

Table S4. Measured n-Alcohol/Water Partition Coefficients (K_{AW})

Chemical	n-Alcohol	Measurement Method ^{a, c}	log K_{AW} ^b					Concentration in n-alcohol phase	
			average	sd	n	minimum	maximum	mg/L	slope p value
Benzene	n-butanol	SS	1.92	0.022	5	1.89	1.94	1.64	10%
		SS	1.93	0.016	4	1.91	1.94	1.53	84%
		average	1.92	0.021	2				
Chlorobenzene	n-butanol	SS	2.44	0.012	5	2.42	2.46	0.97	3%
		SS	2.43	0.013	4	2.41	2.44	0.71	49%
		average	2.43	0.017	2				
Bromobenzene	n-butanol	SS	2.53	0.020	5	2.50	2.56	0.52	41%
		SS	2.54	0.017	4	2.53	2.57	0.51	100%
		average	2.53	0.024	2				
Naphthalene	n-butanol	SS	2.78	0.017	4	2.75	2.79	159	66%
		SS	2.74	0.031	4	2.69	2.77	141	72%
		SS	2.76	0.002	4	2.76	2.77	176	97%
		average	2.76	0.015	3				
Acenaphthene	n-butanol	SS	3.22	0.060	4	3.17	3.31	27.6	49%
		SS	3.19	0.011	5	3.17	3.20	29.6	24%
		average	3.21	0.035	2				
Fluorene	n-butanol	SS	3.28	0.044	4	3.24	3.34	8.35	47%
		SS	3.28	0.014	5	3.27	3.31	9.09	40%
		average	3.28	0.024	2				
Phenanthrene	n-butanol	SS	3.47	0.020	4	3.45	3.49	10.8	25%
		SS	3.45	0.010	4	3.44	3.46	10.2	94%
		average	3.46	0.013	2				
Anthracene	n-butanol	SS	3.54	0.010	4	3.53	3.55	3.34	90%
		SS	3.54	0.010	4	3.53	3.55	3.25	33%

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			average	sd	n	minimum	maximum	mg/L	
PCB 1	n-butanol	SS	3.61	0.101	4	3.54	3.76	1.26	97%
		average	3.56	0.055	3				
		SS	3.59	0.025	6	3.55	3.61	0.774	58%
		SS	3.60	0.099	4	3.47	3.69	0.622	74%
Fluoranthene	n-butanol	SS	3.73	0.087	4	3.62	3.82	0.821	40%
		average	3.64	0.055	3				
		SS	3.72	0.057	4	3.67	3.80	26.9	18%
		SS	3.78	0.060	4	3.71	3.86	27.2	100%
Pyrene	n-butanol	SS	3.69	0.287	4	3.34	3.95	20.2	58%
		average	3.73	0.132	3				
		SS	3.72	0.037	4	3.70	3.78	23.3	79%
		SS	3.79	0.047	4	3.75	3.85	24.9	98%
Chrysene	n-butanol	SS	3.69	0.119	6	3.55	3.85	38.6	40%
		average	3.74	0.053	3				
		SS	4.06	0.014	6	4.04	4.08	75.3	72%
		SS	4.06	0.024	6	4.04	4.10	70.4	49%
Benz[a]anthracene	n-butanol	SS	4.08	0.015	5	4.06	4.10	31.7	57%
		SS	4.10	0.023	5	4.07	4.13	36.2	12%
		average	4.07	0.019	4				
		SS	4.09	0.012	6	4.07	4.10	70.2	100%
Benz[a]anthracene	n-butanol	SS	4.12	0.034	6	4.08	4.16	73.5	96%
		SS	4.12	0.023	5	4.10	4.15	32.5	94%
		SS	4.13	0.023	5	4.11	4.16	34.8	13%
		average	4.11	0.019	4				
	n-octanol	SS	5.77	0.177	4	5.57	5.93	125	64%

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			average	sd	n	minimum	maximum	mg/L	slope p value
		SS	5.75	0.109	4	5.68	5.92	113	96%
		average	5.76	0.143	2.00				
Hexachlorobenzene	n-butanol	SS	4.19	0.010	4	4.18	4.20	2.18	86%
Benzo[g,h,i]perylene	n-butanol	SS	4.31	0.45	5	3.90	5.07	11.5	76%
		SS	4.14	0.12	6	4.00	4.34	19.8	59%
		SS	4.20	0.13	6	3.99	4.35	19.2	87%
		average	4.21	0.195	3				
Indeno(1,2,3-cd)pyrene	n-butanol	SS	4.21	0.292	4	3.91	4.50	7.85	55%
		SS	4.26	0.047	5	4.19	4.32	16.9	31%
		SS	4.21	0.005	4	4.21	4.22	16.9	49%
		average	4.23	0.163	3				
Benzo[a]pyrene	n-butanol	SS	4.26	0.034	6	4.22	4.32	106	56%
		SS	4.30	0.064	6	4.22	4.39	98.7	83%
		SS	4.25	0.027	5	4.22	4.28	45.9	97%
		SS	4.29	0.014	5	4.27	4.31	50.1	13%
	average	4.28	0.026	4					
	n-octanol	SS	6.80	0.157	5	6.64	7.01	124	91%
	SS	6.74	0.207	5	6.55	7.00	127	55%	
	average	6.77	0.210	2					
PCB 77	n-butanol	SS	4.69	0.045	5	4.62	4.73	1.23	93%
		SS	4.66	0.033	4	4.62	4.70	101	56%
		SS	4.67	0.050	4	4.61	4.73	99	63%
		average	4.68	0.043	3				
PCB 155	n-butanol	SS	4.84	0.042	6	4.76	4.87	1.34	70%

