SUPPORTING INFORMATION (SI)
FOR:

ASSESSMENT OF PDMS-WATER PARTITION COEFFICIENTS: IMPLICATIONS FOR PASSIVE ENVIRONMENTAL SAMPLING OF HYDROPHOBIC ORGANIC COMPOUNDS

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Table SI-1.
Compilation of log K_f data for PDMS-water systems from published literature

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]									
Polycyclic Aromatic Hydrocarbons (PAHs)														
Naphthalene	3.3 [44]	Fresh	20	Supelco 100	**3.25** [12]	**2.82** [13]								
				Supelco 7	**3.26** [12]									
				Polymicro 30	3.20 [20]									
				Silastic A[g]	**2.98** [55]									
				SR Batch 0[g]	**2.88** [55]									
				SR-Red[g]	**3.04** [55]									
				Sr-TF[g]	**2.90** [55]									
				AlteSil[g]	**3.03** [55]	**3.02** [55]	**3.03** [55]							
			25	Supelco 100	3.02 [14]	2.85 [15, e]	**3.34** [19]							
				Supelco 7	**3.09** [42, e]	**2.91** [10, e]	**2.71** [15, e]							
				Polymicro 15	**3.01** [16, e]									
				PDMS Sheet[f]	**2.75** [17]	**2.85** [17]								
Fluorene	4.18 [44]	Fresh	20	Supleco 100	3.63 [12]									
				Polymicro 30	3.76 [20]	**3.60** [21]	**3.60** [21]	**3.60** [21]	**3.60** [21]					
				Silastic A[g]	**3.69** [55]									
				SR Batch 0[g]	**3.56** [55]									
				SR-Red[g]	**3.79** [55]									
				Sr-TF[g]	**3.58** [55]									
				AlteSil[g]	**3.78** [55]	**3.79** [55]	**3.79** [55]							
			25	Supleco 100	3.71 [14]	**3.65** [19]								
				Supelco 7	**3.69** [42, e]	**3.72** [10, e]								
Phenanthrene	4.46 [44]	Fresh	5	Polymicro 30	3.93 [53]									
			13	Polymicro 30	3.86 [53]									
			20	Polymicro 30	3.95 [20]	**3.86** [21]	**3.84** [21]	**3.84** [21]	**3.84** [21]	3.86 [23]	**3.73** [23]	3.83 [24]	3.88 [24]	3.84 [24]
				Polymicro 30	3.80 [49]	3.73 [53]	**3.86** [54]	**3.70** [32]						
				Supelco 100	3.85 [13]									
				Silastic A[g]	**4.00** [55]									

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (μm)	log K_f[d]
Phenanthrene (cont.)	4.46[44]	Fresh	20	SR Batch 0[g]	**3.84**[55]
				SR-Red[g]	**4.09**[55]
				Sr-TF[g]	**3.83**[55]
				AlteSil[g]	**4.11**[55] **4.10**[55] **4.11**[55]
			25	Supleco 100	**3.45**[3] **4.45**[4] **3.90**[6] 3.96[14] 3.41[15, e]
				Supelco 30	**4.10**[6]
				Supelco 7	**3.25**[3] **4.32**[6] **4.01**[42, e] **3.98**[10, e] 4.42[15, e]
				Fiberguide 15	**3.48**[8]
				FIberguide 10	**3.77**[9, e] **4.06**[22, e]
				Polymicro 35	3.66[7]
				PDMS Sheet[f]	**3.74**[17] **3.87**[17]
			30	PolyMicro 30	3.69[53]
Anthracene	4.45[44]	Fresh	5	Polymicro 30	4.03[53]
			13	Polymicro 30	3.95[53]
			20	Supleco 100	**4.31**[12]
				Supelco 7	**4.38**[12]
				Polymicro 30	4.16[20] 3.84[24] 3.83[49] 3.83[53] **3.82**[32]
				Silastic A[g]	**4.08**[55]
				SR Batch 0[g]	**3.92**[55]
				SR-Red[g]	**4.18**[55]
				Sr-TF[g]	**3.91**[55]
				AlteSil[g]	**4.21**[55] **4.20**[55] **4.21**[55]
			25	Supleco 100	**3.46**[3] 3.98[14] 3.14[15, e] **4.12**[19]
				Supelco 7	**3.20**[3] **4.13**[42, e] **4.17**[10, e] 3.97[15, e]
				Polymicro 15	4.10[16, e]
				Fiberguide 10	**4.19**[22, e]
				PDMS Sheet[f]	**3.93**[17] **3.98**[17]
			30	Polymicro 30	3.78[53]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters			log K_f [d]									
		Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)										
Fluoranthene	5.16 [44]	Fresh	5	Polymicro 30	4.43 [53]									
			13	Polymicro 30	4.32 [53]									
			20	Supleco 100	**4.45** [12]									
				Supelco 7	**4.63** [12]									
				Polymicro 30	4.60 [20]	**4.25** [21]	**4.26** [21]	**4.24** [21]	**4.25** [21]	4.40 [23]	**4.18** [23]	4.26 [24]	4.35 [24]	4.20 [24]
				Polymicro 30	4.20 [49]	4.20 [53]	**4.40** [54]	**4.16** [32]						
				Silastic A[g]	**4.49** [55]									
				SR Batch 0[g]	**4.30** [55]									
				SR-Red[g]	**4.58** [55]									
				Sr-TF[g]	**4.29** [55]									
				AlteSil[g]	**4.62** [55]	**4.62** [55]	**4.61** [55]							
			25	Supleco 100	**3.79** [3]	**4.26** [6]	4.71 [14]	4.11 [15, e]						
				Supelco 30	**4.55** [6]									
				Supelco 7	**3.72** [3]	**4.69** [6]	**4.47** [42, e]	**4.52** [10, e]	4.38 [15, e]					
				Fiberguide 15	**4.09** [8]	**4.26** [8]								
				Fiberguide 10	**4.63** [22, e]									
				PDMS Sheet[f]	**4.21** [17]	**4.32** [17]								
			30	Polymicro 30	4.10 [53]									
Pyrene	4.88 [44]	Fresh	5	Polymicro 30	4.53 [53]									
			13	Polymicro 30	4.41 [53]									
			20	Supleco 100	**4.49** [12]	4.49 [13]								
				Supelco 7	**4.68** [12]									
				Polymicro 30	4.61 [20]	**4.36** [21]	**4.35** [21]	**4.34** [21]	**4.34** [21]	4.41 [23]	**4.22** [23]	4.32 [24]	4.41 [24]	4.27 [24]
				Polymicro 30	4.27 [49]	4.28 [53]	**4.41** [54]	**4.25** [32]						
				Silastic A[g]	**4.56** [55]									
				SR Batch 0[g]	**4.38** [55]									
				SR-Red[g]	**4.64** [55]									
				Sr-TF[g]	**4.38** [55]									
				AlteSil[g]	**4.69** [55]	**4.67** [55]	**4.67** [55]							

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (μm)	log K_f [d]
Pyrene (cont.)	4.88 [44]	Fresh	25	Supleco 100	**3.82** [3] 4.86 [14] 4.07 [15, e] **4.40** [19]
				Supelco 7	**3.80** [3] **4.62** [42, e] **4.63** [10, e] 4.44 [15, e]
				Fiberguide 10	**4.73** [22, e]
				PDMS Sheet[f]	**4.27** [17] **4.36** [17]
			30	Polymicro 30	4.18 [53]
Chrysene	5.73 [44]	Fresh	5	Polymicro 30	4.98 [53]
			13	Polymicro 30	4.85 [53]
			20	Polymicro 30	4.98 [20] 4.69 [24] 4.69 [49] 4.70 [53] **4.68** [32]
				Silastic A[g]	**5.09** [55]
				SR Batch 0[g]	**4.81** [55]
				SR-Red[g]	**5.21** [55]
				Sr-TF[g]	**4.80** [55]
				AlteSil[g]	**5.26** [55] **5.25** [55] **5.24** [55]
			25	Supleco 100	5.69 [14] 3.97 [15, e]
				Supelco 7	**4.84** [42, e] **4.92** [10, e] 4.72 [15, e]
				Fiberguide 10	**5.33** [22, e]
				PDMS Sheet[f]	**4.81** [17] **4.74** [17]
			30	Polymicro 30	4.59 [53]
Benzo[*a*]pyrene	5.97 [44]	Fresh	5	Polymicro 30	5.54 [53]
			13	Polymicro 30	5.41 [53]
			20	Supleco 100	**4.99** [12]
				Supelco 7	**5.27** [12]
				Polymicro 30	5.24 [24] 5.39 [20] 5.24 [49] 5.22 [53] **5.18** [32]
				Silastic A[g]	**5.55** [55]
				SR Batch 0[g]	**5.22** [55]
				SR-Red[g]	**5.65** [55]
				Sr-TF[g]	**5.22** [55]
				AlteSil[g]	**5.71** [55] **5.70** [55] **5.67** [55]

