Acq On : 14 Feb 2017 10:32 am
Operator : Hueanht
Sample : bs
Misc : MS12448,V4B2850,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 14 10:55:36 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.807	65	104899	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	279071	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	390421	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	362708	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.478	152	217190	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	279071	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	121581	51.59	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.18%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	130927	51.29	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.58%			
80) toluene-d8 (s)	11.310	98	452917	50.23	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.46%			
105) 4-bromofluorobenzene (s)	14.181	95	181565	51.05	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.10%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	6.911	59	72357	264.42	ug/L	95
3) 1,4-dioxane	10.337	88	30717	1294.28	ug/L	94
7) chlorodifluoromethane	3.862	51	203766	46.17	ug/L	98
8) dichlorodifluoromethane	3.820	85	204991	53.54	ug/L	99
10) chloromethane	4.176	52	100476	52.43	ug/L	99
11) vinyl chloride	4.396	62	239744	46.97	ug/L	98
12) bromomethane	4.987	94	128447	54.38	ug/L	97
13) chloroethane	5.170	64	112395	49.35	ug/L	98
14) vinyl bromide	5.447	106	160062	50.25	ug/L	99
15) trichlorofluoromethane	5.510	101	227510	51.94	ug/L	99
16) 1,3-butadiene	4.469	54	177691	42.38	ug/L	99
19) ethyl ether	5.876	74	81336	51.60	ug/L	92
20) 2-chloropropane	6.074	39	60564	56.73	ug/L	89
21) acrolein	6.085	56	313954	496.67	ug/L	100
22) 1,1-dichloroethene	6.252	96	135116	52.30	ug/L	99
23) acetone	6.258	58	51651	168.67	ug/L	91
24) allyl chloride	6.713	76	202073	91.98	ug/L #	76
25) acetonitrile	6.624	40	87095	486.63	ug/L	97
26) iodomethane	6.482	142	226721	42.65	ug/L	96
27) carbon disulfide	6.608	76	389037	47.51	ug/L	99
28) methylene chloride	6.869	84	147275	50.69	ug/L	98
29) methyl acetate	6.650	74	21002	48.24	ug/L #	77
31) methyl tert butyl ether	7.173	73	757155	95.48	ug/L	99
32) trans-1,2-dichloroethene	7.215	96	131372	50.48	ug/L	96
33) di-isopropyl ether	7.696	45	552702	50.17	ug/L	97
34) 2-butanone	8.308	72	68810	206.37	ug/L #	87
35) 1,1-dichloroethane	7.732	63	268169	51.05	ug/L	100
36) chloroprene	7.816	53	226671	53.31	ug/L	97
37) acrylonitrile	7.131	53	274249	244.79	ug/L	99
38) vinyl acetate	7.659	86	26587	51.25	ug/L	99
39) ethyl tert-butyl ether	8.109	59	475569	50.90	ug/L	99
40) ethyl acetate	8.308	45	23010	47.86	ug/L	77
41) 2,2-dichloropropane	8.397	77	131735	50.56	ug/L	98
42) cis-1,2-dichloroethene	8.371	96	155409	53.45	ug/L	97
43) methylacrylate	8.391	85	19781	47.37	ug/L	94
44) propionitrile	8.386	54	194710	471.58	ug/L	91
45) bromochloromethane	8.643	128	78206	53.80	ug/L	97
46) tetrahydrofuran	8.658	42	48078	48.86	ug/L	98
47) chloroform	8.710	85	163965	51.70	ug/L	98
48) T-BUTYL FORMATE	8.742	59	84624	36.94	ug/L	93
51) freon 113	6.252	151	124340	56.11	ug/L	95
52) methacrylonitrile	8.559	41	93131	45.24	ug/L	97
53) 1,1,1-trichloroethane	8.956	97	195716	53.19	ug/L	99
54) cyclohexane	9.056	84	165448	43.87	ug/L #	82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69261.D
Acq On : 14 Feb 2017 10:32 am
Operator : Hueanht
Sample : bs
Misc : MS12448,V4B2850,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 14 10:55:36 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
57)	epichlorohydrin	10.865	57	71623	238.68 ug/L	98
58)	n-butyl alcohol	9.746	56	194603	2121.82 ug/L	97
59)	carbon tetrachloride	9.134	117	173880	53.03 ug/L	100
60)	1,1-dichloropropene	9.108	75	196115	51.21 ug/L	98
61)	hexane	7.518	57	154009	34.35 ug/L	98
62)	Tert Amyl alcohol	9.207	73	30573	206.09 ug/L	92
63)	benzene	9.343	78	558320	49.95 ug/L	99
64)	iso-octane	9.417	57	577778	48.48 ug/L	98
65)	tert-amyl methyl ether	9.401	87	90022	51.70 ug/L	97
66)	heptane	9.553	57	153297	54.38 ug/L	98
67)	isopropyl acetate	9.234	61	57298	49.54 ug/L	93
68)	1,2-dichloroethane	9.370	62	185655	51.96 ug/L	100
69)	trichloroethene	10.013	95	148760	53.08 ug/L	97
71)	ethyl acrylate	9.987	55	179672	49.24 ug/L	99
72)	2-nitropropane	10.750	41	56281	49.93 ug/L	88
73)	2-chloroethyl vinyl ether	10.771	63	476444	252.61 ug/L	99
74)	methyl methacrylate	10.243	100	35996	46.02 ug/L #	79
75)	1,2-dichloropropane	10.300	63	161923	53.24 ug/L	99
76)	dibromomethane	10.405	93	92841	51.58 ug/L	99
77)	methylcyclohexane	10.295	83	229884	49.06 ug/L	98
78)	bromodichloromethane	10.546	83	205380	56.29 ug/L	99
79)	cis-1,3-dichloropropene	10.996	75	264669	54.28 ug/L	97
81)	4-methyl-2-pentanone	11.095	58	263984	212.93 ug/L	99
82)	toluene	11.388	92	350286	49.44 ug/L	99
83)	3-methyl-1-butanol	11.085	55	125832	978.98 ug/L	99
84)	trans-1,3-dichloropropene	11.577	75	226411	53.73 ug/L	99
85)	ethyl methacrylate	11.551	69	182942	47.30 ug/L	99
86)	1,1,2-trichloroethane	11.807	83	114008	50.36 ug/L	99
87)	2-hexanone	11.969	58	258235	202.53 ug/L	96
89)	tetrachloroethene	11.958	164	143313	48.04 ug/L	97
90)	1,3-dichloropropane	12.000	76	214979	46.97 ug/L	98
91)	butyl acetate	12.047	56	100119	47.35 ug/L	94
92)	3,3-DIMETHYL-1-BUTANOL	12.152	57	119595	457.12 ug/L	98
93)	dibromochloromethane	12.262	129	166032	58.06 ug/L	98
94)	1,2-dibromoethane	12.429	107	146952	48.90 ug/L	97
95)	n-butyl ether	12.879	57	712953	52.21 ug/L	99
96)	chlorobenzene	12.937	112	405617	50.12 ug/L	99
97)	1,1,1,2-tetrachloroethane	13.010	131	147888	51.34 ug/L	98
98)	ethylbenzene	12.999	91	666286	49.38 ug/L	99
99)	m,p-xylene	13.130	106	523608	98.98 ug/L	98
100)	o-xylene	13.569	106	269355	50.87 ug/L	97
101)	styrene	13.585	104	450568	48.66 ug/L	96
102)	bromoform	13.841	173	122904	50.37 ug/L	98
104)	isopropylbenzene	13.951	105	712548	50.05 ug/L	99
106)	cyclohexanone	14.103	55	61097	87.16 ug/L	99
107)	bromobenzene	14.385	156	204416	49.54 ug/L	94
108)	1,1,2,2-tetrachloroethane	14.265	83	186856	47.85 ug/L	100
109)	trans-1,4-dichloro-2-b...	14.302	53	43356	51.21 ug/L	99
110)	1,2,3-trichloropropane	14.364	110	46892	47.97 ug/L	99
111)	n-propylbenzene	14.411	91	841866	51.36 ug/L	100
113)	2-chlorotoluene	14.563	126	182412	51.05 ug/L	99
114)	4-chlorotoluene	14.689	91	521926	51.29 ug/L	99
115)	1,3,5-trimethylbenzene	14.584	105	583522	49.97 ug/L	99
116)	tert-butylbenzene	14.966	119	554032	51.43 ug/L	98
117)	pentachloroethane	15.044	167	129125	56.54 ug/L	98
118)	1,2,4-trimethylbenzene	15.023	105	620400	52.22 ug/L	100
119)	sec-butylbenzene	15.206	105	833134	52.12 ug/L	100
120)	1,3-dichlorobenzene	15.400	146	387770	50.27 ug/L	99
121)	p-isopropyltoluene	15.353	119	725579	52.18 ug/L	99
122)	1,4-dichlorobenzene	15.510	146	387973	51.63 ug/L	98
123)	benzyl chloride	15.609	91	340306	51.19 ug/L	99
124)	1,2-dichlorobenzene	15.923	146	385269	51.46 ug/L	100
126)	n-butylbenzene	15.813	92	388318	52.73 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69261.D
Acq On : 14 Feb 2017 10:32 am
Operator : Hueanht
Sample : bs
Misc : MS12448,V4B2850,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 14 10:55:36 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
128) 1,2-dibromo-3-chloropr...	16.770	75	35016	52.52 ug/L	97
129) 1,3,5-TRICHLOROBENZENE	16.969	180	369186	55.81 ug/L	100
130) 1,2,4-trichlorobenzene	17.654	180	306599	52.07 ug/L	99
131) hexachlorobutadiene	17.769	225	169204	48.97 ug/L	99
132) naphthalene	17.968	128	512455	48.12 ug/L	100
133) 1,2,3-trichlorobenzene	18.203	180	260950	50.35 ug/L	100
134) hexachloroethane	16.247	201	147287	56.62 ug/L	99
135) 2-ethylhexyl acrylate	17.659	70	21327	13.32 ug/L	94
136) 2-methylnaphthalene	19.270	142	1214	0.47 ug/L	93

