

Supplemental Table 1: Elimination rate constants (k_2) and half-lives ($t_{1/2}$) (\pm standard error) for 72 PCB congeners in yellow perch during summer (0 - 60 d), fall (60 - 180 d), winter (180 - 300 d), spring (300 - 365 d), and annual (0 - 365 d) temperature cycles.

Congener (Group ^b)	K_{ow}^c	Elimination rate constant ^a						Half-life ^a		
		(10 ⁻² · d ⁻¹)	(d)							
PCB 19 (m)	5.02	3.5 ± 1.2	1.0 ± 1.7	N/A ^e	4.3 ± 2.4	0.9 ± 0.2	20 ± 7	72 ± 126	N/A	16 ± 9
PCB 18 (m)	5.24	2.7 ± 1.1	0.3 ± 0.8	0.1 ± 0.8	1.1 ± 0.1*	0.6 ± 0.1	26 ± 11	220 ± 574	645 ± 2433	62 ± 1
PCB 17 (m)	5.25	2.0 ± 0.9	0.2 ± 0.7	N/A	1.4 ± 0.2	0.4 ± 0.1	34 ± 16	284 ± 861	N/A	49 ± 6
PCB 24/27 (m/m)	5.40	2.6 ± 1.1	0.4 ± 0.9	N/A	2.5 ± 0.1*	0.5 ± 0.1	27 ± 11	186 ± 426	N/A	28 ± 1
PCB 16/32 (m/m)	5.30	2.5 ± 1.1	0.3 ± 0.8	N/A	1.7 ± 0.1	0.5 ± 0.1	28 ± 12	254 ± 793	N/A	42 ± 2
PCB 26 (m)	5.66	2.2 ± 1.0	0.1 ± 0.9	N/A	1.0 ± 0.1	0.3 ± 0.1	31 ± 14	877 ± 1000	N/A	70 ± 6
PCB 25 (m)	5.67	1.6 ± 0.7	0.3 ± 1.0	N/A	1.2 ± 0.1*	0.3 ± 0.1	43 ± 20	240 ± 809	N/A	57 ± 1
PCB 31/28 (m/p)	5.67	1.9 ± 0.9	N/A	N/A	1.0 ± 0.1	0.3 ± 0.1	37 ± 18	N/A	N/A	68 ± 7
PCB 33/20 (m/m)	5.59	2.1 ± 1.0	0.1 ± 0.9	N/A	1.2 ± 0.2	0.3 ± 0.1	33 ± 15	>1000	N/A	59 ± 12
PCB 22 (m)	5.58	1.8 ± 0.6	0.1 ± 0.9	N/A	1.3 ± 0.2	0.3 ± 0.1	39 ± 14	>1000	N/A	52 ± 6