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]									
Benzo[*a*]pyrene (cont.)	5.97 [44]	Fresh	25	Supleco 100	4.14 [3]	**4.95** [4]	**5.82** [6]	5.39 [14]	3.47 [15, e]					
				Supelco 30	**6.06** [6]									
				Supelco 7	**4.66** [3]	**6.06** [6]	**4.90** [42, e]	**5.19** [10, e]	4.26 [15, e]					
				Polymicro 15	4.86 [16, e]									
				Fiberguide 10	**5.22** [22, e]									
				PDMS Sheet[f]	**5.36** [17]	**5.09** [17]								
			30	Polymicro 30	5.09 [53]									
Benzo[*a*]anthracene	5.79 [44]	Fresh	5	Polymicro 30	5.04 [53]									
			13	Polymicro 30	4.92 [53]									
			20	Polymicro 30	5.15 [20]	4.92 [23]	**4.59** [23]	4.77 [24]	4.92 [24]	4.77 [24]	4.77 [49]	4.78 [53]	**4.92** [54]	**4.75** [32]
				Silastic A[g]	**5.14** [55]									
				SR Batch 0[g]	**4.85** [55]									
				SR-Red[g]	**5.27** [55]									
				Sr-TF[g]	**4.84** [55]									
				AlteSil[g]	**5.34** [55]	**5.31** [55]	**5.31** [55]							
			25	Supleco 100	5.26 [14]	3.83 [15, e]								
				Supelco 7	4.46 [15, e]									
				Polymicro 15	4.96 [16, e]									
				Fiberguide 10	**5.41** [22, e]									
				PDMS Sheet[f]	**4.90** [17]	**4.85** [17]								
			30	Polymicro 30	4.68 [53]									
Benzo[*b*]fluoranthene	5.78 [44]	Fresh	5	Polymicro 30	5.49 [53]									
			13	Polymicro 30	5.37 [53]									
			20	Polymicro 30	5.18 [20]	5.28 [23]	**4.77** [23]	5.23 [24]	5.36 [24]	5.21 [24]	5.21 [49]	5.18 [53]	**5.28** [54]	**5.15** [32]
			25	Supleco 100	5.17 [14]									
				Fiberguide 10	**5.64** [22, e]									
			30	Polymicro 30	5.05 [53]									
Benzo[*k*]fluoranthene	5.91 [45]	Fresh	5	Polymicro 30	5.52 [53]									
			13	Polymicro 30	5.41 [53]									

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f [d]							
Benzo[*k*]fluoranthene (cont.)	5.91 [45]	Fresh	20	Polymicro 30	5.19 [20]	5.29 [23]	5.23 [24]	5.25 [24]	5.37 [24]	5.25 [49]	5.23 [53]	**5.19** [32]
			25	Supleco 100	5.33 [14]							
				Fiberguide 10	**5.86** [22, e]							
			30	Polymicro 30	5.11 [53]							
Benzo[*e*]pyrene	6.44 [44]	Fresh	13	Polymicro 30	5.30 [53]							
			20	Polymicro 30	5.41 [20]	**5.10** [21]	**5.09** [21]	**5.09** [21]	**5.12** [21]	5.11 [49]	5.12 [53]	**5.09** [32]
			30	Polymicro 30	4.99 [53]							
Indeno[1,2,3-*cd*]pyrene	7.66 [52]	Fresh	5	Polymicro 30	5.86 [53]							
			13	Polymicro 30	5.86 [53]							
			20	Polymicro 30	5.33 [20]	5.64 [49]	5.63 [53]	**5.51** [32]				
				Silastic A[g]	**5.95** [55]							
				SR Batch 0[g]	**5.58** [55]							
				SR-Red[g]	**6.03** [55]							
				Sr-TF[g]	**5.59** [55]							
				AlteSil[g]	**6.06** [55]	**6.08** [55]	**6.03** [55]					
			25	Supelco 100	4.43 [14]							
			30	Polymicro 30	5.51 [53]							
Benzo[*ghi*]perylene	6.90 [52]	Fresh	13	Polymicro 30	5.80 [53]							
			20	Polymicro 30	5.02 [20]	5.39 [23]	5.50 [24]	5.08 [24]	5.61 [49]	5.61 [53]	**5.39** [54]	**5.52** [32]
				Silastic A[g]	**5.92** [55]							
				SR Batch 0[g]	**5.60** [55]							
				SR-Red[g]	**5.98** [55]							
				Sr-TF[g]	**5.60** [55]							
				AlteSil[g]	**6.03** [55]	**6.04** [55]	**6.00** [55]					
			25	Supelco 100	4.28 [14]							
				PDMS Sheet[f]	**5.36** [17]							
			30	Polymicro 30	5.47 [53]							
Acenaphthylene	4.08 [44]	Fresh	20	Silastic A[g]	**3.18** [55]							
				SR Batch 0[g]	**3.05** [55]							

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f [d]		
Acenaphthylene (cont.)	4.08 [44]	Fresh	20	SR-Red[g]	**3.26** [55]		
				Sr-TF[g]	**3.07** [55]		
				AlteSil[g]	**3.26** [55]	**3.25** [55]	**3.27** [55]
			25	Supelco 100	3.40 [14]		
Acenaphthene	3.92 [44]	Fresh	20	Silastic A[g]	**3.56** [55]		
				SR Batch 0[g]	**3.44** [55]		
				SR-Red[g]	3.62 [55]		
				Sr-TF[g]	**3.45** [55]		
				AlteSil[g]	**3.62** [55]	**3.61** [55]	**3.62** [55]
			25	Supelco 100	3.63 [14]	**3.54** [19]	
				PDMS Sheet[f]	**3.46** [17]	**3.46** [17]	
Dibenzo[*a,c*]anthracene	6.17 [52]	Fresh	25	PDMS Sheet[f]	**5.41** [17]		
Dibenzo[*a,h*]anthracene	6.75 [52]	Fresh	13	Polymicro 30	5.69 [53]		
			20	Polymicro 30	5.52 [49]	5.52 [53]	**5.42** [32]
				Silastic A[g]	**6.08** [55]		
				SR Batch 0[g]	**5.69** [55]		
				SR-Red[g]	**6.19** [55]		
				Sr-TF[g]	**5.68** [55]		
				AlteSil[g]	**6.24** [55]	**6.26** [55]	**6.21** [55]
			25	Polymicro 30	4.83 [24]		
				Supelco 100	4.86 [14]		
				PDMS Sheet[f]	**5.47** [17]		
			30	Polymicro 30	5.50 [53]		

Table SI-1. (cont.)