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

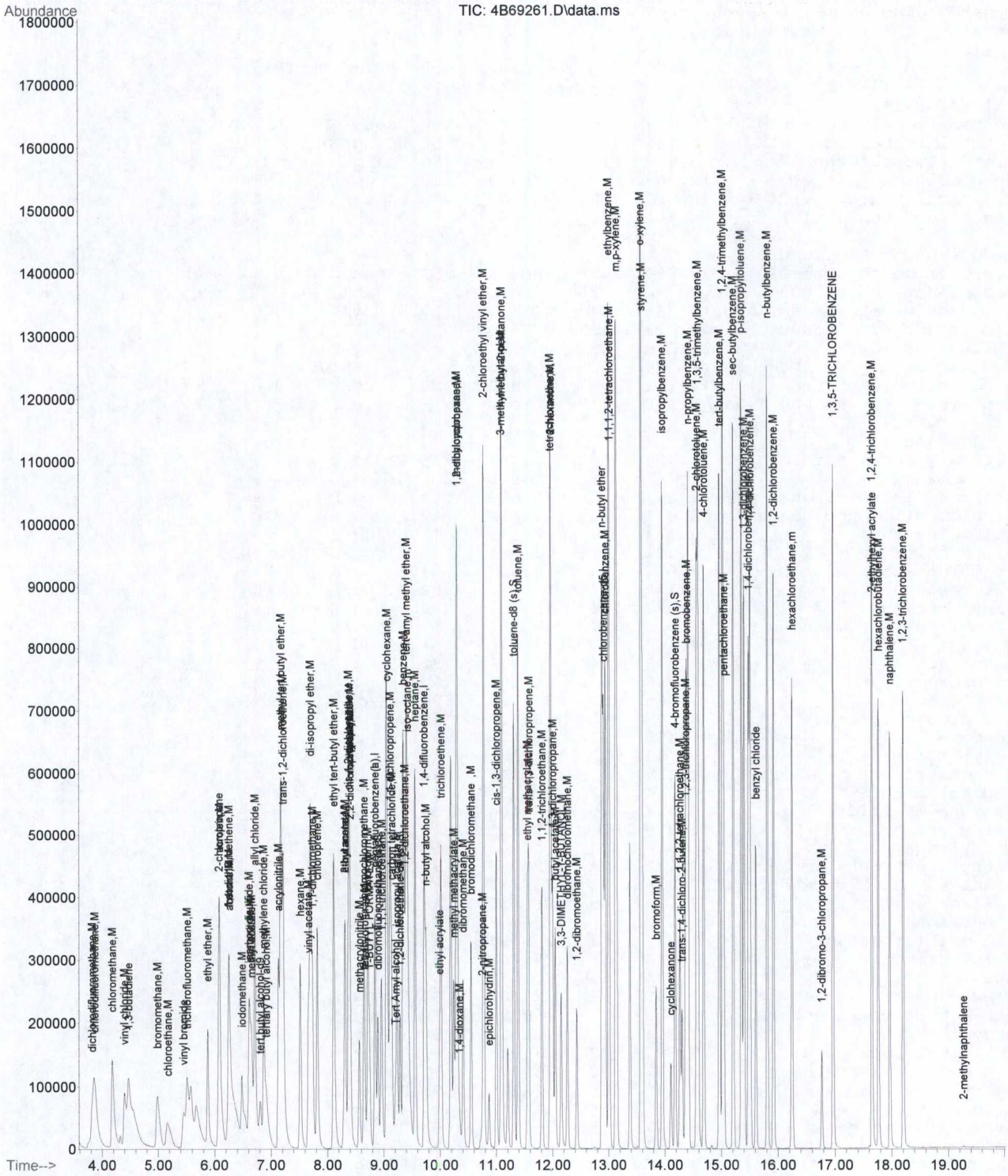
7.3.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69261.D
Acq On : 14 Feb 2017 10:32 am
Operator : Hueanht
Sample : bs
Misc : MS12448,V4B2850,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 14 10:55:36 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69315.D
Acq On : 15 Feb 2017 1:29 pm
Operator : Hueanht
Sample : bs
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 16 12:21:22 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.807	65	127260	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	289957	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.720	114	403716	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	375878	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	228760	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	289957	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	126909	51.83	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.66%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	134352	50.65	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 101.30%			
80) toluene-d8 (s)	11.310	98	461581	49.50	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.00%			
105) 4-bromofluorobenzene (s)	14.181	95	188932	50.44	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 100.88%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	6.906	59	84835	255.54	ug/L	96
3) 1,4-dioxane	10.342	88	38520	1337.88	ug/L	96
7) chlorodifluoromethane	3.862	51	200877	43.80	ug/L	98
8) dichlorodifluoromethane	3.831	85	187692	47.18	ug/L	100
10) chloromethane	4.171	52	84899	42.64	ug/L	98
11) vinyl chloride	4.401	62	234541	44.23	ug/L	98
12) bromomethane	4.976	94	130617	53.23	ug/L	95
13) chloroethane	5.149	64	123037	52.00	ug/L	98
14) vinyl bromide	5.442	106	162288	49.04	ug/L	100
15) trichlorofluoromethane	5.525	101	223069	49.01	ug/L	99
16) 1,3-butadiene	4.469	54	223196	51.24	ug/L	99
19) ethyl ether	5.876	74	84701	51.72	ug/L	93
20) 2-chloropropane	6.075	39	67105	60.50	ug/L	89
21) acrolein	6.085	56	332597	506.41	ug/L	98
22) 1,1-dichloroethene	6.252	96	131417	48.96	ug/L	97
23) acetone	6.258	58	65152	204.76	ug/L	98
24) allyl chloride	6.713	76	111351	46.94	ug/L	94
25) acetonitrile	6.624	40	100151	538.57	ug/L	98
26) iodomethane	6.514	142	278052	50.34	ug/L	98
27) carbon disulfide	6.613	76	460104	54.08	ug/L	99
28) methylene chloride	6.870	84	152321	50.45	ug/L	99
29) methyl acetate	6.650	74	23563	52.09	ug/L #	79
31) methyl tert butyl ether	7.173	73	789156	95.78	ug/L	100
32) trans-1,2-dichloroethene	7.215	96	133233	49.28	ug/L	99
33) di-isopropyl ether	7.696	45	560458	48.96	ug/L	99
34) 2-butanone	8.308	72	84756	244.65	ug/L	99
35) 1,1-dichloroethane	7.733	63	268098	49.12	ug/L	99
36) chloroprene	7.816	53	230208	52.11	ug/L	98
37) acrylonitrile	7.131	53	303179	260.45	ug/L	99
38) vinyl acetate	7.659	86	29108	54.00	ug/L	96
39) ethyl tert-butyl ether	8.109	59	488399	50.31	ug/L	99
40) ethyl acetate	8.308	45	25467	50.98	ug/L	91
41) 2,2-dichloropropane	8.397	77	134643	49.73	ug/L	99
42) cis-1,2-dichloroethene	8.371	96	154772	51.23	ug/L	100
43) methylacrylate	8.392	85	22225	51.23	ug/L	96
44) propionitrile	8.386	54	220443	513.86	ug/L	91
45) bromochloromethane	8.643	128	81184	53.75	ug/L	98
46) tetrahydrofuran	8.658	42	54152	52.97	ug/L	99
47) chloroform	8.716	85	164285	49.85	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69315.D
Acq On : 15 Feb 2017 1:29 pm
Operator : Hueanht
Sample : bs
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 16 12:21:22 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48) T-BUTYL FORMATE	8.742	59	95486	40.12 ug/L	94
51) freon 113	6.258	151	140641	61.08 ug/L	98
52) methacrylonitrile	8.559	41	101036	47.24 ug/L	97
53) 1,1,1-trichloroethane	8.956	97	205327	53.70 ug/L	100
54) cyclohexane	9.056	84	192972	49.24 ug/L	83
57) epichlorohydrin	10.865	57	82666	266.41 ug/L	96
58) n-butyl alcohol	9.746	56	239163	2521.80 ug/L	99
59) carbon tetrachloride	9.134	117	178801	52.73 ug/L	98
60) 1,1-dichloropropene	9.108	75	194399	49.09 ug/L	98
61) hexane	7.518	57	175191	37.79 ug/L	99
62) Tert Amyl alcohol	9.202	73	37763	246.17 ug/L	94
63) benzene	9.343	78	561538	48.58 ug/L	100
64) iso-octane	9.417	57	582444	47.26 ug/L	99
65) tert-amyl methyl ether	9.401	87	96085	53.36 ug/L	98
66) heptane	9.553	57	136532	46.84 ug/L	99
67) isopropyl acetate	9.234	61	63460	53.06 ug/L	97
68) 1,2-dichloroethane	9.370	62	188407	50.99 ug/L	99
69) trichloroethene	10.013	95	151615	52.32 ug/L	98
71) ethyl acrylate	9.987	55	197785	52.42 ug/L	100
72) 2-nitropropane	10.750	41	61139	52.45 ug/L #	79
73) 2-chloroethyl vinyl ether	10.771	63	508850	260.91 ug/L	100
74) methyl methacrylate	10.243	100	40026	49.49 ug/L #	88
75) 1,2-dichloropropane	10.301	63	161149	51.24 ug/L	99
76) dibromomethane	10.405	93	95656	51.39 ug/L	98
77) methylcyclohexane	10.301	83	229420	47.35 ug/L	99
78) bromodichloromethane	10.552	83	207613	55.03 ug/L	99
79) cis-1,3-dichloropropene	11.001	75	263163	52.19 ug/L	99
81) 4-methyl-2-pentanone	11.096	58	301884	235.48 ug/L	99
82) toluene	11.388	92	352650	48.14 ug/L	99
83) 3-methyl-1-butanol	11.085	55	148129	1114.50 ug/L	98
84) trans-1,3-dichloropropene	11.577	75	224158	51.45 ug/L	100
85) ethyl methacrylate	11.551	69	198974	49.75 ug/L	99
86) 1,1,2-trichloroethane	11.812	83	121495	51.90 ug/L	99
87) 2-hexanone	11.969	58	293069	222.28 ug/L	97
89) tetrachloroethene	11.959	164	150910	48.82 ug/L	97
90) 1,3-dichloropropane	12.000	76	223152	47.05 ug/L	100
91) butyl acetate	12.047	56	111789	51.02 ug/L	94
92) 3,3-DIMETHYL-1-BUTANOL	12.152	57	137942	508.78 ug/L	97
93) dibromochloromethane	12.262	129	168323	56.80 ug/L	97
94) 1,2-dibromoethane	12.429	107	155913	50.06 ug/L	97
95) n-butyl ether	12.879	57	718022	50.74 ug/L	100
96) chlorobenzene	12.937	112	409755	48.86 ug/L	100
97) 1,1,1,2-tetrachloroethane	13.010	131	151911	50.89 ug/L	98
98) ethylbenzene	12.999	91	673025	48.13 ug/L	99
99) m,p-xylene	13.130	106	529926	96.67 ug/L	98
100) o-xylene	13.569	106	274832	50.08 ug/L	98
101) styrene	13.585	104	458579	47.79 ug/L	97
102) bromoform	13.847	173	124259	49.16 ug/L	97
104) isopropylbenzene	13.951	105	718164	47.89 ug/L	100
106) cyclohexanone	14.108	55	61880	83.81 ug/L	98
107) bromobenzene	14.385	156	211479	48.66 ug/L	95
108) 1,1,2,2-tetrachloroethane	14.265	83	206029	50.09 ug/L	98
109) trans-1,4-dichloro-2-b...	14.302	53	20597	24.00 ug/L	98
110) 1,2,3-trichloropropane	14.364	110	52971	51.45 ug/L	96
111) n-propylbenzene	14.412	91	842711	48.81 ug/L	100
113) 2-chlorotoluene	14.563	126	187851	49.92 ug/L	99
114) 4-chlorotoluene	14.689	91	529979	49.44 ug/L	100
115) 1,3,5-trimethylbenzene	14.589	105	590877	48.04 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69315.D
Acq On : 15 Feb 2017 1:29 pm
Operator : Hueanht
Sample : bs
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 16 12:21:22 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
116) tert-butylbenzene	14.966	119	563538	49.66 ug/L	98
117) pentachloroethane	15.044	167	129190	53.70 ug/L	99
118) 1,2,4-trimethylbenzene	15.023	105	632168	50.52 ug/L	99
119) sec-butylbenzene	15.212	105	851663	50.58 ug/L	99
120) 1,3-dichlorobenzene	15.405	146	400553	49.30 ug/L	98
121) p-isopropyltoluene	15.358	119	741179	50.60 ug/L	100
122) 1,4-dichlorobenzene	15.510	146	398350	50.33 ug/L	99
123) benzyl chloride	15.615	91	336968	48.12 ug/L	99
124) 1,2-dichlorobenzene	15.923	146	402374	51.03 ug/L	100
126) n-butylbenzene	15.813	92	390847	50.39 ug/L	99
128) 1,2-dibromo-3-chloropr...	16.770	75	37152	52.90 ug/L	96
129) 1,3,5-TRICHLOROBENZENE	16.969	180	369647	53.05 ug/L	99
130) 1,2,4-trichlorobenzene	17.654	180	310658	50.09 ug/L	99
131) hexachlorobutadiene	17.769	225	167485	46.03 ug/L	97
132) naphthalene	17.968	128	541476	48.28 ug/L	99
133) 1,2,3-trichlorobenzene	18.209	180	267518	49.00 ug/L	99
134) hexachloroethane	16.253	201	136718	49.90 ug/L	99
135) 2-ethylhexyl acrylate	17.660	70	16373	10.07 ug/L	98

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

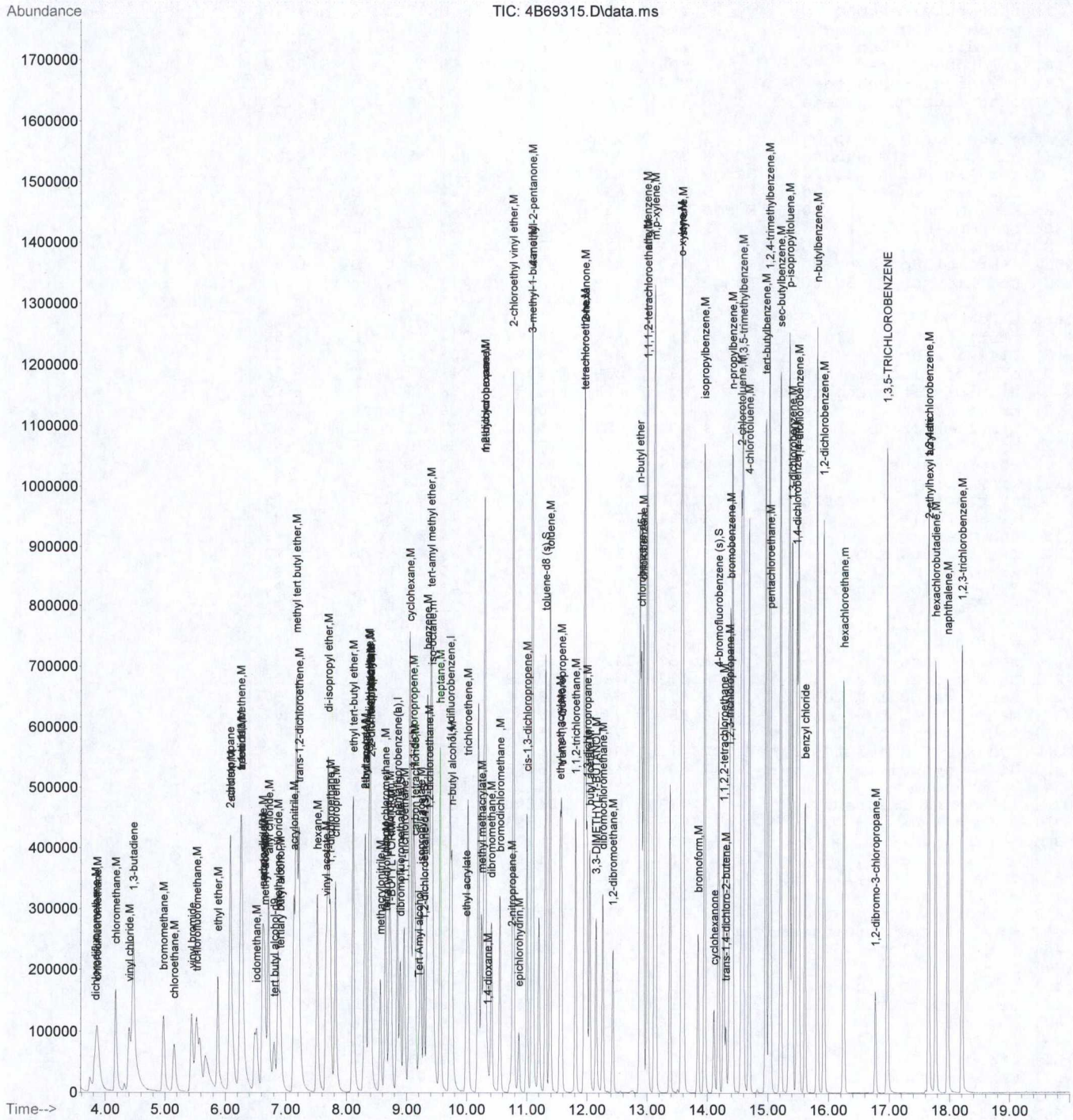
7.3.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69315.D
Acq On : 15 Feb 2017 1:29 pm
Operator : Hueanht
Sample : bs
Misc : MS12524,V4B2853,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 16 12:21:22 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