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			average	sd	n	minimum	maximum	mg/L	slope p value
		SS	4.67	0.117	5	4.47	4.78	70.6	85%
		SS	4.64	0.207	5	4.35	4.92	70.9	61%
		average	4.72	0.096	3				
Di- <i>n</i> -hexyl phthalate	n-butanol	SS	4.91	0.027	4	4.87	4.93	208	34%
		SS	4.90	0.059	4	4.83	4.96	220	89%
		average	4.91	0.037	2				
PCB 209	n-butanol	SS	5.18	0.077	7	5.06	5.33	100	23%
		SS	5.15	0.041	6	5.11	5.23	44.6	27%
		SS	5.19	0.016	6	5.17	5.20	22.9	48%
		SS	5.25	0.052	6	5.19	5.35	5.17	94%
		SS	5.23	0.050	6	5.19	5.32	31.5	89%
	average	5.20	0.036	5					
	n-octanol	SS	8.24	0.107	5	8.08	8.32	233	46%
		SS	8.10	0.097	5	7.99	8.22	226	98%
		GC	8.25	0.132	18	7.92	8.46	141	NA ^d
		GC	8.12	0.121	14	7.94	8.33	247	NA
average		8.18	0.115	4					
Decabromodiphenyl ether	n-butanol	SS	5.45	0.071	4	5.37	5.59	8.93	9%
		SS	5.47	0.021	5	5.44	5.44	8.74	9%
		SS	5.55	0.094	6	5.41	5.63	5.67	42%
		SS	5.42	0.027	4	5.39	5.44	2.39	40%
		average	5.47	0.041	4				
	n-octanol	GC	8.43	0.159	31	8.00	8.67	39.7	NA
		GC	8.31	0.280	22	7.90	8.79	60.3	NA
		average	8.37	0.208	2				

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Di- <i>n</i> -octyl phthalate	n-butanol	SS	5.51	0.017	4	5.48	5.52	125	36%
		SS	5.52	0.064	4	5.47	5.59	126	50%
		average	5.52	0.035	2				
Decabromodiphenyl ethane	n-butanol	SS	5.57	0.221	5	5.34	5.81	0.219	94%
		SS	5.63	0.102	5	5.48	5.75	0.273	98%
		average	5.60	0.138	2				
Tetradecachloro- <i>m</i> -terphenyl	n-butanol	SS	5.82	0.051	4	5.75	5.88	6.17	63%
		SS	5.78	0.141	4	5.58	5.90	5.65	69%
		SS	5.77	0.028	4	5.75	5.81	1.79	20%
		SS	5.76	0.017	4	5.75	5.78	1.62	12%
		average	5.78	0.056	4				
Tetradecachloro- <i>p</i> -terphenyl	n-butanol	SS	5.87	0.065	5	5.80	5.94	1.34	75%
		SS	5.82	0.076	4	5.71	5.88	0.475	55%
		SS	5.75	0.209	5	5.42	5.92	0.0686	33%
		SS	5.84	0.054	5	5.79	5.93	0.0744	89%
		average	5.82	0.080	4				
Di- <i>n</i> -decyl phthalate	n-butanol	SS	5.93	0.036	4	5.89	5.97	207	83%
		SS	5.97	0.056	4	5.92	6.04	190	25%
		average	5.95	0.047	2				
TBPH	n-butanol	SS	6.21	0.115	6	6.08	6.42	231	50%
		SS	6.21	0.239	6	5.92	6.59	310	18%
		average	6.21	0.154	2				
	n-octanol	SS	9.26	0.326	5	8.75	9.60	556	93%
		SS	9.17	0.135	5	9.00	9.36	570	73%

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			average	sd	n	minimum	maximum	mg/L	
		average	9.21	0.191	2				
Octadecachloroquaterphenyl	n-butanol	SS	6.42	0.100	5	6.33	6.55	1.13	40%
		SS	6.49	0.150	5	6.34	6.72	0.152	51%
		SS	6.51	0.186	5	6.31	6.77	0.160	23%
		average	6.47	0.132	3				

^a Measurement methods: SS = Slow Stir, GC = Generator Column

^b sd = standard deviation, n = count, minimum value, maximum value

^c Chemical Averages: average, standard deviation computed using propagation of error formulas, n = count

^d NA = Not applicable