Compound	$\log K_{ow}$ [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	$\log K_f$ [d]
Polychlorinated Biphenyls (PCBs)[i]					
PCB 1	4.46 [50]	Fresh	20	Supelco 100	3.97 [13]
			25	Supelco 100	**4.09** [25]
				Supelco 7	**4.01** [10, e] **4.45** [10, e] **4.44** [25] **4.03** [10, e]
PCB 2	4.69 [50]	Fresh	20	Polymicro 100	**4.14** [26]
				Polymicro 30	**4.18** [26]
				Polymicro 7	**4.09** [26]
PCB 3	4.69 [50]	Fresh	25	Polymicro 15	4.94 [16, e]
PCB 4	4.65 [50]	Fresh	20	Silastic A[g]	**4.56** [55]
				SR Batch 0[g]	**4.38** [55]
				SR-Red[g]	**4.58** [55]
				Sr-TF[g]	**4.39** [55]
				AlteSil[g]	**4.58** [55] **4.59** [55] **4.59** [55]
PCB 5	4.97 [50]	Fresh	25	Polymicro 15	4.89 [16, e]
PCB 8	5.07 [50]	Fresh	25	Supelco 100	4.09 [27, e] 4.04 [28, e]
				Supelco 7	4.51 [27, e]
PCB 10	4.84 [50]	Fresh	20	Silastic A[g]	**4.53** [55]
				SR Batch 0[g]	**4.37** [55]
				SR-Red[g]	**4.54** [55]
				Sr-TF[g]	**4.38** [55]
				AlteSil[g]	**4.55** [55] **4.55** [55] **4.55** [55]
PCB 14	5.28 [50]	Fresh	20	Polymicro 100	**4.87** [26]
				Polymicro 30	**4.94** [26]
				Polymicro 7	**4.86** [26]
				Silastic A[g]	**4.99** [55]
				SR Batch 0[g]	**4.82** [55]
				SR-Red[g]	**5.11** [55]
				Sr-TF[g]	**4.82** [55]
				AlteSil[g]	**5.15** [55] **5.13** [55] **5.13** [55]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater [a]	Temp [b] (°C)	PDMS Source [c] & Coating Thickness (µm)	log K_f [d]
PCB 15	5.30 [50]	Fresh	20	Supelco 100	4.59 [13]
			25	Supelco 100	**4.83** [25]
				Supelco 7	**4.63** [10, e] **4.55** [10, e] **5.11** [25] **4.65** [10, e]
PCB 17	5.25 [50]	Fresh	25	FiberGuide 10	**4.85** [29]
PCB 18	5.24 [50]	Fresh	20	Polymicro 100	**5.11** [26]
				Polymicro 30	**5.13** [26]
				Polymicro 7	**5.05** [26]
				Silastic A [g]	**5.17** [55]
				SR Batch 0 [g]	**4.99** [55]
				SR-Red [g]	**5.21** [55]
				Sr-TF [g]	**4.99** [55]
				AlteSil [g]	**5.24** [55] **5.23** [55] **5.23** [55]
			25	Supelco 100	4.03 [27, e] 4.00 [28, e]
				Supelco 7	4.51 [27, e]
			25	Fiberguide 10	**4.96** [29]
		Seawater	20	Supelco 100	**5.11** [2] **4.97** [2]
PCB 21	5.51 [50]	Fresh	20	Silastic A [g]	**5.34** [55]
				SR Batch 0 [g]	**5.13** [55]
				SR-Red [g]	**5.41** [55]
				Sr-TF [g]	**5.13** [55]
				AlteSil [g]	**5.43** [55] **5.43** [55] **5.43** [55]
PCB 28	5.67 [50]	Fresh	20	Supelco 100	5.03 [13]
				Polymicro 100	**5.24** [26]
				Polymicro 30	**5.34** [26] **5.36** [54]
				Silastic A [g]	**5.42** [55]
				SR Batch 0 [g]	**5.23** [55]
				SR-Red [g]	**5.50** [55]
				Sr-TF [g]	**5.23** [55]
				AlteSil [g]	**5.54** [55] **5.53** [55] **5.52** [55]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater [a]	Temp [b] (°C)	PDMS Source [c] & Coating Thickness (µm)	log K_f [d]
PCB 28 (cont.)	5.67 [50]	Fresh	25	Polymicro 7	**5.27** [26]
				Supelco 100	4.76 [3] 3.88 [27, e] **5.18** [25] 3.94 [28, e]
				Supelco 7	**4.94** [10, e] **4.71** [10, e] **4.65** [3] 4.55 [27, e] **5.47** [25] **5.04** [10, e]
				PDMS Trap [f]	**4.59** [30, e] **4.67** [30, e]
		Seawater	20	Supelco 100	**5.24** [2] **5.13** [2]
PCB 29	5.60 [50]	Fresh	20	Silastic A [g]	**5.33** [55]
				SR Batch 0 [g]	**5.16** [55]
				SR-Red [g]	**5.40** [55]
				Sr-TF [g]	**5.16** [55]
				AlteSil [g]	**5.44** [55] **5.43** [55] **5.42** [55]
PCB 30	5.44 [50]	Fresh	20	Silastic A [g]	**5.20** [55]
				SR Batch 0 [g]	**5.05** [55]
				SR-Red [g]	**5.22** [55]
				Sr-TF [g]	**5.06** [55]
				AlteSil [g]	**5.25** [55] **5.24** [55] **5.24** [55]
PCB 31	5.67 [50]	Fresh	20	Silastic A [g]	**5.38** [55]
				SR Batch 0 [g]	**5.20** [55]
				SR-Red [g]	**5.46** [55]
				Sr-TF [g]	**5.20** [55]
				AlteSil [g]	**5.50** [55] **5.49** [55] **5.48** [55]
PCB 35	5.82 [50]	Fresh	20	Polymicro 100	**5.29** [26]
				Polymicro 30	**5.30** [26]
				Polymicro 7	**5.23** [26]
PCB 37	5.83 [50]	Seawater	20	Supelco 100	**5.30** [2] **5.15** [2]
PCB 44	5.75 [50]	Fresh	20	Silastic A [g]	**5.73** [55]
				SR Batch 0 [g]	**5.53** [55]
				SR-Red [g]	**5.79** [55]
				Sr-TF [g]	**5.52** [55]
				AlteSil [g]	**5.82** [55] **5.82** [55] **5.81** [55]

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]
PCB 44 (cont.)	5.75 [50]	Fresh	25	Supelco 100	3.80 [27, e] 3.89 [28, e]
				Supelco 7	4.75 [27, e]
				Fiberguide 10	**5.27** [29]
		Seawater	20	Supelco 100	**5.49** [2] **5.32** [2]
PCB 47	5.85 [50]	Fresh	20	Silastic A[g]	**5.70** [55]
				SR Batch 0[g]	**5.52** [55]
				SR-Red[g]	**5.76** [55]
				Sr-TF[g]	**5.53** [55]
				AlteSil[g]	**5.79** [55] **5.79** [55] **5.79** [55]
			25	Supelco 100	**5.64** [25]
				Supelco 7	**5.86** [25]
PCB 49	5.85 [50]	Fresh	20	Silastic A[g]	**5.79** [55]
				SR Batch 0[g]	**5.60** [55]
				SR-Red[g]	**5.85** [55]
				Sr-TF[g]	**5.61** [55]
				AlteSil[g]	**5.89** [55] **5.88** [55] **5.86** [55]
			25	Fiberguide 10	**5.28** [29]
		Seawater	20	Supelco 100	**5.52** [2] **5.34** [2]
PCB 50	5.63 [50]	Fresh	20	Silastic A[g]	**5.67** [55]
				SR Batch 0[g]	**5.50** [55]
				SR-Red[g]	**5.68** [55]
				Sr-TF[g]	**5.51** [55]
				AlteSil[g]	**5.71** [55] **5.70** [55] **5.69** [55]
PCB 52	5.84 [50]	Fresh	20	Supelco 100	5.40 [13]
				Polymicro 100	**5.60** [26]
				Polymicro 30	**5.65** [26] **5.59** [54]
				Polymicro 7	**5.58** [26]
				Silastic A[g]	**5.72** [55]
				SR Batch 0[g]	**5.54** [55]

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]
PCB 52 (cont.)	5.84 [50]	Fresh	20	SR-Red[g]	**5.77** [55]
				Sr-TF[g]	**5.54** [55]
				AlteSil[g]	**5.82** [55] **5.81** [55] **5.79** [55]
			25	Supelco 100	5.14 [3] 3.87 [27, e] **5.52** [6] 3.86 [28, e] **5.30** [4]
				Supelco 30	**5.71** [6]
				Supelco 7	5.21 [10, e] **4.48** [10, e] **4.98** [3] 4.67 [27, e] **5.66** [6] **5.55** [10, e]
				Polymicro 35	5.04 [7]
				Fiberguide 15	**5.30** [8] **5.38** [8]
				Fiberguide 10	**5.37** [29]
				PDMS Trap[f]	**5.45** [30, e] **5.11** [30, e]
		Seawater	20	Supelco 100	**5.50** [2] **5.32** [2]
PCB 55	6.11 [50]	Fresh	20	Silastic A[g]	**5.87** [55]
				SR Batch 0[g]	**5.65** [55]
				SR-Red[g]	**5.97** [55]
				Sr-TF[g]	**5.65** [55]
				AlteSil[g]	**6.01** [55] **6.01** [55] **5.98** [55]
PCB 56	6.11 [50]	Fresh	20	Silastic A[g]	**5.92** [55]
				SR Batch 0[g]	**5.71** [55]
				SR-Red[g]	**6.01** [55]
				Sr-TF[g]	**5.71** [55]
				AlteSil[g]	**6.05** [55] **6.05** [55] **6.02** [55]
PCB 65	5.86 [50]	Fresh	25	Fiberguide 15	**5.30** [8] **5.35** [8]
		Seawater	20	Supelco 100	**5.59** [2] **5.38** [2]
PCB 66	6.20 [50]	Fresh	20	Silastic A[g]	**5.90** [55]
				SR Batch 0[g]	**5.69** [55]
				SR-Red[g]	**6.00** [55]
				Sr-TF[g]	**5.69** [55]
				AlteSil[g]	**6.05** [55] **6.04** [55] **6.01** [55]
			25	Supelco 100	3.88 [27, e] 3.93 [28, e]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters			log K_f [d]
		Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	
PCB 72	6.26 [50]	Fresh	20	Polymicro 100	**5.83** [26]
				Polymicro 30	**5.86** [26]
				Polymicro 7	**5.78** [26]
PCB 74	6.20 [50]	Fresh	25	Fiberguide 10	**5.30** [29]
		Seawater	20	Supelco 100	**5.52** [2] **5.41** [2]
PCB 77	6.36 [50]	Fresh	20	Polymicro 100	**5.57** [26]
				Polymicro 30	**5.67** [26]
				Polymicro 7	**5.61** [26]
			25	Supelco 100	3.83 [27, e] 3.92 [28, e] **5.81** [4]
				Supelco 7	4.92 [27, e] **4.78** [11, e]
		Seawater	20	Supelco 100	**5.81** [2] **5.73** [2]
PCB 78	6.35 [50]	Fresh	20	Silastic A[g]	**5.86** [55]
				SR Batch 0[g]	**5.65** [55]
				SR-Red[g]	**6.03** [55]
				Sr-TF[g]	**5.67** [55]
				AlteSil[g]	**6.07** [55] **6.07** [55] **6.02** [55]
PCB 81	6.36 [50]	Seawater	20	Supelco 100	**5.62** [2] **5.43** [2]
PCB 85	6.30 [50]	Fresh	20	Silastic A[g]	**6.14** [55]
				SR Batch 0[g]	**5.93** [55]
				SR-Red[g]	**6.21** [55]
				Sr-TF[g]	**5.93** [55]
				AlteSil[g]	**6.26** [55] **6.25** [55] **6.22** [55]
PCB 87	6.29 [50]	Fresh	20	Silastic A[g]	**6.24** [55]
				SR Batch 0[g]	**6.04** [55]
				SR-Red[g]	**6.31** [55]
				Sr-TF[g]	**6.04** [55]
				AlteSil[g]	**6.36** [55] **6.35** [55] **6.33** [55]
		Seawater	20	Supelco 100	**5.59** [2] **5.46** [2]