7.3.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69267.D
Acq On : 14 Feb 2017 1:23 pm
Operator : Hueanht
Sample : jc37024-8ms
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 15 10:33:35 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.812	65	118522	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	273295	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	378063	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	354805	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	212344	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	273295	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.889	113	118516	51.35	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.70%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	124184	49.68	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 99.36%			
80) toluene-d8 (s)	11.310	98	442977	50.73	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 101.46%			
105) 4-bromofluorobenzene (s)	14.182	95	175047	50.34	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 100.68%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	6.912	59	75657	244.70	ug/L	95
3) 1,4-dioxane	10.337	88	29594	1103.64	ug/L	97
7) chlorodifluoromethane	3.862	51	187977	43.49	ug/L	96
8) dichlorodifluoromethane	3.826	85	213203	56.86	ug/L	99
10) chloromethane	4.171	52	86705	46.20	ug/L	97
11) vinyl chloride	4.401	62	239547	47.93	ug/L	99
12) bromomethane	4.971	94	117733	50.90	ug/L	97
13) chloroethane	5.144	64	115554	51.81	ug/L	100
14) vinyl bromide	5.437	106	157261	50.42	ug/L	99
15) trichlorofluoromethane	5.520	101	227120	52.95	ug/L	99
16) 1,3-butadiene	4.464	54	198236	48.28	ug/L	99
19) ethyl ether	5.876	74	66261	42.93	ug/L	95
20) 2-chloropropane	6.075	39	61318	58.65	ug/L	93
21) acrolein	6.085	56	258309	417.27	ug/L	96
22) 1,1-dichloroethene	6.253	96	111218	43.96	ug/L	96
23) acetone	6.258	58	45819	152.78	ug/L	86
24) allyl chloride	6.713	76	84112	37.28	ug/L #	81
25) acetonitrile	6.624	40	79991	456.38	ug/L	94
26) iodomethane	6.483	142	234018	44.95	ug/L	98
27) carbon disulfide	6.613	76	350068	43.66	ug/L	100
28) methylene chloride	6.870	84	128062	45.01	ug/L	97
29) methyl acetate	6.650	74	17737	41.60	ug/L #	82
31) methyl tert butyl ether	7.173	73	655092	84.36	ug/L	100
32) trans-1,2-dichloroethene	7.215	96	121219	47.57	ug/L	96
33) di-isopropyl ether	7.696	45	506193	46.92	ug/L	97
34) 2-butanone	8.308	72	61391	188.01	ug/L #	87
35) 1,1-dichloroethane	7.733	63	254590	49.49	ug/L	99
36) chloroprene	7.816	53	222723	53.49	ug/L	96
37) acrylonitrile	7.131	53	230171	209.79	ug/L	99
38) vinyl acetate	7.665	86	21943	43.19	ug/L	86
39) ethyl tert-butyl ether	8.109	59	422574	46.18	ug/L	100
40) ethyl acetate	8.313	45	20358	43.24	ug/L	66
41) 2,2-dichloropropane	8.392	77	137287	53.80	ug/L	99
42) cis-1,2-dichloroethene	8.371	96	140848	49.47	ug/L	99
43) methylacrylate	8.392	85	17112	41.85	ug/L	96
44) propionitrile	8.386	54	168420	416.53	ug/L	92
45) bromochloromethane	8.643	128	67594	47.48	ug/L	96
46) tetrahydrofuran	8.658	42	40761	42.30	ug/L	98
47) chloroform	8.716	85	151050	48.63	ug/L	100
48) T-BUTYL FORMATE	8.742	59	25482	11.36	ug/L	87
51) freon 113	6.253	151	140388	64.69	ug/L	94
52) methacrylonitrile	8.559	41	80682	40.02	ug/L	99
53) 1,1,1-trichloroethane	8.951	97	199834	55.45	ug/L	99
54) cyclohexane	9.056	84	201606	54.58	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69267.D
Acq On : 14 Feb 2017 1:23 pm
Operator : Hueanht
Sample : jc37024-8ms
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 15 10:33:35 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
57)	epichlorohydrin	10.866	57	55398	190.65 ug/L	96
58)	n-butyl alcohol	9.746	56	196380	2211.18 ug/L	97
59)	carbon tetrachloride	9.134	117	175350	55.22 ug/L	97
60)	1,1-dichloropropene	9.108	75	184929	49.86 ug/L	98
61)	hexane	7.518	57	180915	41.67 ug/L	99
62)	Tert Amyl alcohol	9.208	73	34233	238.30 ug/L	92
63)	benzene	9.344	78	510176	47.13 ug/L	100
64)	iso-octane	9.417	57	617676	53.52 ug/L	99
65)	tert-amyl methyl ether	9.396	87	81119	48.11 ug/L	93
66)	heptane	9.553	57	144593	52.97 ug/L	99
67)	isopropyl acetate	9.234	61	51435	45.92 ug/L	99
68)	1,2-dichloroethane	9.370	62	161297	46.61 ug/L	98
69)	trichloroethene	10.013	95	140343	51.71 ug/L	98
71)	ethyl acrylate	9.987	55	156277	44.23 ug/L	98
72)	2-nitropropane	10.745	41	33143	30.36 ug/L #	32
74)	methyl methacrylate	10.238	100	31385	41.44 ug/L #	90
75)	1,2-dichloropropane	10.301	63	144838	49.18 ug/L	100
76)	dibromomethane	10.405	93	78681	45.14 ug/L	97
77)	methylcyclohexane	10.301	83	235483	51.90 ug/L	98
78)	bromodichloromethane	10.547	83	182692	51.71 ug/L	100
79)	cis-1,3-dichloropropene	11.002	75	237644	50.33 ug/L	98
81)	4-methyl-2-pentanone	11.090	58	250437	208.61 ug/L	92
82)	toluene	11.389	92	325449	47.44 ug/L	99
83)	3-methyl-1-butanol	11.085	55	141673	1138.26 ug/L	98
84)	trans-1,3-dichloropropene	11.577	75	194719	47.72 ug/L	99
85)	ethyl methacrylate	11.551	69	165317	44.14 ug/L	97
86)	1,1,2-trichloroethane	11.812	83	100055	45.64 ug/L	97
87)	2-hexanone	11.969	58	241999	196.00 ug/L	96
89)	tetrachloroethene	11.959	164	142276	48.76 ug/L	98
90)	1,3-dichloropropane	12.001	76	185911	41.52 ug/L	99
91)	butyl acetate	12.048	56	96833	46.82 ug/L	94
92)	3,3-DIMETHYL-1-BUTANOL	12.152	57	155586	607.94 ug/L	97
93)	dibromochloromethane	12.262	129	141921	50.73 ug/L	100
94)	1,2-dibromoethane	12.429	107	125480	42.68 ug/L	98
95)	n-butyl ether	12.879	57	662324	49.59 ug/L	100
96)	chlorobenzene	12.937	112	371304	46.90 ug/L	100
97)	1,1,1,2-tetrachloroethane	13.010	131	135485	48.08 ug/L	96
98)	ethylbenzene	13.000	91	627472	47.54 ug/L	98
99)	m,p-xylene	13.130	106	489488	94.59 ug/L	97
100)	o-xylene	13.570	106	250645	48.39 ug/L	100
101)	styrene	13.585	104	407737	45.02 ug/L	98
102)	bromoform	13.842	173	102381	43.01 ug/L	98
104)	isopropylbenzene	13.951	105	674531	48.46 ug/L	99
106)	cyclohexanone	14.103	55	43640	63.67 ug/L	97
107)	bromobenzene	14.386	156	184599	45.76 ug/L	95
108)	1,1,2,2-tetrachloroethane	14.265	83	161559	42.32 ug/L	98
109)	trans-1,4-dichloro-2-b...	14.302	53	32857	40.07 ug/L	99
110)	1,2,3-trichloropropane	14.365	110	40429	42.30 ug/L	98
111)	n-propylbenzene	14.412	91	798957	49.85 ug/L	100
113)	2-chlorotoluene	14.563	126	170031	48.67 ug/L	96
114)	4-chlorotoluene	14.689	91	483593	48.60 ug/L	99
115)	1,3,5-trimethylbenzene	14.584	105	548754	48.07 ug/L	99
116)	tert-butylbenzene	14.966	119	528842	50.21 ug/L	99
117)	pentachloroethane	15.045	167	116446	52.15 ug/L	99
118)	1,2,4-trimethylbenzene	15.024	105	576720	49.66 ug/L	99
119)	sec-butylbenzene	15.212	105	795971	50.93 ug/L	100
120)	1,3-dichlorobenzene	15.400	146	359618	47.68 ug/L	98
121)	p-isopropyltoluene	15.353	119	690366	50.78 ug/L	99
122)	1,4-dichlorobenzene	15.510	146	350809	47.75 ug/L	99
123)	benzyl chloride	15.609	91	290436	44.69 ug/L	99
124)	1,2-dichlorobenzene	15.923	146	348217	47.57 ug/L	99
126)	n-butylbenzene	15.813	92	372680	51.76 ug/L	98
128)	1,2-dibromo-3-chloropr...	16.771	75	29736	45.62 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69267.D
Acq On : 14 Feb 2017 1:23 pm
Operator : Hueanht
Sample : jc37024-8ms
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 15 10:33:35 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
129) 1,3,5-TRICHLOROBENZENE	16.969	180	343715	53.14	ug/L	99
130) 1,2,4-trichlorobenzene	17.654	180	280347	48.70	ug/L	99
131) hexachlorobutadiene	17.770	225	165718	49.06	ug/L	100
132) naphthalene	17.968	128	449481	43.17	ug/L	99
133) 1,2,3-trichlorobenzene	18.204	180	233500	46.08	ug/L	98
134) hexachloroethane	16.247	201	138661	54.52	ug/L	99
135) 2-ethylhexyl acrylate	17.660	70	16296	10.70	ug/L	97