PCB 45 (m)	5.53	1.8 ± 0.9	<0.1	N/A	1.0 ± 0.1	0.2 ± 0.1	39 ± 20	>1000	N/A	68 ± 8	310 ± 133
PCB 52 (m)	5.84	1.5 ± 0.9	N/A	N/A	0.6 ± 0.1	0.1 ± 0.1	48 ± 28	N/A	N/A	111 ± 22	833 ± 905
PCB 49 (m)	5.85	1.7 ± 1.0	N/A	N/A	0.6 ± 0.1	0.1 ± 0.1	41 ± 24	N/A	N/A	124 ± 16	774 ± 809
PCB 47/48 (p/m)	5.82	1.4 ± 0.9	N/A	N/A	0.6 ± 0.1	0.1 ± 0.1	48 ± 31	N/A	N/A	122 ± 27	908 ± 1067
PCB 44 (m)	5.75	1.6 ± 0.9	N/A	N/A	0.8 ± 0.2	0.1 ± 0.1	43 ± 25	N/A	N/A	88 ± 21	564 ± 435
PCB 42 (m)	5.76	1.6 ± 1.1	N/A	N/A	0.8 ± 0.1	0.1 ± 0.1	43 ± 28	N/A	N/A	88 ± 7	770 ± 859
PCB 64/41/71 (m/m/m)	5.87	1.6 ± 0.9	N/A	N/A	0.7 ± 0.1	0.1 ± 0.1	44 ± 25	N/A	N/A	104 ± 23	740 ± 714
PCB 40 (m)	5.66	1.8 ± 1.0	<0.1	N/A	0.9 ± 0.2	0.2 ± 0.1	38 ± 20	>1000	N/A	80 ± 21	390 ± 218
PCB 74 (p)	6.20	1.6 ± 0.9	N/A	N/A	0.4 ± 0.1	<0.1	44 ± 25	N/A	N/A	165 ± 44	>1000
PCB 70/76 (m/m)	6.17	1.7 ± 1.0	N/A	N/A	0.6 ± 0.1	0.1 ± 0.1	42 ± 24	N/A	N/A	112 ± 23	816 ± 905
PCB 66 (p)	6.20	1.5 ± 0.9	N/A	N/A	0.6 ± 0.2	<0.1	46 ± 28	N/A	N/A	126 ± 44	>1000
PCB 56/60 (m/p)	6.11	1.6 ± 0.9	N/A	N/A	0.6 ± 0.1	0.1 ± 0.1	44 ± 24	N/A	N/A	120 ± 20	844 ± 1000
PCB 95 (m)	6.13	1.3 ± 0.8	N/A	N/A	0.6 ± 0.2	<0.1	54 ± 34	N/A	N/A	121 ± 32	>1000
PCB 91 (m)	6.13	1.4 ± 0.9	N/A	N/A	0.4 ± 0.2	<0.1	51 ± 35	N/A	N/A	155 ± 63	>1000

PCB 92 (m)	6.35	1.4 ± 0.9	N/A	N/A	0.4 ± 0.1	N/A	50 ± 34	N/A	N/A	177 ± 65	N/A			
PCB 84 (m)	6.04	1.4± 0.8	N/A	N/A	0.6 ± 0.1	<0.1	51 ± 31	N/A	N/A	112 ± 11	>1000			
PCB 101 (m)	6.38	1.2 ± 0.8	N/A	N/A	0.4 ± 0.1	N/A	56 ± 39	N/A	N/A	167 ± 33	N/A			
PCB 99 (p)	6.39	1.4 ± 0.9	N/A	N/A	0.4 ± 0.1*	N/A	51 ± 33	N/A	N/A	182 ± 18	N/A			
PCB 97 (m)	6.29	1.3 ± 0.9	N/A	N/A	0.4 ± 0.1	N/A	52 ± 37	N/A	N/A	178 ± 67	N/A			
PCB 87 (m)	6.29	1.3 ± 0.9	N/A	N/A	0.4 ± 0.1	N/A	52 ± 35	N/A	N/A	168 ± 48	N/A			
PCB 85 (p)	6.30	1.6 ± 1.1	N/A	N/A	0.3 ± 0.1	N/A	45 ± 31	N/A	N/A	228 ± 45	N/A			
PCB 110 (m)	6.48	1.3 ± 0.8	N/A	N/A	0.4 ± 0.1	N/A	54 ± 34	N/A	N/A	157 ± 49	N/A			
PCB 118 (p)	6.74	1.5 ± 0.9	N/A	N/A	0.4 ± 0.1*	N/A	48 ± 30	N/A	N/A	186 ± 20	N/A			
PCB 105 (p)	6.65	1.6 ± 1.0	N/A	N/A	0.3 ± 0.1*	N/A	42 ± 26	N/A	N/A	200 ± 5	N/A			
PCB 136 (m)	6.22	1.0 ± 0.7	N/A	N/A	0.4 ± 0.2	N/A	69 ± 46	N/A	N/A	169 ± 71	N/A			
PCB 151 (m)	6.64	1.0 ± 0.7	N/A	N/A	0.3 ± 0.1	N/A	70 ± 48	N/A	N/A	240 ± 124	N/A			
PCB 144/133 (m/p)	6.77	1.1 ± 0.8	N/A	N/A	0.3 ± 0.1	N/A	65 ± 45	N/A	N/A	204 ± 61	N/A			
PCB 149 (m)	6.67	1.0 ± 0.7	N/A	N/A	0.3 ± 0.2	N/A	67 ± 44	N/A	N/A	201 ± 93	N/A			
PCB 134 (m)	6.55	1.2 ± 0.8	N/A	N/A	0.3 ± 0.1	N/A	57 ± 37	N/A	N/A	271 ± 132	N/A			
PCB 146 (p)	6.89	1.0 ± 0.7	N/A	N/A	0.2 ± 0.1	N/A	66 ± 45	N/A	N/A	437 ± 180	N/A			