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]			
PCB 97	6.29 [50]	Fresh	20	Silastic A[g]	**6.12** [55]			
				SR Batch 0[g]	**5.92** [55]			
				SR-Red[g]	**6.18** [55]			
				Sr-TF[g]	**5.93** [55]			
				AlteSil[g]	**6.22** [55]	**6.22** [55]	**6.19** [55]	
PCB 99	6.39 [50]	Fresh	20	Silastic A[g]	**6.28** [55]			
				SR Batch 0[g]	**6.09** [55]			
				SR-Red[g]	**6.34** [55]			
				Sr-TF[g]	**6.10** [55]			
				AlteSil[g]	**6.39** [55]	**6.38** [55]	**6.35** [55]	
		Seawater	20	Supelco 100	**5.57** [2]	**5.45** [2]		
PCB 101	6.38 [50]	Fresh	20	Polymicro 100	**6.06** [26]			
				Polymicro 30	**6.14** [26]	**6.07** [54]		
				Polymicro 7	**6.07** [26]			
				Silastic A[g]	**6.19** [55]			
				SR Batch 0[g]	**6.01** [55]			
				SR-Red[g]	**6.25** [55]			
				Sr-TF[g]	**6.01** [55]			
				AlteSil[g]	**6.29** [55]	**6.28** [55]	**6.26** [55]	
			25	Supelco 100	5.48 [3]	3.56 [27, e]	**6.08** [25]	3.57 [28, e]
				Supelco 7	5.48 [3]	4.56 [27, e]	**6.21** [25]	
				Fiberguide 15	**5.58** [8]	**5.71** [8]		
				Fiberguide 10	**5.30** [29]			
				PDMS Trap[f]	**6.71** [30, e]			
		Seawater	20	Supelco 100	**5.61** [2]	**5.47** [2]		

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]		
PCB 104	5.81 [50]	Fresh	20	Silastic A[g]	**6.16** [55]		
				SR Batch 0[g]	**6.01** [55]		
				SR-Red[g]	**6.15** [55]		
				Sr-TF[g]	**6.01** [55]		
				AlteSil[g]	**6.18** [55]	**6.17** [55]	**6.16** [55]
PCB 105	6.65 [50]	Fresh	20	Silastic A[g]	**6.29** [55]		
				SR Batch 0[g]	**6.06** [55]		
				SR-Red[g]	**6.39** [55]		
				Sr-TF[g]	**6.07** [55]		
				AlteSil[g]	**6.44** [55]	**6.43** [55]	**6.40** [55]
			25	Supelco 100	3.42 [27, e]	3.49 [28, e]	
				Supelco 7	4.56 [27, e]		
				Fiberguide 15	**5.69** [8]	**5.89** [8]	
		Seawater	20	Supelco 100	**5.74** [2]	**5.54** [2]	
PCB 110	6.48 [50]	Fresh	20	Silastic A[g]	**6.22** [55]		
				SR Batch 0[g]	**6.01** [55]		
				SR-Red[g]	**6.27** [55]		
				Sr-TF[g]	**6.02** [55]		
				AlteSil[g]	**6.32** [55]	**6.31** [55]	**6.28** [55]
			25	Fiberguide 10	**5.31** [29]		
		Seawater	20	Supelco 100	**5.58** [2]	**5.42** [2]	
PCB 112	6.45 [50]	Fresh	25	Fiberguide 15	**5.57** [8]	**5.71** [8]	
PCB 114	6.65 [50]	Seawater	20	Supelco 100	**5.69** [2]	**5.51** [2]	
PCB 118	6.74 [50]	Fresh	20	Polymicro 100	**5.87** [26]		
				Polymicro 30	**6.14** [26]	**6.06** [54]	
				Polymicro 7	**6.10** [26]		
				Silastic A[g]	**6.29** [55]		
				SR Batch 0[g]	**6.08** [55]		
				SR-Red[g]	**6.38** [55]		

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters			log K_f [d]
		Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	
PCB 118 (cont.)	6.74 [50]	Fresh	20	Sr-TF[g]	**6.09** [55]
				AlteSil[g]	**6.44** [55] **6.42** [55] **6.39** [55]
			25	Supelco 100	3.56 [27, e] 3.52 [28, e]
				Supelco 7	5.52 [10, e] **4.42** [10, e] 4.56 [27, e] **5.97** [10, e]
				Fiberguide 15	**5.69** [8] **5.87** [8]
				Fiberguide 10	**5.00** [29]
		Seawater	20	Supelco 100	**5.67** [2] **5.50** [2]
PCB 119	6.58 [50]	Seawater	20	Supelco 100	**5.58** [2] **5.45** [2]
PCB 123	6.74 [50]	Seawater	20	Supelco 100	**5.66** [2] **5.54** [2]
PCB 126	6.89 [50]	Fresh	20	Polymicro 100	**5.89** [26]
				Polymicro 30	**6.14** [26]
				Polymicro 7	**6.09** [26]
			25	Supelco 100	3.22 [27, e] 3.26 [28, e]
				Supelco 7	4.52 [27, e]
		Seawater	20	Supelco 100	**5.73** [2] **5.65** [2]
PCB 128	6.74 [50]	Fresh	20	Silastic A[g]	**6.67** [55]
				SR Batch 0[g]	**6.44** [55]
				SR-Red[g]	**6.73** [55]
				Sr-TF[g]	**6.44** [55]
				AlteSil[g]	**6.78** [55] **6.77** [55] **6.74** [55]
			25	Supelco 100	2.88 [27, e] 2.97 [28, e]
				Supelco 7	4.26 [27, e]
		Seawater	20	Supelco 100	**5.54** [2] **5.29** [2]
PCB 137	6.83 [50]	Fresh	20	Silastic A[g]	**6.73** [55]
				SR Batch 0[g]	**6.53** [55]
				SR-Red[g]	**6.79** [55]
				Sr-TF[g]	6.54 [55]
				AlteSil[g]	**6.83** [55] **6.83** [55] **6.80** [55]

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters			log K_f[d]
		Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c]& Coating Thickness (µm)	
PCB 138	6.83 [50]	Fresh	20	Polymicro 30	**6.40** [54]
				Silastic A[g]	**6.66** [55]
				SR Batch 0[g]	**6.45** [55]
				SR-Red[g]	**6.73** [55]
				Sr-TF[g]	**6.46** [55]
				AlteSil[g]	**6.78** [55] **6.77** [55] **6.74** [55]
			25	Supelco 100	5.65 [3] 3.37 [27,e] 3.36 [28, e]
				Supelco 7	5.98 [3] 4.49 [27, e]
				Fiberguide 15	**5.79** [8] **6.20** [8]
		Seawater	20	Supelco 100	**5.50** [2] **5.37** [2]
PCB 141	6.82 [50]	Fresh	20	Silastic A[g]	**6.60** [55]
				SR Batch 0[g]	**6.40** [55]
				SR-Red[g]	**6.67** [55]
				Sr-TF[g]	**6.41** [55]
				AlteSil[g]	**6.71** [55] **6.71** [55] **6.68** [55]
PCB 145	6.25 [50]	Fresh	20	Silastic A[g]	**6.64** [55]
				SR Batch 0[g]	**6.48** [55]
				SR-Red[g]	**6.63** [55]
				Sr-TF[g]	**6.48** [55]
				AlteSil[g]	**6.66** [55] **6.65** [55] **6.64** [55]
PCB 149	6.67 [50]	Fresh	20	Silastic A[g]	**6.58** [55]
				SR Batch 0[g]	**6.40** [55]
				SR-Red[g]	**6.61** [55]
				Sr-TF[g]	**6.40** [55]
				AlteSil[g]	**6.65** [55] **6.64** [55] **6.62** [55]
		Seawater	20	Supelco 100	**5.50** [2] **5.43** [2]
PCB 151	6.64 [50]	Fresh	20	Silastic A[g]	**6.54** [55]
				SR Batch 0[g]	**6.37** [55]
				SR-Red[g]	**6.55** [55]

Table SI-1. (cont.)