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

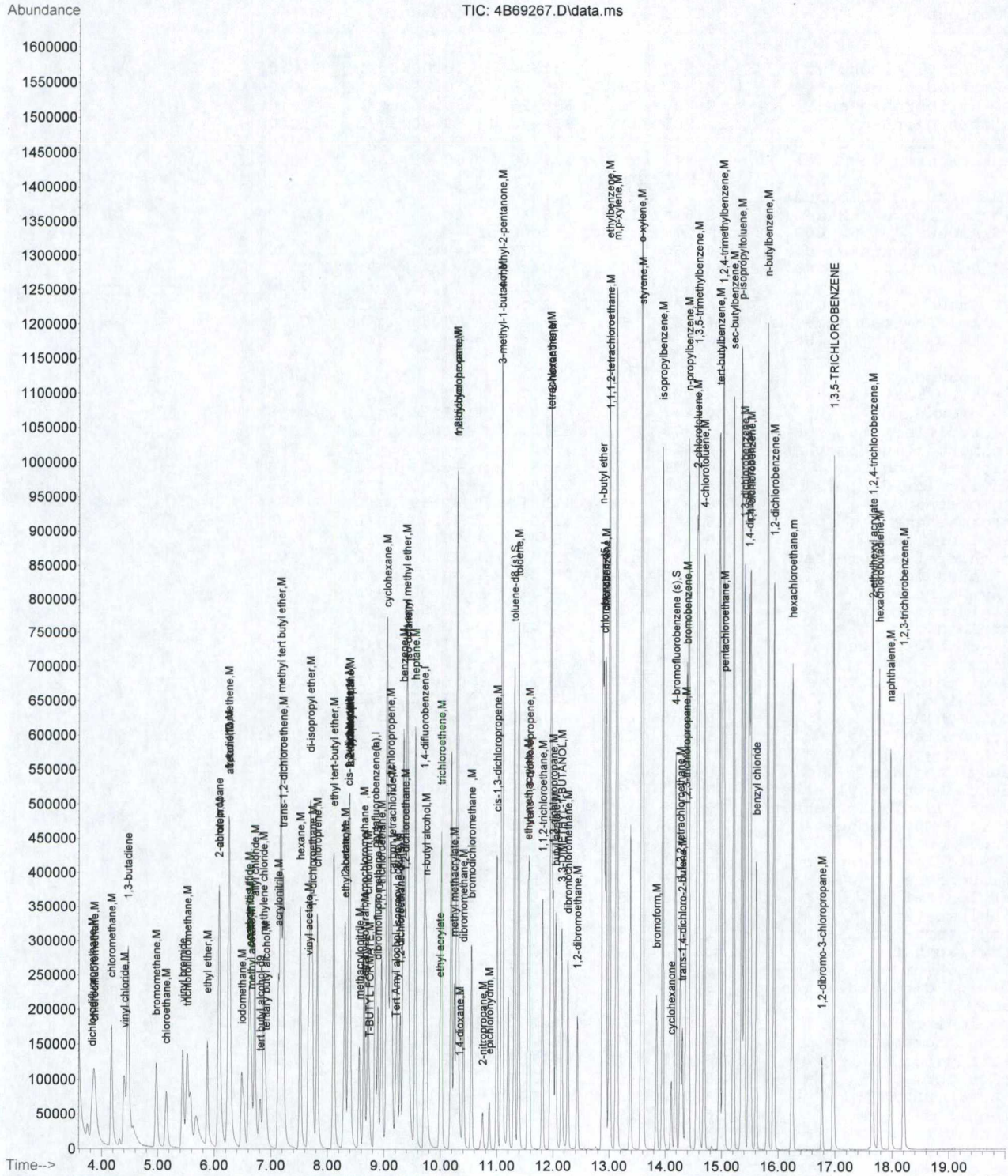
7.4.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69267.D
Acq On : 14 Feb 2017 1:23 pm
Operator : Hueanht
Sample : jc37024-8ms
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 15 10:33:35 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69268.D
Acq On : 14 Feb 2017 1:52 pm
Operator : Hueanht
Sample : jc37024-8msd
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 15 10:33:54 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.807	65	121924	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	275465	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.720	114	380325	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	354578	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	214618	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	275465	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	118283	50.85	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.70%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	123772	49.12	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 98.24%			
80) toluene-d8 (s)	11.310	98	438600	49.93	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.86%			
105) 4-bromofluorobenzene (s)	14.181	95	177621	50.54	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 101.08%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	6.906	59	77170	242.63	ug/L	95
3) 1,4-dioxane	10.342	88	31937	1157.78	ug/L	96
7) chlorodifluoromethane	3.873	51	181212	41.60	ug/L	100
8) dichlorodifluoromethane	3.826	85	209464	55.42	ug/L	99
10) chloromethane	4.171	52	87514	46.27	ug/L	96
11) vinyl chloride	4.401	62	238883	47.42	ug/L	99
12) bromomethane	4.971	94	119811	51.39	ug/L	96
13) chloroethane	5.144	64	115543	51.40	ug/L	99
14) vinyl bromide	5.442	106	158827	50.52	ug/L	100
15) trichlorofluoromethane	5.520	101	221614	51.26	ug/L	99
16) 1,3-butadiene	4.464	54	209021	50.51	ug/L	99
19) ethyl ether	5.881	74	65219	41.92	ug/L	99
20) 2-chloropropane	6.080	39	56805	53.90	ug/L	94
21) acrolein	6.085	56	257414	412.55	ug/L	97
22) 1,1-dichloroethene	6.258	96	111199	43.61	ug/L	98
23) acetone	6.258	58	45725	151.27	ug/L	88
24) allyl chloride	6.713	76	81788	35.92	ug/L	84
25) acetonitrile	6.624	40	79412	449.51	ug/L	99
26) iodomethane	6.488	142	231509	44.12	ug/L	100
27) carbon disulfide	6.613	76	334485	41.38	ug/L	99
28) methylene chloride	6.870	84	126287	44.03	ug/L	98
29) methyl acetate	6.655	74	17377	40.44	ug/L	89
31) methyl tert butyl ether	7.173	73	636615	81.33	ug/L	99
32) trans-1,2-dichloroethene	7.215	96	115328	44.90	ug/L	96
33) di-isopropyl ether	7.696	45	483215	44.44	ug/L	98
34) 2-butanone	8.308	72	61401	186.56	ug/L	94
35) 1,1-dichloroethane	7.733	63	243239	46.91	ug/L	99
36) chloroprene	7.816	53	212529	50.64	ug/L	97
37) acrylonitrile	7.131	53	224683	203.17	ug/L	100
38) vinyl acetate	7.659	86	21686	42.35	ug/L	95
39) ethyl tert-butyl ether	8.109	59	409087	44.36	ug/L	99
40) ethyl acetate	8.308	45	19172	40.40	ug/L	78
41) 2,2-dichloropropane	8.397	77	130915	50.90	ug/L	99
42) cis-1,2-dichloroethene	8.371	96	135687	47.28	ug/L	99
43) methylacrylate	8.392	85	16238	39.40	ug/L #	89
44) propionitrile	8.386	54	166250	407.92	ug/L	92
45) bromochloromethane	8.643	128	66090	46.06	ug/L	96
46) tetrahydrofuran	8.658	42	41399	42.63	ug/L	97
47) chloroform	8.716	85	144336	46.10	ug/L	99
48) T-BUTYL FORMATE	8.742	59	14762	6.53	ug/L	88
51) freon 113	6.258	151	139338	63.70	ug/L	98
52) methacrylonitrile	8.564	41	78773	38.77	ug/L	98
53) 1,1,1-trichloroethane	8.956	97	192041	52.87	ug/L	98
54) cyclohexane	9.056	84	198428	53.30	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69268.D
Acq On : 14 Feb 2017 1:52 pm
Operator : Hueanht
Sample : jc37024-8msd
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 15 10:33:54 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
57) epichlorohydrin	10.865	57	48689	166.56 ug/L	95
58) n-butyl alcohol	9.746	56	202994	2272.06 ug/L	99
59) carbon tetrachloride	9.134	117	167415	52.41 ug/L	97
60) 1,1-dichloropropene	9.108	75	176839	47.40 ug/L	99
61) hexane	7.518	57	175519	40.19 ug/L	96
62) Tert Amyl alcohol	9.207	73	34393	237.99 ug/L	92
63) benzene	9.343	78	492558	45.24 ug/L	98
64) iso-octane	9.417	57	598366	51.54 ug/L	100
65) tert-amyl methyl ether	9.396	87	79119	46.64 ug/L	98
66) heptane	9.553	57	138895	50.58 ug/L	99
67) isopropyl acetate	9.234	61	50805	45.09 ug/L	96
68) 1,2-dichloroethane	9.370	62	156107	44.85 ug/L	99
69) trichloroethene	10.013	95	134183	49.15 ug/L	98
71) ethyl acrylate	9.987	55	154747	43.53 ug/L	98
72) 2-nitropropane	10.745	41	31195	28.41 ug/L #	34
74) methyl methacrylate	10.243	100	30828	40.46 ug/L #	79
75) 1,2-dichloropropane	10.301	63	139797	47.19 ug/L	99
76) dibromomethane	10.405	93	76894	43.85 ug/L	99
77) methylcyclohexane	10.301	83	225927	49.50 ug/L	99
78) bromodichloromethane	10.546	83	175184	49.29 ug/L	98
79) cis-1,3-dichloropropene	11.001	75	228477	48.10 ug/L	97
81) 4-methyl-2-pentanone	11.090	58	245720	203.46 ug/L	93
82) toluene	11.389	92	312724	45.31 ug/L	99
83) 3-methyl-1-butanol	11.080	55	144701	1155.67 ug/L	93
84) trans-1,3-dichloropropene	11.577	75	189131	46.08 ug/L	100
85) ethyl methacrylate	11.551	69	161370	42.83 ug/L	97
86) 1,1,2-trichloroethane	11.807	83	97074	44.01 ug/L	98
87) 2-hexanone	11.969	58	239102	192.50 ug/L	97
89) tetrachloroethene	11.959	164	138480	47.49 ug/L	98
90) 1,3-dichloropropane	12.000	76	179849	40.19 ug/L	99
91) butyl acetate	12.048	56	93843	45.40 ug/L	95
92) 3,3-DIMETHYL-1-BUTANOL	12.152	57	163304	638.50 ug/L	98
93) dibromochloromethane	12.262	129	137975	49.35 ug/L	99
94) 1,2-dibromoethane	12.429	107	122928	41.84 ug/L	99
95) n-butyl ether	12.879	57	640703	48.00 ug/L	100
96) chlorobenzene	12.937	112	363834	45.99 ug/L	99
97) 1,1,1,2-tetrachloroethane	13.010	131	131147	46.57 ug/L	97
98) ethylbenzene	12.999	91	604885	45.86 ug/L	99
99) m,p-xylene	13.130	106	472702	91.41 ug/L	94
100) o-xylene	13.570	106	244492	47.23 ug/L	100
101) styrene	13.585	104	396283	43.78 ug/L	96
102) bromoform	13.841	173	101251	42.57 ug/L	95
104) isopropylbenzene	13.951	105	655366	46.58 ug/L	100
106) cyclohexanone	14.103	55	48325	69.76 ug/L	99
107) bromobenzene	14.385	156	181457	44.50 ug/L	94
108) 1,1,2,2-tetrachloroethane	14.265	83	159909	41.44 ug/L	99
109) trans-1,4-dichloro-2-b...	14.302	53	32310	39.02 ug/L	99
110) 1,2,3-trichloropropane	14.365	110	40278	41.70 ug/L	98
111) n-propylbenzene	14.412	91	773344	47.74 ug/L	99
113) 2-chlorotoluene	14.563	126	165690	46.93 ug/L	97
114) 4-chlorotoluene	14.689	91	470427	46.78 ug/L	99
115) 1,3,5-trimethylbenzene	14.589	105	533242	46.21 ug/L	100
116) tert-butylbenzene	14.966	119	511309	48.03 ug/L	98
117) pentachloroethane	15.044	167	114172	50.59 ug/L	98
118) 1,2,4-trimethylbenzene	15.024	105	559998	47.70 ug/L	100
119) sec-butylbenzene	15.212	105	776566	49.16 ug/L	99
120) 1,3-dichlorobenzene	15.400	146	350796	46.02 ug/L	100
121) p-isopropyltoluene	15.358	119	670176	48.77 ug/L	100
122) 1,4-dichlorobenzene	15.510	146	345761	46.57 ug/L	99
123) benzyl chloride	15.615	91	284843	43.36 ug/L	99
124) 1,2-dichlorobenzene	15.923	146	341402	46.15 ug/L	99
126) n-butylbenzene	15.813	92	359802	49.45 ug/L	97
128) 1,2-dibromo-3-chloropr...	16.770	75	29982	45.51 ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69268.D
Acq On : 14 Feb 2017 1:52 pm
Operator : Hueanht
Sample : jc37024-8msd
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 15 10:33:54 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
129) 1,3,5-TRICHLOROBENZENE	16.969	180	338535	51.79 ug/L	100
130) 1,2,4-trichlorobenzene	17.654	180	277391	47.67 ug/L	99
131) hexachlorobutadiene	17.769	225	161807	47.40 ug/L	99
132) naphthalene	17.968	128	458451	43.57 ug/L	100
133) 1,2,3-trichlorobenzene	18.203	180	234868	45.86 ug/L	98
134) hexachloroethane	16.247	201	134936	52.49 ug/L	99
135) 2-ethylhexyl acrylate	17.660	70	17807	11.46 ug/L	94

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

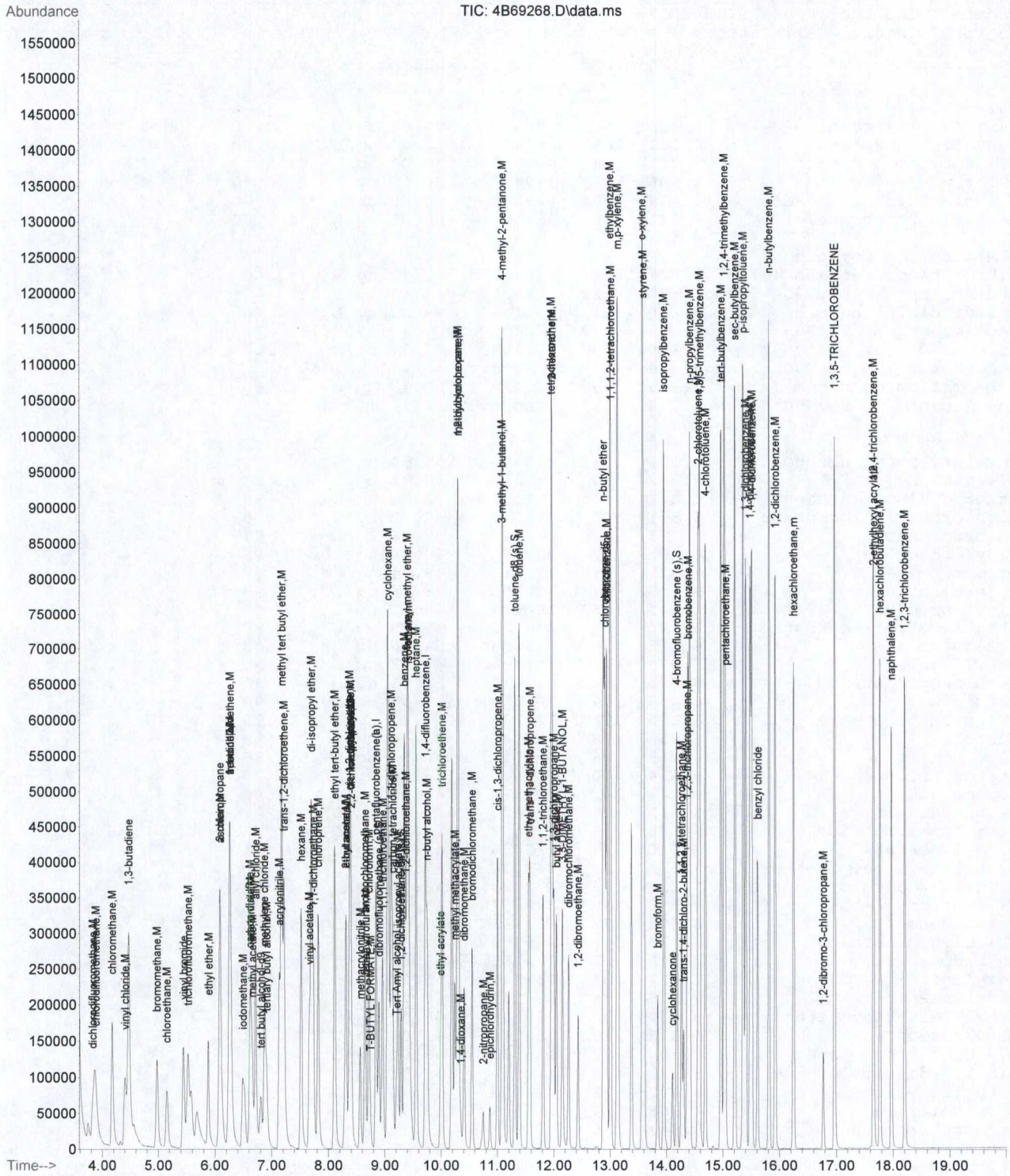
7.4.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\V4B2850-51\
Data File : 4B69268.D
Acq On : 14 Feb 2017 1:52 pm
Operator : Hueanht
Sample : jc37024-8msd
Misc : MS12540,V4B2850,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 15 10:33:54 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Tue Jan 31 16:58:58 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69322.D
Acq On : 15 Feb 2017 4:49 pm
Operator : Hueanht
Sample : jc37024-3ms
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 16 15:38:26 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.802	65	150539	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	297447	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	409812	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	377405	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.479	152	229243	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	297447	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.888	113	128668	51.22	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.44%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	134188	49.32	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 98.64%			
80) toluene-d8 (s)	11.310	98	467262	49.37	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 98.74%			
105) 4-bromofluorobenzene (s)	14.181	95	188919	50.33	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 100.66%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	6.906	59	99950	254.51	ug/L	96
3) 1,4-dioxane	10.342	88	37217	1092.73	ug/L	93
7) chlorodifluoromethane	3.862	51	151338	32.17	ug/L	98
8) dichlorodifluoromethane	3.831	85	174355	42.72	ug/L	98
10) chloromethane	4.171	52	78748	38.56	ug/L	97
11) vinyl chloride	4.401	62	222996	40.99	ug/L	99
12) bromomethane	4.971	94	125210	49.74	ug/L	97
13) chloroethane	5.149	64	117706	48.49	ug/L	98
14) vinyl bromide	5.442	106	156537	46.11	ug/L	99
15) trichlorofluoromethane	5.525	101	214730	45.99	ug/L	99
16) 1,3-butadiene	4.469	54	242888	54.35	ug/L	100
19) ethyl ether	5.876	74	71450	42.53	ug/L	96
20) 2-chloropropane	6.075	39	57538	50.56	ug/L	86
21) acrolein	6.085	56	293030	434.93	ug/L	96
22) 1,1-dichloroethene	6.252	96	124278	45.13	ug/L	100
23) acetone	6.258	58	63145	193.46	ug/L	99
24) allyl chloride	6.713	76	81040	32.86	ug/L	86
25) acetonitrile	6.624	40	102373	536.66	ug/L	96
26) iodomethane	6.483	142	226923	40.05	ug/L	96
27) carbon disulfide	6.613	76	306424	35.11	ug/L	100
28) methylene chloride	6.870	84	136462	44.06	ug/L	98
29) methyl acetate	6.650	74	22050	47.52	ug/L	91
31) methyl tert butyl ether	7.173	73	743074	87.92	ug/L	100
32) trans-1,2-dichloroethene	7.215	96	122023	43.99	ug/L	99
33) di-isopropyl ether	7.696	45	530094	45.14	ug/L	99
34) 2-butanone	8.308	72	84533	237.87	ug/L	93
35) 1,1-dichloroethane	7.733	63	266300	47.56	ug/L	99
36) chloroprene	7.816	53	221185	48.81	ug/L	98
37) acrylonitrile	7.131	53	281726	235.93	ug/L	99
38) vinyl acetate	7.659	86	26934	48.71	ug/L	90
39) ethyl tert-butyl ether	8.109	59	466308	46.82	ug/L	98
40) ethyl acetate	8.308	45	25146	49.07	ug/L	96
41) 2,2-dichloropropane	8.397	77	135085	48.64	ug/L	96
42) cis-1,2-dichloroethene	8.371	96	182630	58.93	ug/L	98
43) methylacrylate	8.392	85	21094	47.40	ug/L	94
44) propionitrile	8.386	54	216885	492.83	ug/L	89
45) bromochloromethane	8.643	128	76345	49.27	ug/L	99
46) tetrahydrofuran	8.658	42	49539	47.24	ug/L	98
47) chloroform	8.716	85	160121	47.37	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69322.D
Acq On : 15 Feb 2017 4:49 pm
Operator : Hueanht
Sample : jc37024-3ms
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 16 15:38:26 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	T-BUTYL FORMATE	8.742	59	35059	14.36	ug/L		91
51)	freon 113	6.252	151	129690	54.91	ug/L		98
52)	methacrylonitrile	8.559	41	97602	44.49	ug/L		99
53)	1,1,1-trichloroethane	8.956	97	786826	200.61	ug/L		98
54)	cyclohexane	9.056	84	184967	46.01	ug/L		89
57)	epichlorohydrin	10.865	57	72464	230.06	ug/L		97
58)	n-butyl alcohol	9.746	56	264467	2747.13	ug/L		99
59)	carbon tetrachloride	9.134	117	171583	49.85	ug/L		97
60)	1,1-dichloropropene	9.108	75	184892	45.99	ug/L		99
61)	hexane	7.518	57	187756	39.90	ug/L		99
62)	Tert Amyl alcohol	9.207	73	46667	299.69	ug/L		90
63)	benzene	9.343	78	536905	45.76	ug/L		99
64)	iso-octane	9.417	57	583997	46.68	ug/L		99
65)	tert-amyl methyl ether	9.401	87	92529	50.62	ug/L		97
66)	heptane	9.553	57	139061	46.99	ug/L		98
67)	isopropyl acetate	9.234	61	63243	52.09	ug/L		96
68)	1,2-dichloroethane	9.370	62	179380	47.82	ug/L		99
69)	trichloroethene	10.013	95	152251	51.75	ug/L		99
71)	ethyl acrylate	9.987	55	193969	50.64	ug/L		90
72)	2-nitropropane	10.745	41	40949	34.61	ug/L	#	33
74)	methyl methacrylate	10.238	100	39584	48.22	ug/L	#	81
75)	1,2-dichloropropane	10.301	63	156981	49.18	ug/L		99
76)	dibromomethane	10.405	93	91757	48.56	ug/L		96
77)	methylcyclohexane	10.301	83	227415	46.24	ug/L		99
78)	bromodichloromethane	10.552	83	202115	52.78	ug/L		100
79)	cis-1,3-dichloropropene	10.996	75	262005	51.19	ug/L		98
81)	4-methyl-2-pentanone	11.090	58	322358	247.71	ug/L		95
82)	toluene	11.389	92	348817	46.91	ug/L		99
83)	3-methyl-1-butanol	11.080	55	191537	1419.66	ug/L		92
84)	trans-1,3-dichloropropene	11.577	75	220201	49.79	ug/L		100
85)	ethyl methacrylate	11.551	69	200961	49.50	ug/L		99
86)	1,1,2-trichloroethane	11.812	83	118886	50.03	ug/L		98
87)	2-hexanone	11.969	58	317503	237.23	ug/L		99
89)	tetrachloroethene	11.959	164	149999	48.32	ug/L		97
90)	1,3-dichloropropane	12.000	76	214923	45.13	ug/L		99
91)	butyl acetate	12.048	56	118895	54.05	ug/L		98
92)	3,3-DIMETHYL-1-BUTANOL	12.152	57	219738	807.19	ug/L		98
93)	dibromochloromethane	12.262	129	164580	55.31	ug/L		100
94)	1,2-dibromoethane	12.429	107	151309	48.39	ug/L		99
95)	n-butyl ether	12.879	57	709869	49.96	ug/L		100
96)	chlorobenzene	12.942	112	407300	48.37	ug/L		98
97)	1,1,1,2-tetrachloroethane	13.010	131	150158	50.10	ug/L		98
98)	ethylbenzene	12.999	91	674018	48.01	ug/L		99
99)	m,p-xylene	13.130	106	530613	96.40	ug/L		97
100)	o-xylene	13.570	106	272731	49.50	ug/L		99
101)	styrene	13.585	104	452630	46.98	ug/L		95
102)	bromoform	13.841	173	124706	49.14	ug/L		98
104)	isopropylbenzene	13.951	105	721030	47.98	ug/L		99
106)	cyclohexanone	14.108	55	61842	83.58	ug/L		99
107)	bromobenzene	14.385	156	209320	48.06	ug/L		94
108)	1,1,2,2-tetrachloroethane	14.265	83	203835	49.45	ug/L		99
109)	trans-1,4-dichloro-2-b...	14.302	53	25009	28.73	ug/L		93
110)	1,2,3-trichloropropane	14.365	110	51703	50.11	ug/L		99
111)	n-propylbenzene	14.412	91	855245	49.43	ug/L		99
113)	2-chlorotoluene	14.563	126	187207	49.64	ug/L		97
114)	4-chlorotoluene	14.689	91	529052	49.25	ug/L		100
115)	1,3,5-trimethylbenzene	14.589	105	587546	47.67	ug/L		100
116)	tert-butylbenzene	14.966	119	563601	49.56	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69322.D
Acq On : 15 Feb 2017 4:49 pm
Operator : Hueanht
Sample : jc37024-3ms
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 16 15:38:26 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
117) pentachloroethane	15.044	167	130075	53.96 ug/L	97
118) 1,2,4-trimethylbenzene	15.024	105	624932	49.84 ug/L	100
119) sec-butylbenzene	15.212	105	851674	50.48 ug/L	100
120) 1,3-dichlorobenzene	15.400	146	395216	48.54 ug/L	98
121) p-isopropyltoluene	15.358	119	741489	50.52 ug/L	99
122) 1,4-dichlorobenzene	15.510	146	394459	49.73 ug/L	99
123) benzyl chloride	15.615	91	354938	50.58 ug/L	100
124) 1,2-dichlorobenzene	15.923	146	395474	50.05 ug/L	99
126) n-butylbenzene	15.813	92	390556	50.25 ug/L	98
128) 1,2-dibromo-3-chloropr...	16.770	75	38086	54.12 ug/L	96
129) 1,3,5-TRICHLOROBENZENE	16.969	180	369451	52.91 ug/L	100
130) 1,2,4-trichlorobenzene	17.654	180	309948	49.87 ug/L	98
131) hexachlorobutadiene	17.769	225	170815	46.84 ug/L	98
132) naphthalene	17.968	128	564944	50.26 ug/L	99
133) 1,2,3-trichlorobenzene	18.203	180	268312	49.04 ug/L	99
134) hexachloroethane	16.247	201	139607	50.84 ug/L	99
135) 2-ethylhexyl acrylate	17.660	70	18398	11.13 ug/L	96
136) 2-methylnaphthalene	19.270	142	833	0.31 ug/L	92