PCB 153/132 (p/m)	6.75	1.1 ± 0.7	N/A	N/A	0.3 ± 0.1	N/A	64 ± 44	N/A	N/A	239 ± 87	N/A	
PCB 141 (m)	6.82	1.0 ± 0.7	N/A	N/A	0.3 ± 0.1	N/A	67 ± 45	N/A	N/A	266 ± 143	N/A	
PCB 130 (p)	6.80	1.3 ± 0.9	N/A	N/A	0.3 ± 0.1*	N/A	54 ± 37	N/A	N/A	237 ± 34	N/A	
PCB 137 (p)	6.83	1.3 ± 0.9	N/A	N/A	0.2 ± 0.2	N/A	54 ± 36	N/A	N/A	289 ± 224	N/A	
PCB 138 (p)	6.83	1.2 ± 0.8	N/A	N/A	0.3 ± 0.1	N/A	60 ± 41	N/A	N/A	246 ± 84	N/A	
PCB 158 (p)	7.02	0.8 ± 0.8	N/A	N/A	0.3 ± 0.1*	N/A	88 ± 92	N/A	N/A	273 ± 47	N/A	
PCB 128 (p)	6.74	1.2 ± 0.8	N/A	N/A	0.2 ± 0.1	N/A	56 ± 37	N/A	N/A	302 ± 174	N/A	
PCB 156 (p)	7.18	1.3 ± 0.8	N/A	N/A	0.1 ± 0.1	N/A	55 ± 37	N/A	N/A	627 ± 824	N/A	
PCB 157 (p)	7.18	1.2 ± 0.7	N/A	N/A	N/A	N/A	60 ± 36	N/A	N/A	N/A	N/A	
PCB 179 (m)	6.73	0.9 ± 0.6	N/A	N/A	0.3 ± 0.1	N/A	76 ± 50	N/A	N/A	229 ± 99	N/A	
PCB 176 (m)	6.76	1.0 ± 0.7	N/A	N/A	0.3 ± 0.2	N/A	70 ± 47	N/A	N/A	235 ± 123	N/A	
PCB 178 (p)	7.14	0.9 ± 0.7	N/A	N/A	0.2 ± 0.1	N/A	74 ± 53	N/A	N/A	423 ± 277	N/A	
PCB 187/182 (p/p)	7.19	0.9 ± 0.6	N/A	N/A	0.2 ± 0.1	N/A	80 ± 56	N/A	N/A	456 ± 323	N/A	
PCB 183 (p)	7.20	0.9 ± 0.6	N/A	N/A	0.2 ± 0.1	N/A	78 ± 56	N/A	N/A	412 ± 274	N/A	
PCB 185 (m)	7.11	0.8 ± 0.6	N/A	N/A	0.2 ± 0.1	N/A	86 ± 68	N/A	N/A	318 ± 153	N/A	