		Experimental Parameters									
Compound	log K_{ow} [d]	Fresh/ Seawater [a]	Temp [b] (°C)	PDMS Source [c] & Coating Thickness (μm)	log K_f [d]						
PCB 151 (cont.)	6.64 [50]	Fresh	20	Sr-TF [g]	**6.38** [55]						
				AlteSil [g]	**6.59** [55]	**6.59** [55]	**6.57** [55]				
		Seawater	20	Supelco 100	**5.65** [2]	**5.48** [2]					
PCB 153	6.92 [50]	Fresh	20	Polymicro 100	**6.68** [26]						
				Polymicro 30	**6.53** [26]	**6.36** [54]					
				Polymicro 7	**6.48** [26]						
				Silastic A [g]	**6.63** [55]						
				SR Batch 0 [g]	**6.44** [55]						
				SR-Red [g]	**6.69** [55]						
				Sr-TF [g]	**6.45** [55]						
				AlteSil [g]	**6.73** [55]	**6.72** [55]	**6.70** [55]				
			25	Supelco 100	5.67 [3]	3.42 [27, e]	**6.45** [6]	**6.45** [25]	3.40 [28, e]	**6.12** [4]	
				Supelco 30	**6.59** [6]						
				Supelco 7	5.63 [10, e]	**4.41** [10, e]	6.01 [3]	4.57 [27, e]	**6.68** [6]	**6.68** [25]	**6.05** [10, e]
				Polymicro 35	5.99 [7]						
				Fiberguide 15	**5.84** [8]	**6.16** [8]					
				Fiberguide 10	6.01 [9, e]						
PCB 154	6.76 [50]	Fresh	25	Fiberguide 15	**5.89** [8]	**6.17** [8]					
PCB 155	6.41 [50]	Fresh	20	Silastic A [g]	**6.77** [55]						
				SR Batch 0 [g]	**6.62** [55]						
				SR-Red [g]	**6.77** [55]						
				Sr-TF [g]	**6.63** [55]						
				AlteSil [g]	**6.80** [55]	**6.80** [55]	**6.78** [55]				
			25	Fiberguide 15	**5.84** [8]	**6.03** [8]					
PCB 156	7.18 [50]	Fresh	20	Silastic A [g]	**6.60** [55]						
				SR Batch 0 [g]	**6.38** [55]						
				SR-Red [g]	**6.68** [55]						
				Sr-TF [g]	**6.40** [55]						
				AlteSil [g]	**6.74** [55]	**6.73** [55]	**6.69** [55]				

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f [d]
PCB 156	7.18 [50]	Fresh	20	Fiberguide 15	**5.79** [8] **6.28** [8]
(cpnt.)		Seawater	20	Supelco 100	**5.45** [2] **5.34** [2]
PCB 157	7.18 [50]	Seawater	20	Supelco 100	**5.41** [2] **5.28** [2]
PCB 158	7.02 [50]	Seawater	20	Supelco 100	**5.53** [2] **5.38** [2]
PCB 167	7.27 [50]	Seawater	20	Supelco 100	**5.37** [2] **5.24** [2]
PCB 169	7.42 [50]	Seawater	20	Supelco 100	**5.37** [2] **5.27** [2]
PCB 170	7.27 [50]	Fresh	20	Silastic A[g]	**7.01** [55]
				SR Batch 0[g]	**6.79** [55]
				SR-Red[g]	**7.07** [55]
				Sr-TF[g]	**6.80** [55]
				AlteSil[g]	**7.11** [55] **7.11** [55] **7.07** [55]
			25	Supelco 100	2.96 [27, e] 2.91 [28, e]
				Supelco 7	4.23 [27, e]
		Seawater	20	Supelco 100	**5.04** [2] **4.90** [2]
PCB 177	7.08 [50]	Seawater	20	Supelco 100	**5.17** [2] **5.02** [2]
PCB 180	7.36 [50]	Fresh	20	Polymicro 100	**6.76** [26]
				Polymicro 30	**6.78** [26] **6.59** [54]
				Polymicro 7	**6.67** [26]
				Silastic A[g]	**6.89** [55]
				SR Batch 0[g]	**6.70** [55]
				SR-Red[g]	**6.96** [55]
				Sr-TF[g]	**6.72** [55]
				AlteSil[g]	**7.00** [55] **7.00** [55] **6.96** [55]
			25	Supelco 100	5.55 [3] 2.92 [27, e] **6.54** [6] **6.54** [25] 2.94 [28, e]
				Supelco 30	**6.37** [6]
				Supelco 7	5.60 [10, e] **4.19** [10, e] 6.37 [3] 4.21 [27, e] **6.76** [6] **6.76** [25] **6.24** [10, e]
				Fiberguide 15	**5.85** [8] **6.40** [8]
		Seawater	20	Supelco 100	**5.08** [2] **4.95** [2]
PCB 183	7.20 [50]	Seawater	20	Supelco 100	**5.10** [2] **4.98** [2]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater [a]	Temp [b] (°C)	PDMS Source [c] & Coating Thickness (µm)	log K_f [d]
PCB 187	7.17 [50]	Fresh	20	Silastic A [g]	**6.81** [55]
				SR Batch 0 [g]	**6.64** [55]
				SR-Red [g]	**6.84** [55]
				Sr-TF [g]	**6.66** [55]
				AlteSil [g]	**6.89** [55] **6.88** [55] **6.85** [55]
			25	Supelco 100	3.26 [27, e] 3.18 [28, e]
				Supelco 7	4.38 [27, e]
		Seawater	20	Supelco 100	**5.16** [2] **5.02** [2]
PCB 189	7.71 [50]	Seawater	20	Supelco 100	**5.02** [2] **4.88** [2]
PCB 194	7.80 [50]	Seawater	20	Supelco 100	**4.72** [2] **4.72** [2]
PCB 195	7.56 [50]	Fresh	25	Supelco 100	2.71 [28, e] 2.75 [27, e]
				Supelco 7	4.00 [27,e]
PCB 200	7.27 [50]	Seawater	20	Supelco 100	**4.92** [2] **4.67** [2]
PCB 201	7.62 [50]	Fresh	25	Supelco 100	3.08 [27, e] 2.99 [28, e]
				Supelco 7	4.23 [27, e]
		Seawater	20	Supelco 100	**4.78** [2] **4.62** [2]
PCB 202	7.24 [50]	Fresh	25	Supelco 100	**6.20** [25]
				Supelco 7	**6.77** [25]
PCB 203	7.65 [50]	Fresh	20	Polymicro 100	**6.95** [26]
				Polymicro 30	**7.05** [26]
				Polymicro 7	**6.85** [26]
PCB 204	7.30 [50]	Fresh	20	Silastic A [g]	**7.58** [55]
				SR Batch 0 [g]	**7.41** [55]
				SR-Red [g]	**7.55** [55]
				Sr-TF [g]	**7.42** [55]
				AlteSil [g]	**7.60** [55] **7.59** [55] **7.57** [55]
PCB 206	8.09 [50]	Fresh	25	Supelco 100	2.45 [27, e] **6.16** [25] 2.48 [28, e]
				Supelco 7	3.79 [27, e] **7.04** [25]
		Seawater	20	Supelco 100	**4.49** [2] **4.39** [2]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater [a]	Temp [b] (°C)	PDMS Source [c] & Coating Thickness (µm)	log K_f [d]
PCB 209	8.18 [50]	Fresh	25	Supelco 100	2.43 [27, e] **5.59** [25] 2.40 [28, e]
				Supelco 7	3.75 [27, e] **6.84** [25]
		Seawater	20	Supelco 100	**4.31** [2] **4.19** [2]
Chlorinated Benzenes					
1,2-Dichlorobenzene	3.43 [44]	Fresh	25	PDMS Sheet [f]	**2.92** [17] **2.81** [17]
				Fiberguide 15	**2.21** [31]
1,4-Dichlorobenzene	3.44 [44]	Fresh	25	PDMS Sheet [f]	**2.91** [17] **2.95** [17]
1,2,3-Trichlorobenzene	4.14 [44]	Fresh	25	PDMS Sheet [f]	**3.33** [17] **3.42** [17] **3.46** [17]
				Fiberguide 15	**3.14** [31]
1,2,4-Trichlorobenzene	4.02 [44]	Fresh	25	PDMS Sheet [f]	**3.33** [17] **3.46** [17] **3.51** [17]
1,3,5-Trichlorobenzene	4.19 [44]	Fresh	25	PDMS Sheet [f]	**3.36** [17] **3.61** [17] **3.67** [17]
1,2,3,4-Tetrachlorobenzene	4.64 [44]	Fresh	25	Supelco 100	**3.61** [3]
				Supelco 7	**3.20** [3]
				Fiberguide 15	**3.90** [31] **3.85** [31]
1,2,3,5-Tetrachlorobenzene	4.66 [44]	Fresh	25	PDMS Sheet [f]	**4.24** [17] **4.12** [17]
1,2,4,5-Tetrachlorobenzene	4.70 [44]	Fresh	25	PDMS Sheet [f]	**4.14** [17] **4.03** [17]
Pentchlorobenzene	5.18 [44]	Fresh	25	Supelco 100	4.05 [3]
				Supelco 7	**4.41** [11, e] **4.58** [11, e] **3.92** [3]
				Fiberguide 15	**4.28** [8] **4.27** [8] **4.42** [31]
				PDMS Sheet [f]	**4.56** [17] **4.69** [17]
Hexachlorobenzene	5.73 [44]	Fresh	20	Silastic A [g]	**5.02** [55]
				SR Batch 0 [g]	**4.90** [55]
				SR-Red [g]	**5.04** [55]
				Sr-TF [g]	**4.92** [55]
				AlteSil [g]	**5.06** [55] **5.05** [55] **5.05** [55]
			25	Supelco 100	4.44 [3]
				Supelco 7	**4.65** [11, e] **5.28** [11, e] **4.33** [3]
				Fiberguide 15	**4.77** [8] **4.75** [8] **4.84** [31]
				PDMS Sheet [f]	**5.12** [17] **4.91** [17]