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

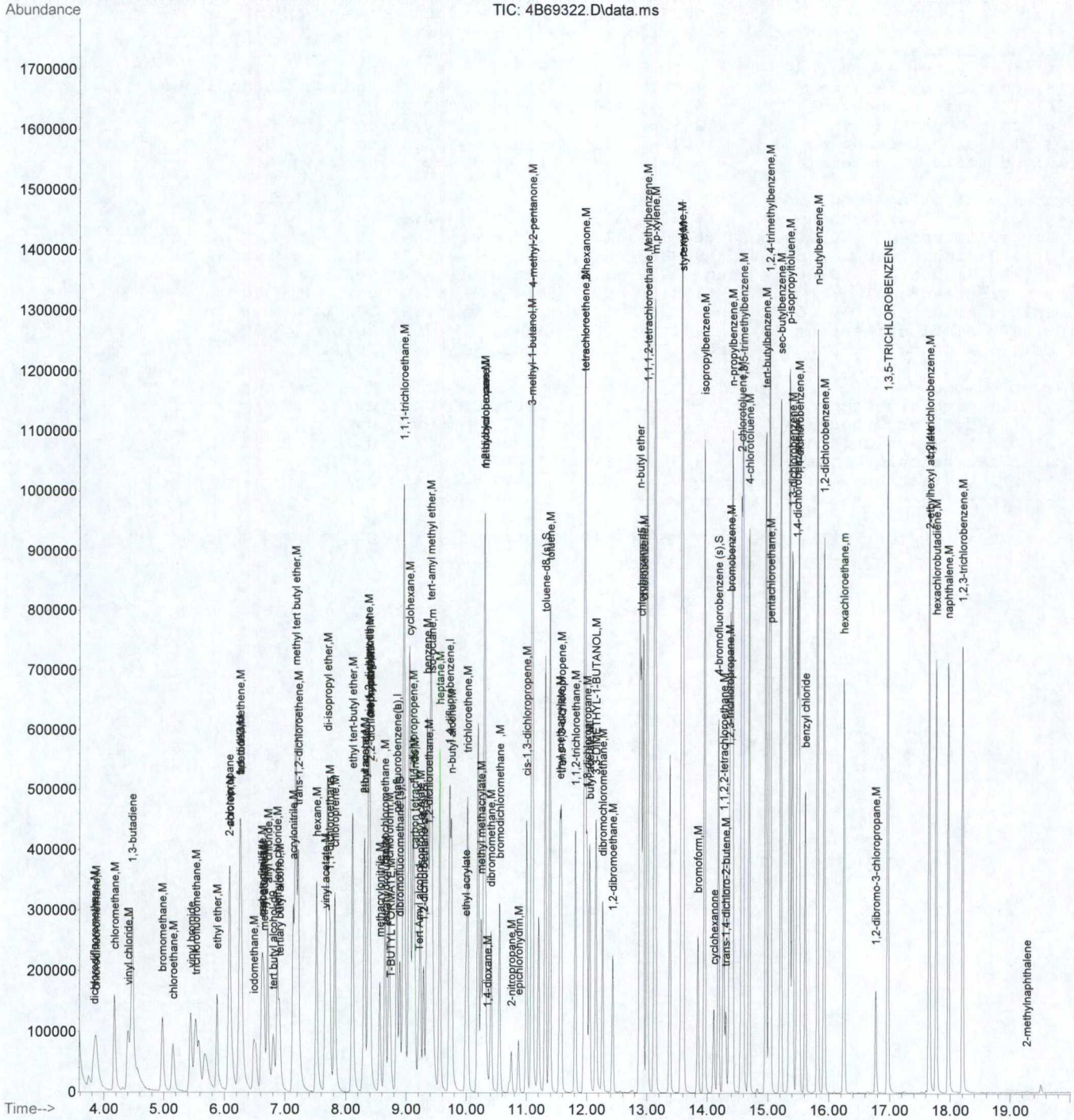
7.4.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69322.D
Acq On : 15 Feb 2017 4:49 pm
Operator : Hueanht
Sample : jc37024-3ms
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 16 15:38:26 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



M4B2825.M Thu Feb 16 15:38:39 2017

Manual Integrations
APPROVED
(compounds with "m" flag)
Kanya Veerawat
02/17/17 16:05

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69324.D
Acq On : 15 Feb 2017 5:47 pm
Operator : Hueanht
Sample : jc37024-4dup
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 17 08:39:53 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.807	65	131349	500.00	ug/L	0.00
5) pentafluorobenzene	8.841	168	321802	50.00	ug/L	0.00
56) 1,4-difluorobenzene	9.715	114	436440	50.00	ug/L	0.00
88) chlorobenzene-d5	12.905	117	407036	50.00	ug/L	0.00
103) 1,4-dichlorobenzene-d4	15.484	152	225920	50.00	ug/L	0.00
137) pentafluorobenzene(a)	8.841	168	321802	50.00	ug/L	# 0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.894	113	137032	50.42	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.84%			
50) 1,2-dichloroethane-d4 (s)	9.286	65	147731	50.19	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 100.38%			
80) toluene-d8 (s)	11.310	98	504133	50.01	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.02%			
105) 4-bromofluorobenzene (s)	14.182	95	191312	51.71	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.42%			
Target Compounds						Qvalue
22) 1,1-dichloroethene	6.357	96	8673m	2.91	ug/L	
35) 1,1-dichloroethane	7.733	63	17625	2.91	ug/L	97
42) cis-1,2-dichloroethene	8.371	96	23926	7.14	ug/L	97
53) 1,1,1-trichloroethane	8.956	97	276000	65.05	ug/L	99
69) trichloroethene	10.013	95	4691	1.50	ug/L	92

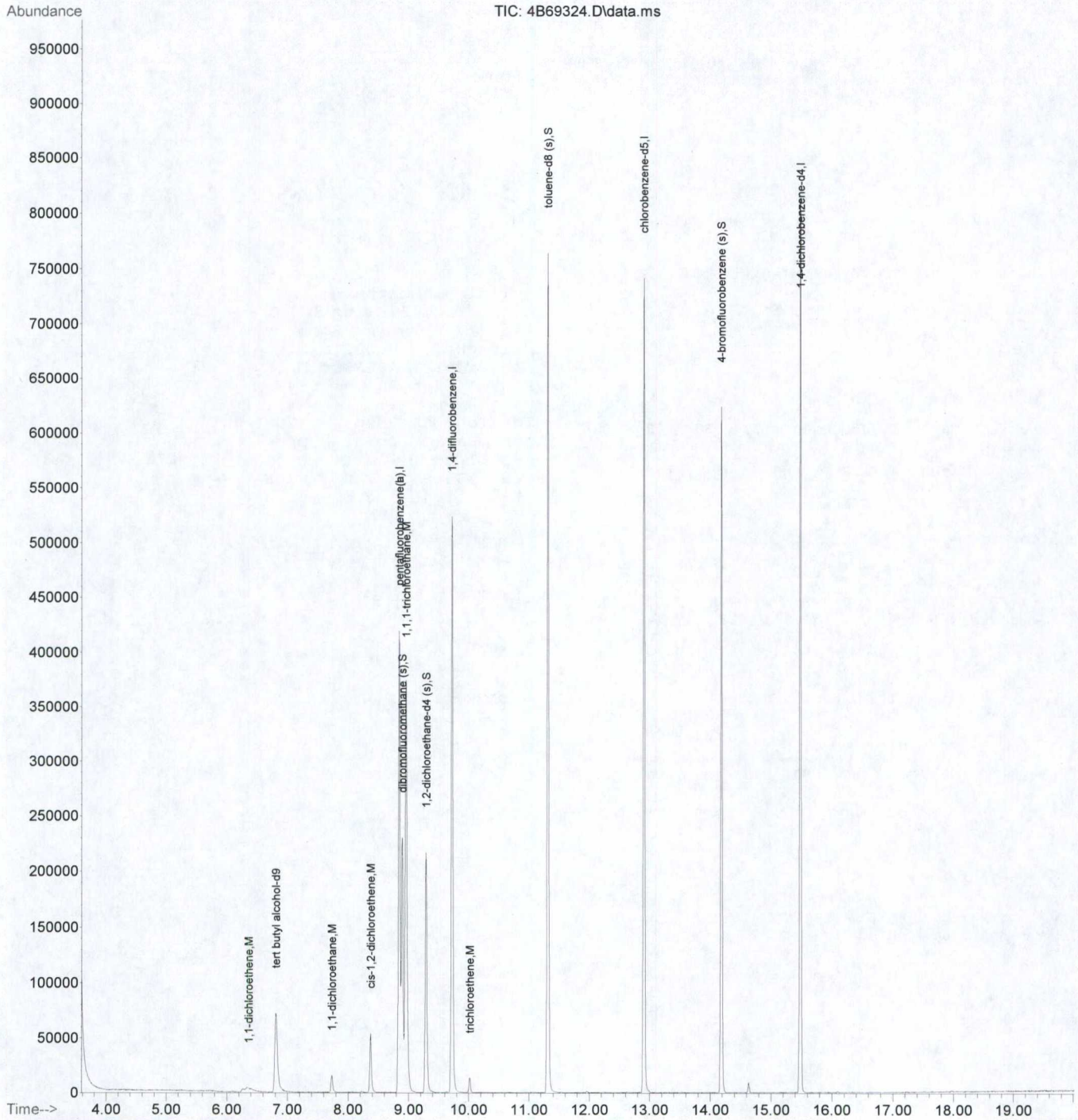
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.5.1
7

