APPLIED AND ENVIRONMENTAL MICROBIOLOGY, Oct. 2008, p. 6169–6170 Vol. 74, No. 19
0099-2240/08/$08.00+0 doi:10.1128/AEM.01613-08

AUTHOR'S CORRECTION

Dehalorespiration with Polychlorinated Biphenyls by an Anaerobic Ultramicrobacterium

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Volume 74, no. 7, p. 2089–2094, 2008. Strain DF-1 was inoculated into sediments contaminated with weathered Aroclor 1260 to determine whether the augmentation would stimulate the dechlorination of congeners as they occur in the environment, adsorbed to sediment particles and in the presence of an indigenous bacterial population. The 8.9 mol% net decrease in double-flanked chlorines observed after bioaugmentation with DF-1 cannot be calculated directly from the abridged data set in Table 1 on page 2092 that highlighted only some of the changes in absolute amounts. A revised Table 1 (see following page) shows the congener profile that was used to calculate the moles percent decrease catalyzed by DF-1. There are disparities between the tables that resulted from normalization of the data in the published Table 1 to dry mass of soil. The revised moles percent analysis shows that non-double-flanked PCBs 63 and 153 did not decrease with the addition of DF-1, but a slight reduction of non-double-flanked PCBs 136 and 66/95 was significant, possibly a result of DF-1 dechlorination products serving as "primers" that stimulated the activities by the indigenous population. The relative reduction of double-flanked PCBs 180 and 202 (and coelutants) also appears to be greater. Although we cannot confirm which double-flanked dechlorination reactions were catalyzed exclusively by DF-1, the revised table clearly supports our conclusion that bioaugmentation with DF-1 stimulated reductive dechlorination of weathered Aroclor-contaminated soil.

TABLE 1. Reductive dechlorination of weathered Aroclor 1260-contaminated soil by bioaugmentation with strain DF-1

PCB(s)[b]	mol% of total PCBs in sediment[a]		
	At day 0	After 145 days	
		Without DF-1	With DF-1
15, 17	ND[c]	ND	0.04 ± 0.01
26	ND	ND	0.07 ± 0.02
51[d]	0.08 ± 0.004	0.07 ± 0.003	0.07 ± 0.01
52, 43[d]	0.07 ± 0.06	0.07 ± 0.04	0.11 ± 0.12
49	0.66 ± 0.29	0.04 ± 0.01	0.13 ± 0.03
47	0.18 ± 0.03	0.22 ± 0.02	0.26 ± 0.06
63[d]	2.06 ± 1.01	2.35 ± 0.80	6.54 ± 2.48
74	0.42 ± 0.05	ND	ND
66, 95	2.57 ± 0.10	2.69 ± 0.15	2.12 ± 0.28
91	0.13 ± 0.004	0.14 ± 0.02	0.17 ± 0.08
56, **60**	0.42 ± 0.005	0.42 ± 0.04	1.06 ± 0.47
92, 84, **89**[d]	ND	ND	6.21 ± 1.29
101	2.24 ± 0.07	2.37 ± 0.14	2.74 ± 0.48
99	0.28 ± 0.001	0.26 ± 0.03	1.48 ± 0.87
83	ND	ND	0.09 ± 0.02
97	0.09 ± 0.01	0.09 ± 0.01	0.08 ± 0.01
81,[d] **87**	0.45 ± 0.03	0.48 ± 0.03	0.28 ± 0.11
136	1.66 ± 0.01	1.71 ± 0.11	1.41 ± 0.07
110, 77[d]	1.55 ± 0.03	1.67 ± 0.11	1.93 ± 0.26
82,[d] 151	2.66 ± 0.07	2.84 ± 0.14	2.70 ± 0.05
135, **144**, **124**, 147[d]	2.00 ± 0.02	2.08 ± 0.11	2.24 ± 0.38
149, **123**[d]	6.21 ± 0.16	6.74 ± 0.27	6.25 ± 0.07
118	0.41 ± 0.02	0.38 ± 0.10	0.46 ± 0.08
134	0.32 ± 0.01	0.35 ± 0.04	0.64 ± 0.20
114, **131**	0.08 ± 0.02	ND	ND
146	1.40 ± 0.01	1.47 ± 0.06	3.72 ± 1.84
153	6.96 ± 0.16	7.67 ± 0.54	7.56 ± 0.22
132	2.64 ± 0.04	2.81 ± 0.14	2.60 ± 0.12
141	1.72 ± 0.01	1.82 ± 0.07	1.79 ± 0.03
137, **176**, **130**	0.76 ± 0.07	0.76 ± 0.02	0.83 ± 0.02
163, **138**	10.50 ± 0.29	11.82 ± 1.13	9.98 ± 2.11
158	1.12 ± 0.02	1.25 ± 0.13	0.87 ± 0.42
178, **129**	1.43 ± 0.02	1.56 ± 0.09	1.81 ± 0.13
175	5.36 ± 1.26	1.86 ± 2.66	1.42 ± 1.51
186,[d] **182**[d]	3.74 ± 0.06	4.23 ± 0.42	5.06 ± 0.29
183	2.76 ± 0.05	3.10 ± 0.29	2.75 ± 0.65
128	0.53 ± 0.003	0.60 ± 0.08	0.46 ± 0.18
185	0.48 ± 0.01	0.54 ± 0.06	0.43 ± 0.17
174	4.30 ± 0.05	4.94 ± 0.63	4.73 ± 0.93
177	2.86 ± 0.03	3.23 ± 0.41	3.80 ± 0.17
202, **171**, **156**	2.59 ± 0.02	1.98 ± 1.33	0.47 ± 0.03
157, **200**	0.38 ± 0.01	0.43 ± 0.04	0.45 ± 0.05
172	1.34 ± 0.02	1.24 ± 0.40	ND
180	9.77 ± 0.30	9.35 ± 2.62	4.88 ± 1.48
193	0.79 ± 0.01	0.71 ± 0.22	0.49 ± 0.004
191	0.32 ± 0.01	0.31 ± 0.10	0.17 ± 0.06
199	0.29 ± 0.01	0.27 ± 0.09	0.17 ± 0.01
170, **190**	4.61 ± 0.10	4.36 ± 1.27	2.06 ± 0.38
198	0.09 ± 0.002	0.09 ± 0.03	ND
201	2.65 ± 0.04	2.48 ± 0.78	1.69 ± 0.04
203, **196**	3.60 ± 0.06	3.41 ± 1.01	2.12 ± 0.30
208, **195**	0.89 ± 0.01	0.85 ± 0.24	0.57 ± 0.06
207	0.04 ± 0.000	0.04 ± 0.01	0.03 ± 0.001
194	1.71 ± 0.04	1.65 ± 0.45	1.13 ± 0.12
205	0.12 ± 0.005	0.12 ± 0.03	ND
206	0.34 ± 0.02	0.32 ± 0.10	0.24 ± 0.01

[a] All data are means of triplicate cultures ± standard deviations.
[b] Listed in order of elution. Congeners with double-flanked chlorines are shown in bold.
[c] Values less than 0.01 mol% are reported as ND.
[d] Not typically detected in Aroclor 1260.