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]					
DDT Compounds										
p,p'-DDMU	NA[h]	Fresh	25	Supelco 100	5.74 [1]	5.47 [1]				
o,p'-DDE	6.96 [44]	Fresh	25	Supelco 100	6.05 [1]	5.82 [1]				
		Seawater	20	Supelco 100	**5.98** [2]	**5.66** [2]				
p,p'-DDE	6.96 [44]	Fresh	25	Supelco 100	6.12 [1]	5.92 [1]	5.26 [3]	**5.85** [4]	4.00 [5, e]	**6.17** [6]
				Supelco 30	**6.50** [6]					
				Supelco 7	5.39 [3]	**6.27** [6]				
				Polymicro 35	5.29 [7]					
				Fiberguide 15	**5.88** [8]	**5.73** [8]				
				Fiberguide 10	5.68 [9, e]					
		Seawater	20	Supelco 100	**5.75** [2]	**5.63** [2]				
o,p'-DDD	6.22 [44]	Fresh	25	Supelco 100	5.30 [1]	4.88 [1]				
		Seawater	20	Supelco 100	**5.36** [2]	**5.20** [2]				
p,p'-DDD	6.22 [44]	Fresh	25	Supelco 100	5.13 [1]	4.64 [1]	4.55 [3]	4.32 [5, e]	**6.11** [6]	
				Supelco 30	**6.66** [6]					
				Supelco 7	**4.45** [3]	**6.04** [6]				
		Seawater	20	Supelco 100	**5.20** [2]	**5.05** [2]				
o,p'-DDT	6.91 [44]	Fresh	25	Supelco 100	5.74 [1]	5.71 [1]				
		Seawater	20	Supelco 100	**5.71** [2]	**5.69** [2]				
p,p'-DDT	6.91 [44]	Fresh	25	Supelco 100	5.40 [1]	5.39 [1]	**5.56** [4]	4.36 [5, e]	**5.76** [6]	
				Supelco 30	**6.06** [6]					
				Supelco 7	**5.83** [6]	**5.33** [10, e]	5.05 [11, e]			
		Seawater	20	Supelco 100	**5.64** [2]	**5.45** [2]				
methoxychlor	5.08 [44]	Fresh	25	Supelco 100	4.26 [5, e]					
Hexachlorocyclohexanes										
α-Hexachlorocyclohexane	3.80 [44]	Fresh	25	Supelco 100	**2.66** [3]	3.26 [5, e]				
β-Hexachlorocyclohexane	3.78 [44]	Fresh	25	Supelco 100	**2.59** [3]	2.95 [5, e]				
γ-Hexachlorocyclohexane	3.72 [44]	Fresh	25	Supelco 100	**2.59** [3]	4.11 [5, e]	2.03 [33, e]			
δ-Hexachlorocyclohexane	4.14 [44]	Fresh	25	Supelco 100	**2.03** [3]	2.78 [5, e]				

Table SI-1. (cont.)