Quantitation Report (QT Reviewed)

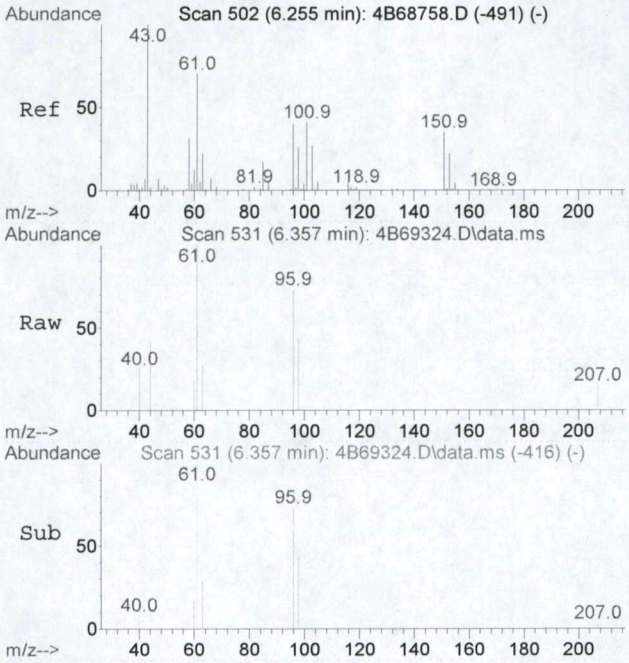
Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69324.D
Acq On : 15 Feb 2017 5:47 pm
Operator : Hueanht
Sample : jc37024-4dup
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 17 08:39:53 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration



M4B2825.M Fri Feb 17 08:40:50 2017

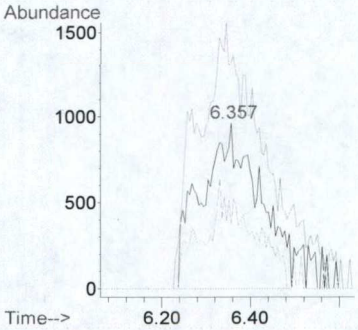
Page: 2

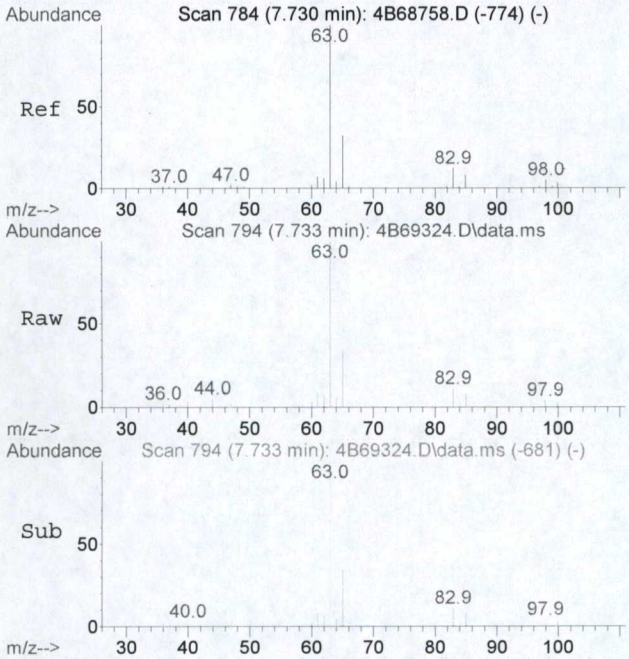


#22
1,1-dichloroethene
Concen: 2.91 ug/L m
RT: 6.357 min Scan# 531
Delta R.T. 0.102 min
Lab File: 4B69324.D
Acq: 15 Feb 2017 5:47 pm

Tgt Ion: 96 Resp: 8673

Ion	Ratio	Lower	Upper
96	100		
61	136.7	144.5	204.5#
63	38.4	24.8	84.8

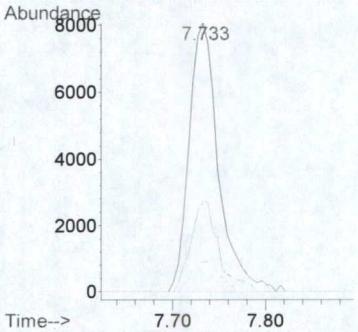




#35
1,1-dichloroethane
Concen: 2.91 ug/L
RT: 7.733 min Scan# 794
Delta R.T. 0.002 min
Lab File: 4B69324.D
Acq: 15 Feb 2017 5:47 pm

Tgt Ion: 63 Resp: 17625

Ion	Ratio	Lower	Upper
63	100		
65	33.8	1.8	61.8
83	11.4	0.0	42.3



7.5.1

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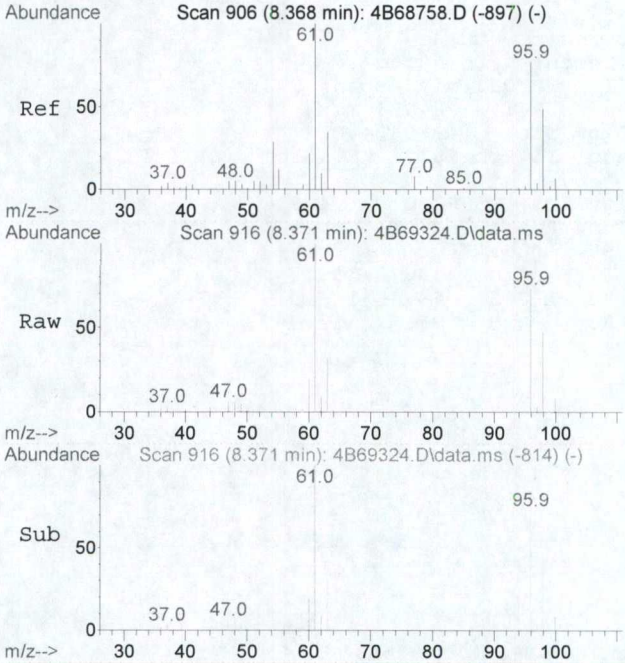
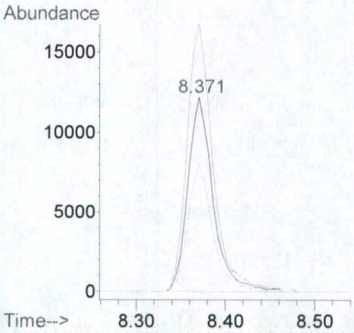
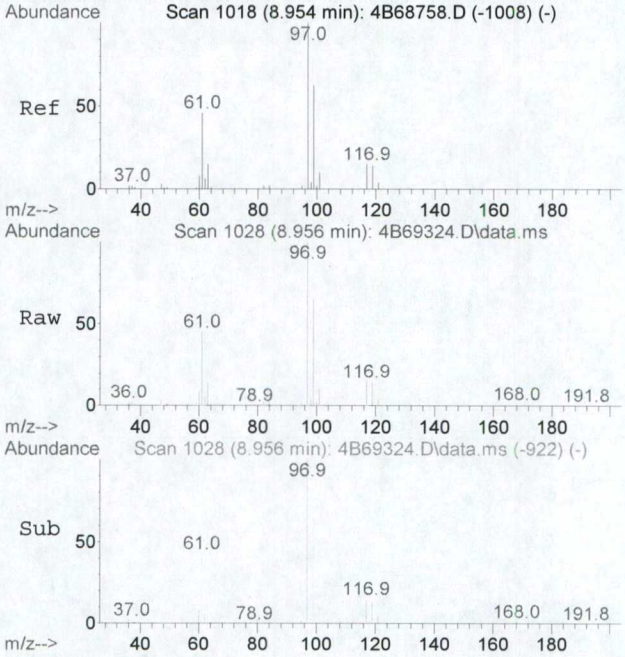


#42
cis-1,2-dichloroethene
Concen: 7.14 ug/L
RT: 8.371 min Scan# 916
Delta R.T. 0.002 min
Lab File: 4B69324.D
Acq: 15 Feb 2017 5:47 pm

Tgt Ion: 96 Resp: 23926

Ion	Ratio	Lower	Upper
96	100		
61	137.0	110.8	170.8
98	65.8	34.1	94.1

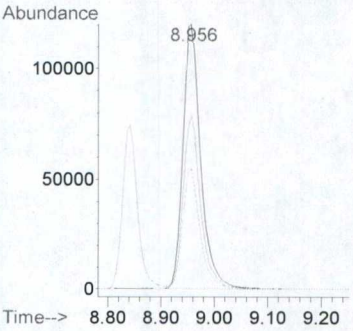




#53
1,1,1-trichloroethane
Concen: 65.05 ug/L
RT: 8.956 min Scan# 1028
Delta R.T. 0.002 min
Lab File: 4B69324.D
Acq: 15 Feb 2017 5:47 pm

Tgt Ion: 97 Resp: 276000

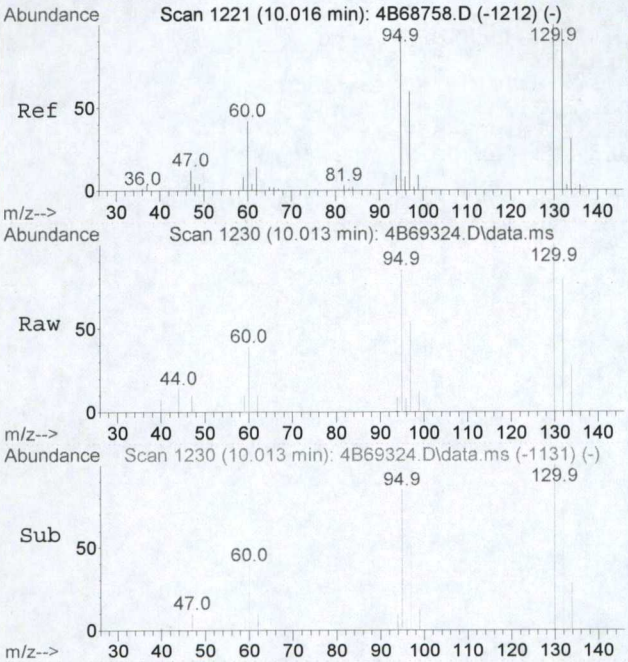
Ion	Ratio	Lower	Upper
97	100		
99	64.8	34.3	94.3
61	45.0	15.9	75.9



7.5.1

7

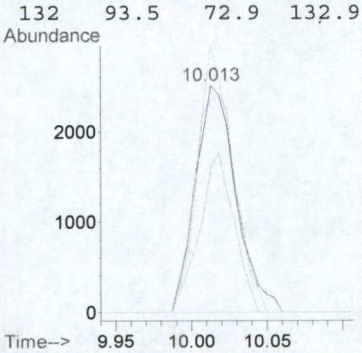
SGS ACCUTEST JC37024



#69
trichloroethene
Concen: 1.50 ug/L
RT: 10.013 min Scan# 1230
Delta R.T. -0.003 min
Lab File: 4B69324.D
Acq: 15 Feb 2017 5:47 pm

Tgt Ion: 95 Resp: 4691

Ion	Ratio	Lower	Upper
95	100		
97	64.0	33.7	93.7
130	117.5	75.9	135.9
132	93.5	72.9	132.9



7.5.1

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Manual Integration Approval Summary

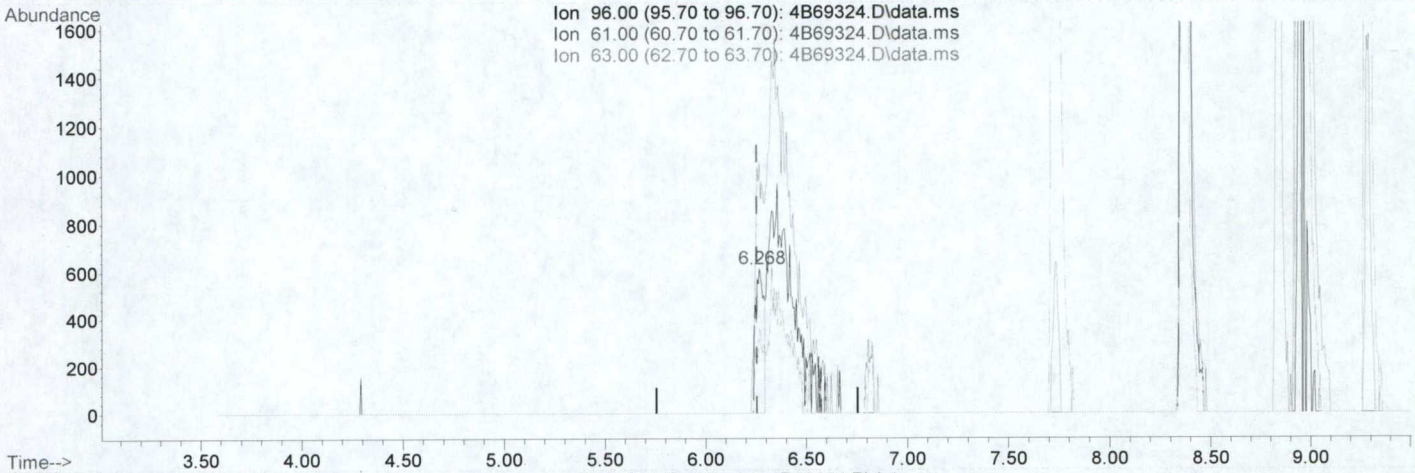
Sample Number:	JC37024-4DUP	**Method:**	SW846 8260C
Lab FileID:	4B69324.D	**Analyst approved:**	02/17/17 08:41 Mei Chen
Injection Time:	02/15/17 17:47	**Supervisor approved:**	02/17/17 16:05 Kanya Veerawat