PCB 174 (m)	7.11	1.0 ± 0.6	N/A	N/A	0.2 ± 0.1	N/A	71 ± 44	N/A	N/A	295 ± 144	N/A				
PCB 177 (p)	7.08	0.9 ± 0.6	N/A	N/A	0.2 ± 0.1	N/A	77 ± 51	N/A	N/A	348 ± 147	N/A				
PCB 171 (p)	7.11	0.8 ± 0.7	N/A	N/A	0.1 ± 0.1	N/A	86 ± 73	N/A	N/A	502 ± 404	N/A				
PCB 172 (p)	7.33	0.4 ± 1.0	N/A	N/A	0.1 ± 0.1*	N/A	174 ± 138	N/A	N/A	>1000	N/A				
PCB 180 (p)	7.36	1.0 ± 0.6	N/A	N/A	0.2 ± 0.1	N/A	72 ± 47	N/A	N/A	448 ± 239	N/A				
PCB 170/190 (p/p)	7.37	0.9 ± 0.7	N/A	N/A	0.1 ± 0.1*	N/A	75 ± 54	N/A	N/A	624 ± 125	N/A				
PCB 202 (p)	7.24	0.9 ± 0.6	N/A	N/A	0.2 ± 0.1	N/A	76 ± 53	N/A	N/A	318 ± 98	N/A				
PCB 200 (p)	7.27	0.8 ± 0.6	N/A	N/A	0.1 ± 0.1*	N/A	84 ± 56	N/A	N/A	549 ± 22	N/A				
PCB 199 (p)	7.20	0.9 ± 0.5	N/A	N/A	0.2 ± 0.1	N/A	75 ± 44	N/A	N/A	368 ± 210	N/A				
PCB 201 (p)	7.62	0.9 ± 0.6	N/A	N/A	0.1 ± 0.1	N/A	80 ± 56	N/A	N/A	926 ± 801	N/A				
PCB 196/203 (p/p)	7.65	0.9 ± 0.6	N/A	N/A	0.1 ± 0.1*	N/A	82 ± 57	N/A	N/A	>1000	N/A				
PCB 195 (p)	7.56	1.0 ± 0.6	N/A	N/A	0.1 ± 0.1	N/A	69 ± 43	N/A	N/A	948 ± 749	N/A				
PCB 194 (p)	7.84	0.9 ± 0.6	N/A	N/A	0.3 ± 0.3	N/A	74 ± 48	N/A	N/A	209 ± 197	N/A				
PCB 208 (p)	7.71	1.3 ± 0.7	N/A	N/A	0.5 ± 0.2	N/A	52 ± 27	N/A	N/A	135 ± 49	N/A				
PCB 207 (p)	7.74	0.8 ± 0.6	N/A	N/A	0.4 ± 0.4	N/A	86 ± 65	N/A	N/A	162 ± 146	N/A				

PCB 206 (p)	8.09	0.9 ± 0.7	N/A	N/A	0.2 ± 0.3	N/A	77 ± 56	N/A	N/A	439 ± 904	N/A
PCB 209 (p)	8.18	1.8 ± 0.6	N/A	N/A	<0.1	N/A	39 ± 14	N/A	N/A	>1000	N/A

^a Elimination rate constants (k_2) and half-lives ($t_{1/2}$) calculated according to first order kinetics. See materials and methods for calculations.

^b Congeners categorized into metabolized (m) or persistent (p) based on chlorination pattern (23).

^c Log K_{ow} values from Hawker and Connell (24).

^d Experimental period in days with day 0 occurring June 21, 2003.

^e Elimination rate constant and half-life values denoted as N/A indicate no elimination observed during experimental sampling period.

* Standard errors calculated to be <0.1.

Supplemental Figure 1S: Dissolved oxygen profiles measured across duration of PCB elimination experiment. Values represented by the symbol (◆) denote dissolved oxygen concentration measured in mg/l with values represented by the symbol (x) indicating the dissolved oxygen concentration measured in percent saturation.