Compound	log K_{ow}[d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f[d]
Chlorinated Cyclodienes					
aldrin	6.50 [44]	Fresh	25	Supelco 100	4.00 [5, e]
		Seawater	20	Supelco 100	**5.94** [2] **5.82** [2]
dieldrin	5.20 [44]	Fresh	25	Supelco 100	4.40 [5, e]
		Seawater	20	Supelco 100	**4.98** [2] **4.88** [2]
endosulfan I	4.74 [18]	Fresh	25	Supelco 100	4.40 [5, e] 3.33 [39, e]
endosulfan II	4.78 [18]	Fresh	25	Supelco 100	4.00 [5, e] 3.30 [39, e]
endosulfan sulfate	3.66 [18]	Fresh	25	Supelco 100	**2.60** [5, e] 3.22 [39, e]
endosulfan ether	NA[h]	Fresh	25	Supelco 100	2.89 [39, e]
endrin	5.20 [44]	Fresh	25	Supelco 100	4.32 [5, e]
		Seawater	20	Supelco 100	**4.62** [2] **4.65** [2]
endrin aldehyde	NA[h]	Fresh	25	Supelco 100	3.15 [5, e]
endrin ketone	NA[h]	Fresh	25	Supelco 100	3.36 [5, e]
heptachlor	6.10 [18]	Fresh	25	Supelco 100	4.26 [5, e]
heptachlor epoxide	5.40 [18]	Fresh	25	Supelco 100	**4.48** [6] 4.54 [5, e]
				Supelco 30	**4.70** [6]
				Supelco 7	**4.64** [6]
α-chlordane	6.10 [18]	Fresh	25	Supelco 100	**5.37** [6]
				Supelco 30	**5.66** [6]
				Supelco 7	**5.59** [6]
		Seawater	20	Supelco 100	**5.54** [2] **5.30** [2]
γ-Chlordane	6.22 [18]	Seawater	20	Supelco 100	**5.59** [2] **5.40** [2]
cis -nonachlor	NA[h]	Seawater	20	Supelco 100	**5.41** [2] **5.18** [2]
trans -nonachlor	NA[h]	Fresh	25	Supelco 100	**5.68** [6]
				Supelco 30	**6.14** [6]
				Supelco 7	**5.94** [6]
		Sewater	20	Supelco 100	**5.67** [2] **5.51** [2]
Chlordene	NA[h]	Sewater	20	Supleco 100	**5.78** [2] **5.52** [2]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters			log K_f [d]
		Fresh/ Seawater [a]	Temp [b] (°C)	PDMS Source [c] & Coating Thickness (μm)	
Organophosphorus Insecticides					
malathion	2.36 [44]	Fresh	25	Supelco 100	**2.82** [36, e]
				Supelco 30	**1.89** [34, e] 2.64 [35]
				Supelco 7	**1.91** [34, e]
parathion	3.83 [44]	Fresh	25	Supelco 30	**2.71** [34, e] 1.97 [33, e]
				Supelco 7	**2.95** [34, e]
azinphos-methyl	2.75 [44]	Fresh	25	Supelco 100	2.54 [37]
chlorpyrifos	5.27 [44]	Fresh	25	Supelco 100	3.65 [37]
				FiberGuide 10	**4.18** [9, e]
		Seawater	20	Supelco 100	**4.65** [2] **4.75** [2]
diazinon	3.81 [44]	Fresh	25	Supelco 100	3.18 [37] 2.84 [35]
		Seawater	20	Supelco 100	**3.89** [2] **3.80** [2]
dichlorvos	1.42 [44]	Fresh	25	Supelco 100	2.11 [37] **1.85** [38]
				Supelco 30	**1.90** [38]
dimethoate	0.78 [44]	Fresh	25	Supelco 100	2.54 [37]
disulfoton	4.02 [44]	Fresh	25	Supelco 100	3.20 [37]
ethoprophos	3.59 [52]	Fresh	25	Supelco 100	2.26 [37]
ethyl parathion	3.83 [52]	Fresh	25	Supelco 100	3.04 [37] 3.02 [35]
famphur	2.28 [52]	Fresh	25	Supelco 100	2.18 [37]
fenchlorvos	4.88 [52]	Fresh	25	Supelco 100	3.54 [37]
fentirothion	3.30 [44]	Fresh	25	Supelco 100	3.00 [37] 2.61 [35] **3.05** [36, e]
iprofenfos	3.21 [52]	Fresh	25	Supelco 100	2.60 [37]
isoxathion	3.73 [52]	Fresh	25	Supelco 100	3.26 [37]
methyl parathion	2.86 [44]	Fresh	25	Supelco 100	2.11 [37] 1.97 [33] 2.14 [35]
0,0,0-triethyl phophorothiate	NA [h]	Fresh	25	Supelco 100	2.26 [37]
phorate	3.56 [44]	Fresh	25	Supelco 100	3.08 [37] **3.21** [36, e]
prothiofos	4.92 [52]	Fresh	25	Supelco 100	4.00 [37]
sulfotep	3.99 [52]	Fresh	25	Supelco 100	3.20 [37]
bromophos methyl	5.21 [44]	Fresh	25	Supelco 100	3.59 [35]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (μm)	log K_f [d]
bromophos ethyl	6.15 [44]	Fresh	25	Supelco 100	3.60 [35]
dichlorofenthion	5.14 [52]	Fresh	25	Supelco 100	3.29 [35]
ethion	5.07 [44]	Fresh	25	Supelco 100	3.17 [35] **3.17** [36, e]
fenthion	4.09 [44]	Fresh	25	Supelco 100	3.11 [35] **3.33** [36, e]
thionazin	1.52 [52]	Fresh	25	Supelco 100	**1.70** [37]
fenamiphos	3.23 [52]	Fresh	25	Supelco 100	2.95 [38] **1.80** [36, e]
				Supelco 30	3.43 [38]
				Supelco 7	**3.00** [38]
chloropyrifos methyl	4.31 [52]	Fresh	25	Supelco 100	**3.45** [36, e]
fonofos	3.94 [52]	Fresh	25	Supelco 100	**3.44** [36, e]
chlorfenvinphos	3.81 [52]	Fresh	25	Supelco 100	**3.38** [36, e]
methidathion	2.42 [52]	Fresh	25	Supelco 100	**2.85** [36, e]
phosalone	4.38 [52]	Fresh	25	Supelco 100	**3.50** [36, e] 2.80 [33, e]
Pyrethroids					
bifenrthin	6.00 [52]	Fresh	25	Supleco 7	**1.26** [43, e]
				Polymicro 30	**5.97** [40, e]
permethrin	6.50 [44]	Fresh	25	Supelco 7	**1.56** [43, e] **1.54** [43, e]
				Polymicro 30	**5.46** [40, e] **5.37** [40, e]
				Fiberguide 10	5.59 [9, e]
fenpropathrin	6.00 [52]	Fresh	25	Supelco 7	**1.52** [43, e]
				Polymicro 30	**5.51** [40, e]
λ-cyhalothrin	NA[h]	Fresh	25	Supelco 7	**1.21** [43, e]
cyfluthrin	4.62 [52]	Fresh	25	Supelco 7	**1.25** [43, e]
				Polymicro 30	**5.65** [40, e]
cypermethrin	6.00 [52]	Fresh	25	Supelco 7	**1.32** [43, e]
				Polymicro 30	**6.26** [40, e]
esfenvalerate	6.22 [52]	Fresh	25	Supelco 7	**1.05** [43, e]
				Polymicro 30	**5.80** [40, e]
deltamethrin	6.20 [52]	Fresh	25	Supelco 7	**1.02** [43, e]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (µm)	log K_f [d]
Carbamates					
carbaryl	2.36 [44]	Fresh	25	PDMS Sheet[f]	**1.09** [17]
aldicarb	1.13 [44]	Fresh	25	PDMS Sheet[f]	**0.35** [17]
carbofuran	2.32 [44]	Fresh	25	PDMS Sheet[f]	**0.77** [17]
Triazines					
terbutryn	3.74 [52]	Fresh	25	Supelco 100	4.56 [41, e] 3.61 [38]
				Supelco 30	3.94 [38]
				Supelco 7	**3.60** [38]
				PDMS Sheet[f]	**2.66** [17]
prometryn	3.51 [52]	Fresh	25	Supelco 100	4.44 [41, e]
terbuthylazyne	3.06 [52]	Fresh	25	Supelco 100	4.25 [41, e]
ametryn	2.98 [52]	Fresh	25	Supelco 100	4.33 [41, e]
sebuthylazyne	3.31 [41]	Fresh	25	Supelco 100	3.64 [41, e]
propazyne	2.93 [52]	Fresh	25	Supelco 100	3.60 [41, e]
atrazine	2.61 [52]	Fresh	25	Supelco 100	2.32 [38]
				Supelco 30	**2.40** [38]
				Supelco 7	**2.30** [38]
prometon	2.99 [52]	Fresh	25	Supelco 100	3.08 [38]
				Supelco 30	3.15 [38]
				Supelco 7	**2.60** [38]
Polybrominated diphenyl ethers					
PBDE 47	6.81 [52]	Fresh	20	Polymicro 100	**5.92** [26]
				Polymicro 30	**5.91** [26]
				Polymicro 7	**5.85** [26]
PBDE 99	7.32 [52]	Fresh	20	Polymicro 100	**6.33** [26]
				Polymicro 30	**6.35** [26]
				Polymicro 7	**6.22** [26]
PBDE 153	7.90 [52]	Fresh	20	Polymicro 100	**6.67** [26]
				Polymicro 30	**6.47** [26]

Table SI-1. (cont.)

Compound	log K_{ow} [d]	Experimental Parameters: Fresh/ Seawater[a]	Temp[b] (°C)	PDMS Source[c] & Coating Thickness (μm)	log K_f [d]	
PBDE 153 (cont.)	7.90 [52]	Fresh	20	Polymicro 7	**6.43** [26]	
PBDE 183	8.27 [52]	Fresh	20	Polymicro 100	**6.70** [26]	
				Polymicro 30	**6.62** [26]	
				Polymicro 7	**6.52** [26]	
BTEX Compounds						
Benzene	2.13 [52]	Fresh	25	Supelco 100	**1.72** [46]	**1.85** [15]
				Supelco 7	**1.99** [15]	
				Polymicro 100	**2.30** [48]	
				Polymicro 56	**2.10** [47]	
Toluene	2.73 [52]	Fresh	25	Supelco 100	**2.23** [46]	**2.17** [15]
				Supelco 7	**2.58** [15]	
				Polymicro 100	**2.88** [48]	
				Polymicro 56	**2.53** [47]	
Ethylbenzene	3.15 [52]	Fresh	25	Supelco 100	**2.74** [46]	**2.49** [15]
				Supelco 7	**2.72** [15]	
				Polymicro 100	**3.33** [48]	
				Polymicro 56	**2.72** [47]	
o-Xylene	3.12 [52]	Fresh	25	Supelco 100	**2.63** [46]	**2.42** [15]
				Supelco 7	**2.56** [15]	
				Polymicro 100	**3.26** [48]	
				Polymicro 56	**2.82** [47]	

[a] Seawater refers to water with a total salt concentration of 0.5 mol/L.
[b] Temperatures are ± 2 °C
[c] Supelco = Supelco/Sigma Aldrich Corp., Polymicro = Polymicro Technologies, Fiberguide = Fiberguide Industries, Inc.
[d] Superscripts indicate the source publication. Numbers in bold print are considered passing by the negligible depletion criterion (see manuscript for explanation).
[e] A temperature of 25 °C was assumed if temperature in original publication was not specified.
[f] PDMS Sheet = Specialty Silicone Products, Inc., PDMS Trap = Restek Thickness = 1 mm
[g] Silicon rubber sheets (*55*).
[h] NA indicates data not available.
[i] PCB congeners numbered according to IUPAC convention.