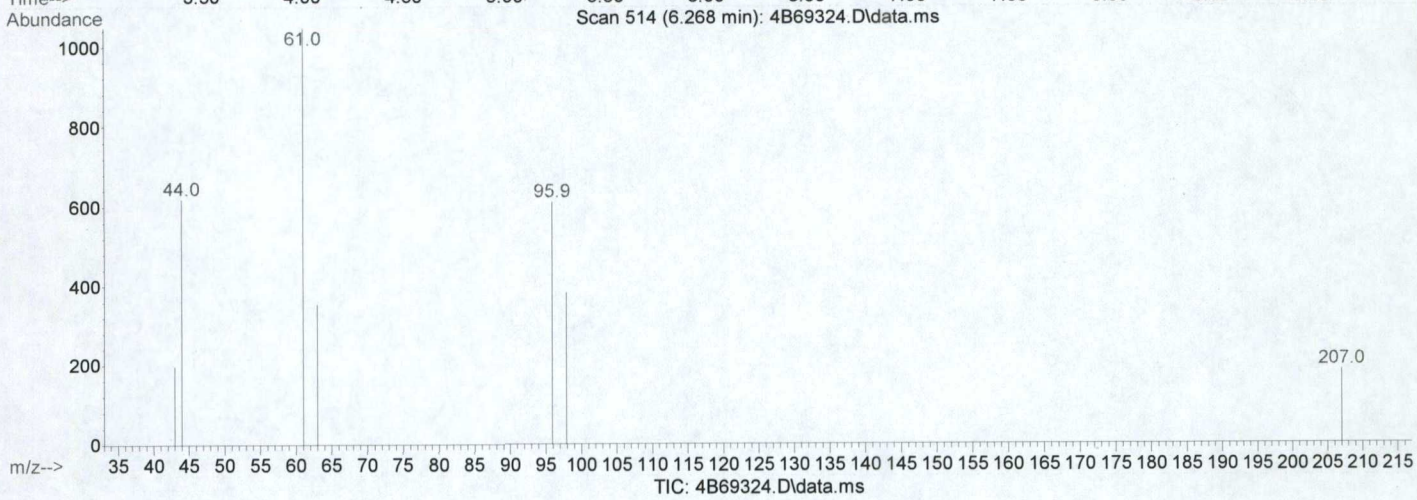
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,1-Dichloroethene	75-35-4		6.36	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\4B\v4b2853-2854\
Data File : 4B69324.D
Acq On : 15 Feb 2017 5:47 pm
Operator : Hueanht
Sample : jc37024-4dup
Misc : MS12540,V4B2853,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 16 09:01:31 2017
Quant Method : C:\MSDCHEM\1\METHODS\M4B2825.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Feb 16 08:29:28 2017
Response via : Initial Calibration





(22) 1,1-dichloroethene (M)

6.268min (+0.013) 0.58ug/L

response 1735

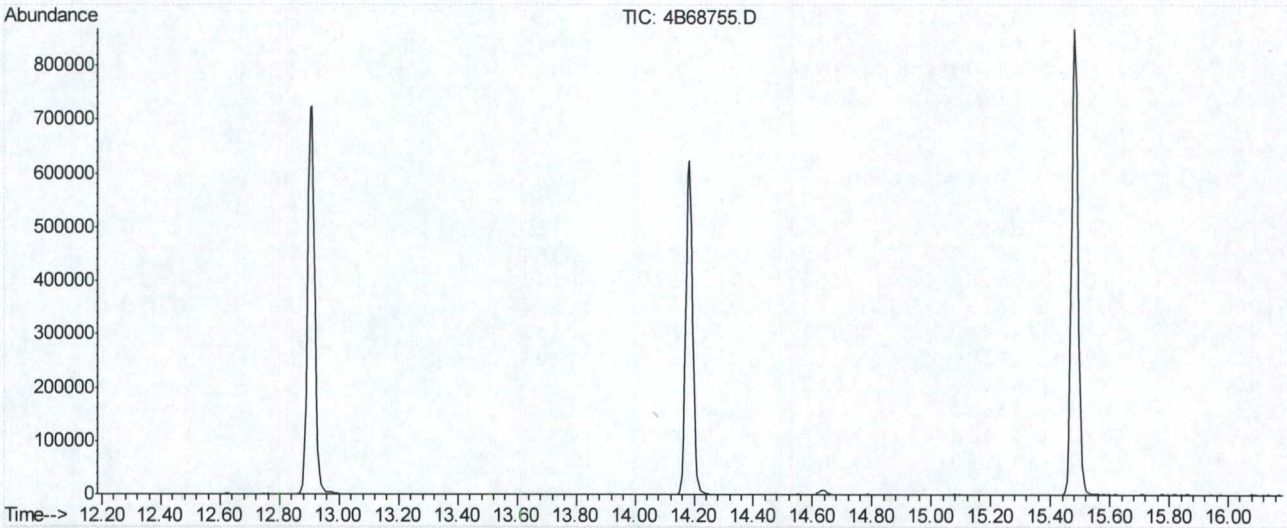
Ion	Exp%	Act%
96.00	100	100
61.00	174.50	142.16#
63.00	54.80	58.01
0.00	0.00	0.00

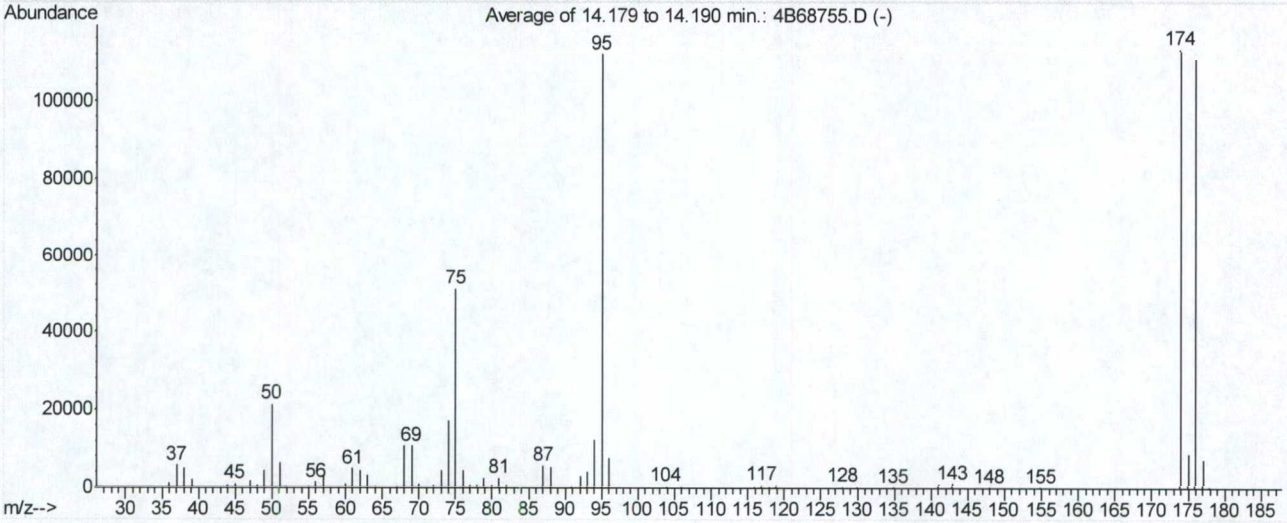
SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\4B68755.D
Acq On : 27 Jan 2017 11:04 am
Sample : bfb
Misc : MS11826,V4B2825,W,,,,1
MS Integration Params: rteint.p

Vial: 2
Operator: Hueanht
Inst : MS4B
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2017, 2018, 2019; Background Corrected with Scan 2008

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.0	21258	PASS
75	95	30	60	45.5	50882	PASS
95	95	100	100	100.0	111944	PASS
96	95	5	9	6.6	7433	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	101.4	113464	PASS
175	174	5	9	7.6	8642	PASS
176	174	95	101	97.6	110720	PASS
177	176	5	9	6.5	7242	PASS

4B68755.D M4B2825.M Fri Jan 27 18:10:35 2017 GCMS4B

7.6.1

7

Average of 14.179 to 14.190 min.: 4B68755.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1163	51.95	218	68.00	10624	79.90	683
37.05	5708	55.05	250	69.00	10723	80.90	2378
38.00	4980	56.00	1435	70.00	766	81.90	503
39.05	1922	57.00	2865	72.00	657	85.90	122
44.00	481	58.10	61	73.00	4427	87.00	5614
45.00	978	60.00	934	74.00	17055	88.00	5268
47.00	1698	61.00	4935	75.00	50882	90.90	349
48.00	658	62.00	4464	76.00	4302	92.00	2780
49.00	4502	63.00	3200	77.00	687	93.00	4217
50.00	21258	64.00	286	77.85	466	94.00	12180
51.05	6275	67.00	353	78.90	2377	95.00	111944

Average of 14.179 to 14.190 min.: 4B68755.D
bfb
Modified:subtracted

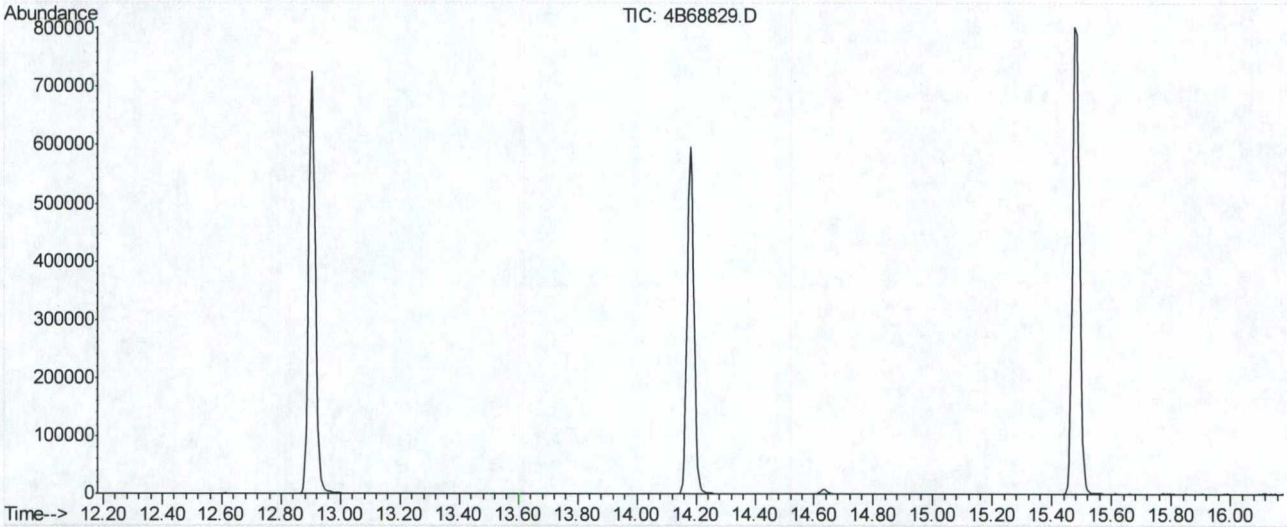
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	7433	128.90	140	156.90	68		
97.00	154	129.85	325	172.05	120		
103.90	393	130.80	55	173.90	113464		
104.80	76	134.85	175	174.95	8642		
105.00	67	136.90	76	175.90	110720		
105.90	383	140.90	995	176.90	7242		
115.90	369	142.00	62	177.85	195		
116.90	634	142.90	1042				
117.95	362	145.90	73				
118.90	512	147.95	287				
127.90	394	154.90	290				

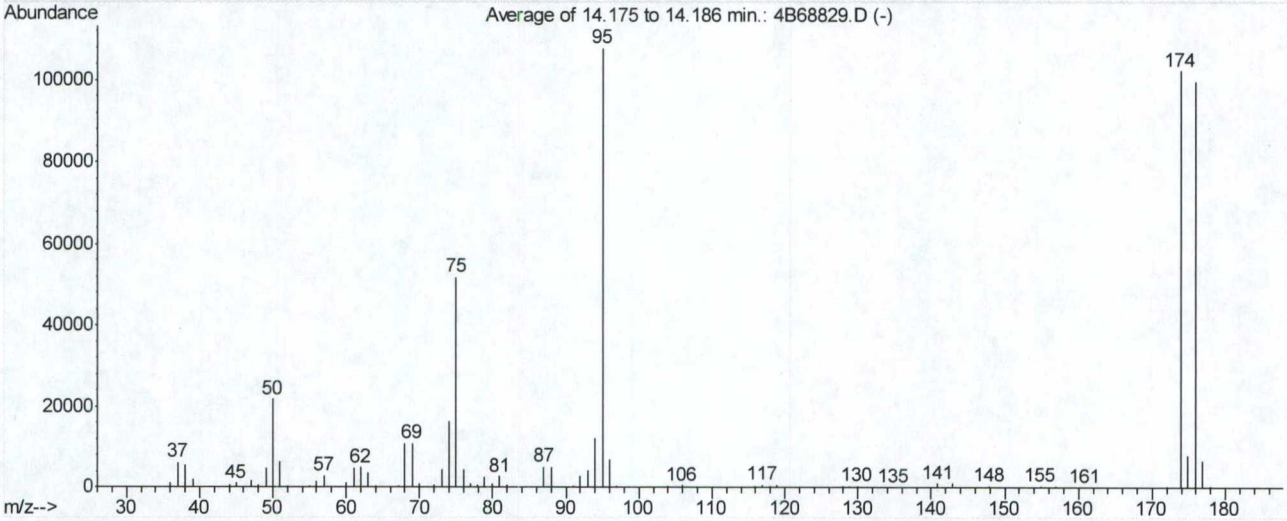
SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\4B68829.D
Acq On : 30 Jan 2017 10:20 pm
Sample : bfb
Misc : MS12037,V4B2828,W,,,,1
MS Integration Params: rteint.p

Vial: 1
Operator: Hueanht
Inst : MS4B
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\M4B2825A.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2131, 2132, 2133; Background Corrected with Scan 2122

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.2	21741	PASS
75	95	30	60	47.9	51608	PASS
95	95	100	100	100.0	107738	PASS
96	95	5	9	6.5	6993	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.0	102328	PASS
175	174	5	9	7.8	7984	PASS
176	174	95	101	97.4	99685	PASS
177	176	5	9	6.7	6688	PASS

4B68829.D M4B2825A.M Tue Jan 31 10:06:12 2017 GCMS4B

7.6.2

7

Average of 14.175 to 14.186 min.: 4B68829.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1213	51.00	6308	65.00	53	77.95	464
37.00	6120	52.00	264	67.10	204	78.90	2553
38.05	5413	55.05	311	68.00	10694	79.95	740
39.05	2072	56.00	1515	69.00	10866	80.90	2662
39.95	43	57.00	2845	70.00	795	81.90	529
44.00	608	58.10	67	72.00	562	85.95	118
45.00	1019	60.00	979	73.00	4414	87.00	4972
47.05	1783	61.00	4720	74.00	16412	88.00	4893
47.95	664	62.00	4942	75.00	51608	91.00	344
49.00	4652	63.00	3616	76.00	4382	92.00	2870
50.00	21741	64.05	411	77.00	741	93.00	4120

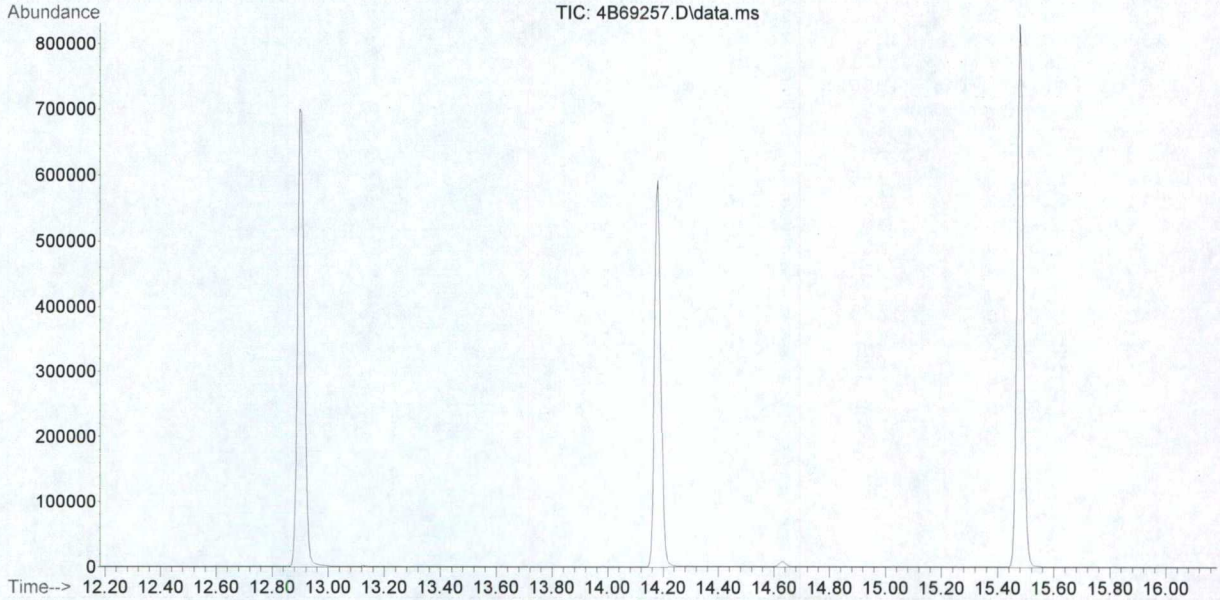
Average of 14.175 to 14.186 min.: 4B68829.D
bfb
Modified:subtracted

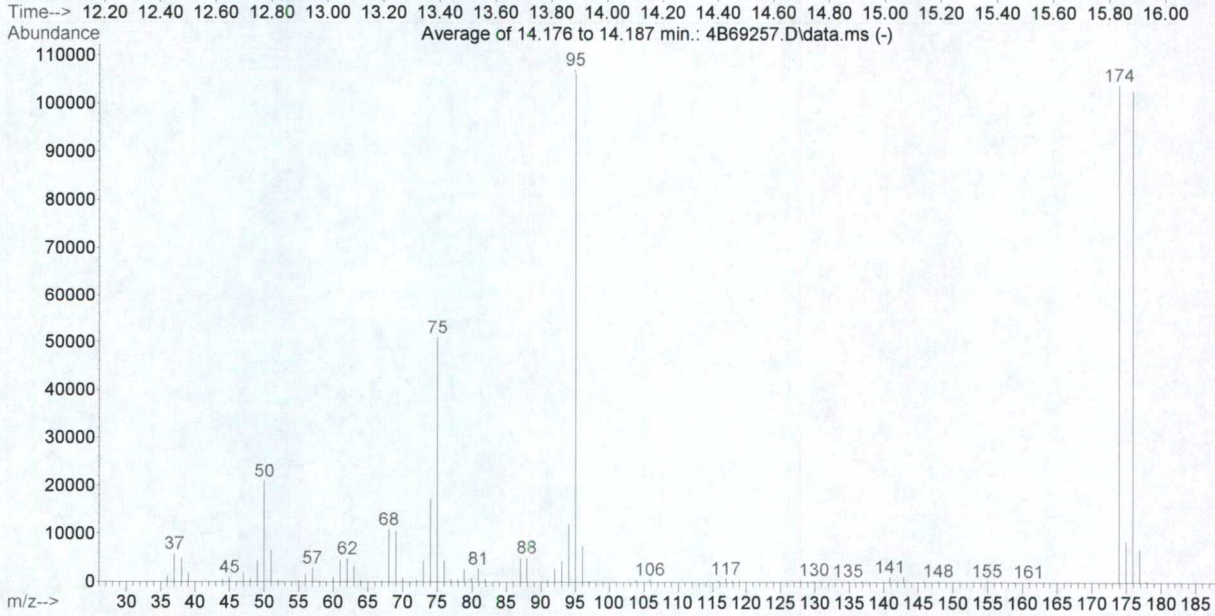
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.00	12183	118.90	506	145.85	105	176.90	6688
95.00	107738	127.90	344	147.90	296	177.95	196
96.00	6993	128.85	179	154.90	285		
96.95	208	129.90	365	156.90	222		
103.90	402	130.80	52	158.90	55		
104.95	105	131.00	50	160.90	52		
105.90	447	134.85	135	171.60	129		
114.90	62	136.90	137	172.10	152		
115.90	407	140.90	1035	173.90	102328		
116.90	636	141.90	61	174.90	7984		
117.90	353	142.90	1016	175.90	99685		

SW-846 Method 8260

Data File : C:\msdchem\1\data\4B\V4B2850-51\4B69257.D Vial: 1
Acq On : 14 Feb 2017 8:15 am Operator: Hueanht
Sample : bfb Inst : MS4B
Misc : MS12448,V4B2850,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2026, 2027, 2028; Background Corrected with Scan 2017

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	20909	PASS
75	95	30	60	47.6	50851	PASS
95	95	100	100	100.0	106819	PASS
96	95	5	9	6.9	7414	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	97.1	103765	PASS
175	174	5	9	8.2	8490	PASS
176	174	95	101	98.7	102467	PASS
177	176	5	9	6.6	6810	PASS

4B69257.D M4B2825.M Wed Feb 15 10:27:07 2017 11

Average of 14.176 to 14.187 min.: 4B69257.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1115	51.00	6510	67.05	200	78.90	2620
37.00	5806	52.05	260	68.00	10802	79.95	771
38.05	4879	55.05	289	69.00	10381	80.90	2710
39.05	1928	56.00	1521	70.00	802	81.90	545
39.90	69	57.00	2805	72.00	477	85.90	108
44.00	520	58.00	57	73.00	4354	87.00	4837
45.00	962	60.00	972	74.00	17175	87.95	5000
47.05	1821	61.00	4568	75.00	50851	90.90	406
48.05	683	62.00	4841	76.00	4409	92.00	2743
49.00	4367	63.00	3363	76.95	621	93.00	4294
50.00	20909	64.00	321	77.95	499	94.00	11928

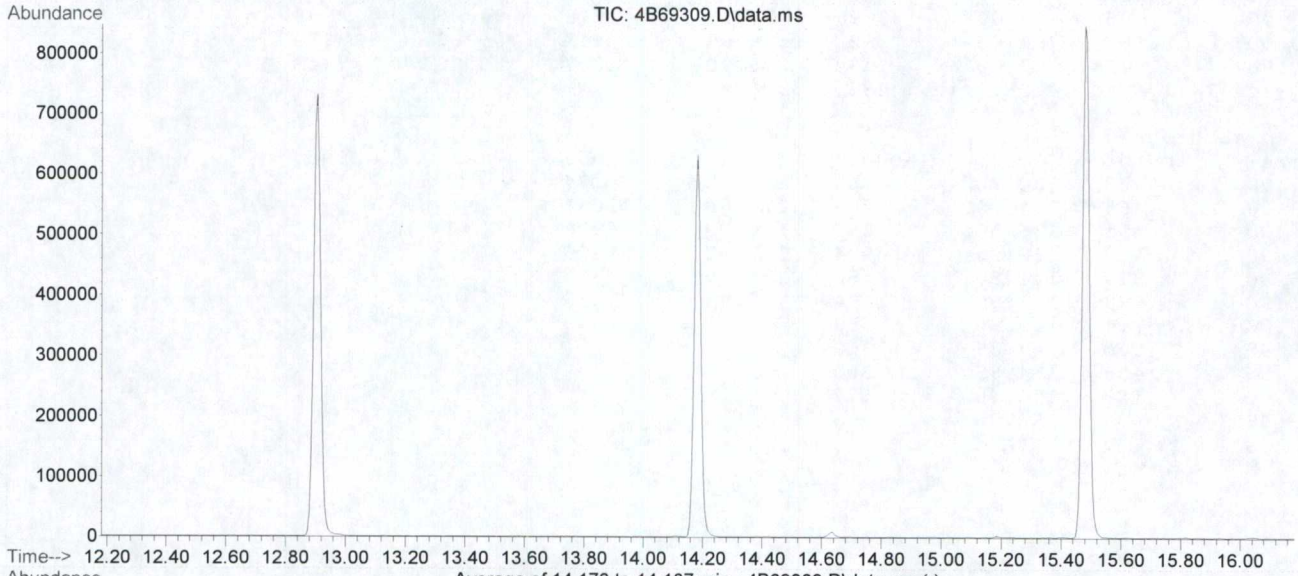
Average of 14.176 to 14.187 min.: 4B69257.D\data.ms
bfb
Modified:subtracted

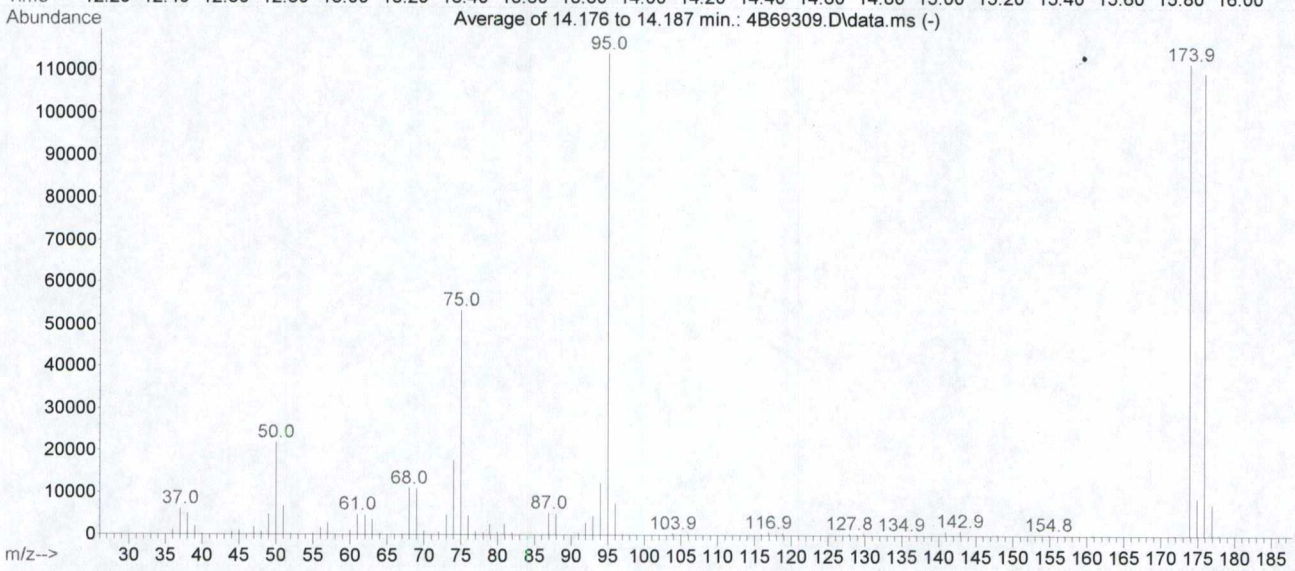
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	106819	127.90	365	154.90	270		
96.00	7414	128.90	149	156.90	222		
96.90	92	129.90	401	158.90	55		
97.10	68	130.90	121	160.90	126		
103.90	470	134.85	211	173.90	103765		
104.80	68	136.85	205	174.90	8490		
105.85	480	140.90	1068	175.90	102467		
115.85	406	141.95	159	176.90	6810		
116.90	711	142.90	1030	177.95	164		
117.85	365	145.85	176				
118.90	473	147.90	229				

SW-846 Method 8260

Data File : C:\msdchem\1\data\4B\v4b2853-2854\4B69309.D Vial: 5
Acq On : 15 Feb 2017 10:32 am Operator: Hueanht
Sample : bfb Inst : MS4B
Misc : MS12524,V4B2853,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B2825.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2026, 2027, 2028; Background Corrected with Scan 2017

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.2	21845	PASS
75	95	30	60	46.9	53389	PASS
95	95	100	100	100.0	113928	PASS
96	95	5	9	6.5	7443	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	98.0	111691	PASS
175	174	5	9	8.0	8908	PASS
176	174	95	101	98.0	109496	PASS
177	176	5	9	6.7	7377	PASS

4B69309.D M4B2825.M Thu Feb 16 12:10:32 2017