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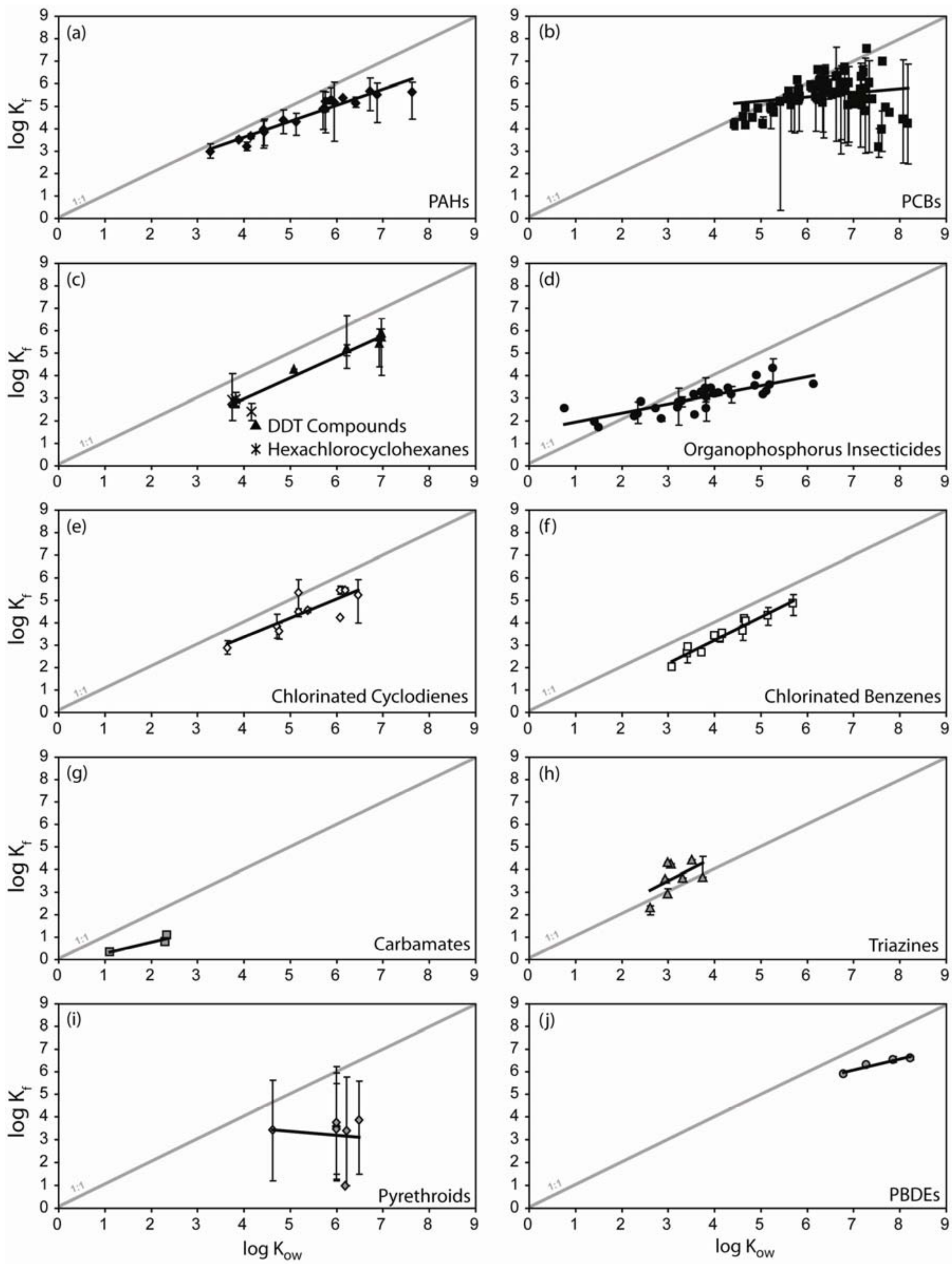

(a)
PAHs
(b)
PCBs
(c)
DDT Compounds
Hexachlorocyclohexanes
(d)
Organophosphorus Insecticides
(e)
Chlorinated Cyclodienes
(f)
Chlorinated Benzenes
(g)
Carbamates
(h)
Triazines
(i)
Pyrethroids
(j)
PBDEs
1:1
log K_f
log K_ow

Figure SI-1

Figure SI-1. Plot of log K_{ow} versus log K_f by compound class for all data. The plotted log K_f values are the average of all published data for compounds listed in Table SI-1. Bars indicate the range in data. The gray lines are the one-to-one relationships between log K_f and log K_{ow}. The black lines are the linear regression between log K_f and log K_{ow} for each compound class:

(a) PAHs: $\log K_f = 0.71 \log K_{ow} + 0.75$; $R^2 = 0.92$

(b) PCBs: $\log K_f = 0.19 \log K_{ow} + 4.72$; $R^2 = 0.05$

(c) DDT Compounds and Hexachlorocyclohexanes: $\log K_f = 0.95 \log K_{ow} - 0.81$; $R^2 = 0.96$

(d) Organophosphorus Insecticides: $\log K_f = 0.40 \log K_{ow} + 1.51$; $R^2 = 0.66$

(e) Chlorinated Cyclodienes: $\log K_f = 0.84 \log K_{ow} - 0.01$; $R^2 = 0.68$

(f) Chlorinated Benzenes: $\log K_f = 1.03 \log K_{ow} - 0.89$; $R^2 = 0.94$

(g) Carbamates: $\log K_f = 0.49 \log K_{ow} - 0.20$; $R^2 = 0.84$

(h) Triazines: $\log K_f = 1.06 \log K_{ow} + 0.32$; $R^2 = 0.28$

(i) Pyrethroids: $\log K_f = -0.16 \log K_{ow} + 4.21$; $R^2 = 0.01$

(j) PBDEs: $\log K_f = 0.49 \log K_{ow} + 2.66$; $R^2 = 0.94$

Table SI-2

Sample volumes (V_w) required for negligible depletion (Equation 2)

	Calculated V_w (ml)		
Log K_f	**100 µm[a]**	**30 µm[a]**	**7 µm[a]**
1	0.61	0.13	0.03
2	6.1	1.3	0.3
3	61	13	3
4	610	130	30
5	6100	1300	300
6	61000	13000	3000
7	610000	130000	30000
8	6100000	1300000	300000

[a] Fiber coating thickness. Fiber coating volumes were calculated based on fibers with a 0.1 mm diameter core and length of 1.0 cm. The coating volumes are 0.61 µl, 0.13 µl, and 0.03 µl for 100-µm, 30-µm, and 7-µm coating thicknesses, respectively.

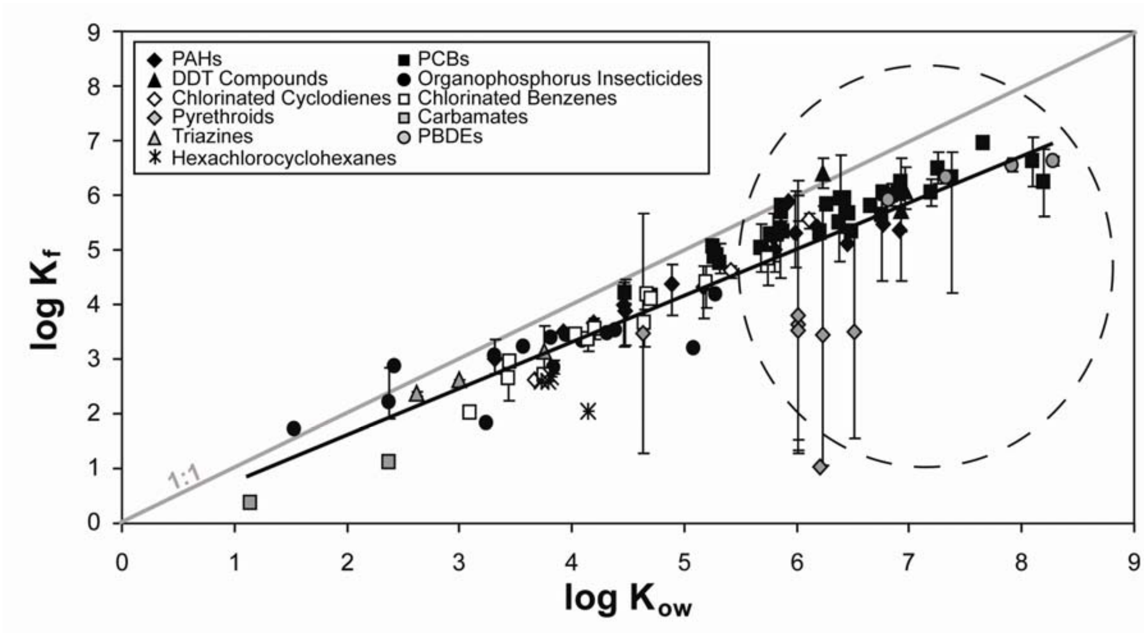

Figure SI-2. Plot of log K_{ow} versus log K_f. The plotted log K_f values are the average of all passing published data measured in distilled water at 25° C for compounds listed in Table SI-1. The bars indicate the range in data. The black line is the linear regression between log K_f and log K_{ow} ($\log K_f = 0.86 \log K_{ow} - 0.13$; $R^2 = 0.78$).

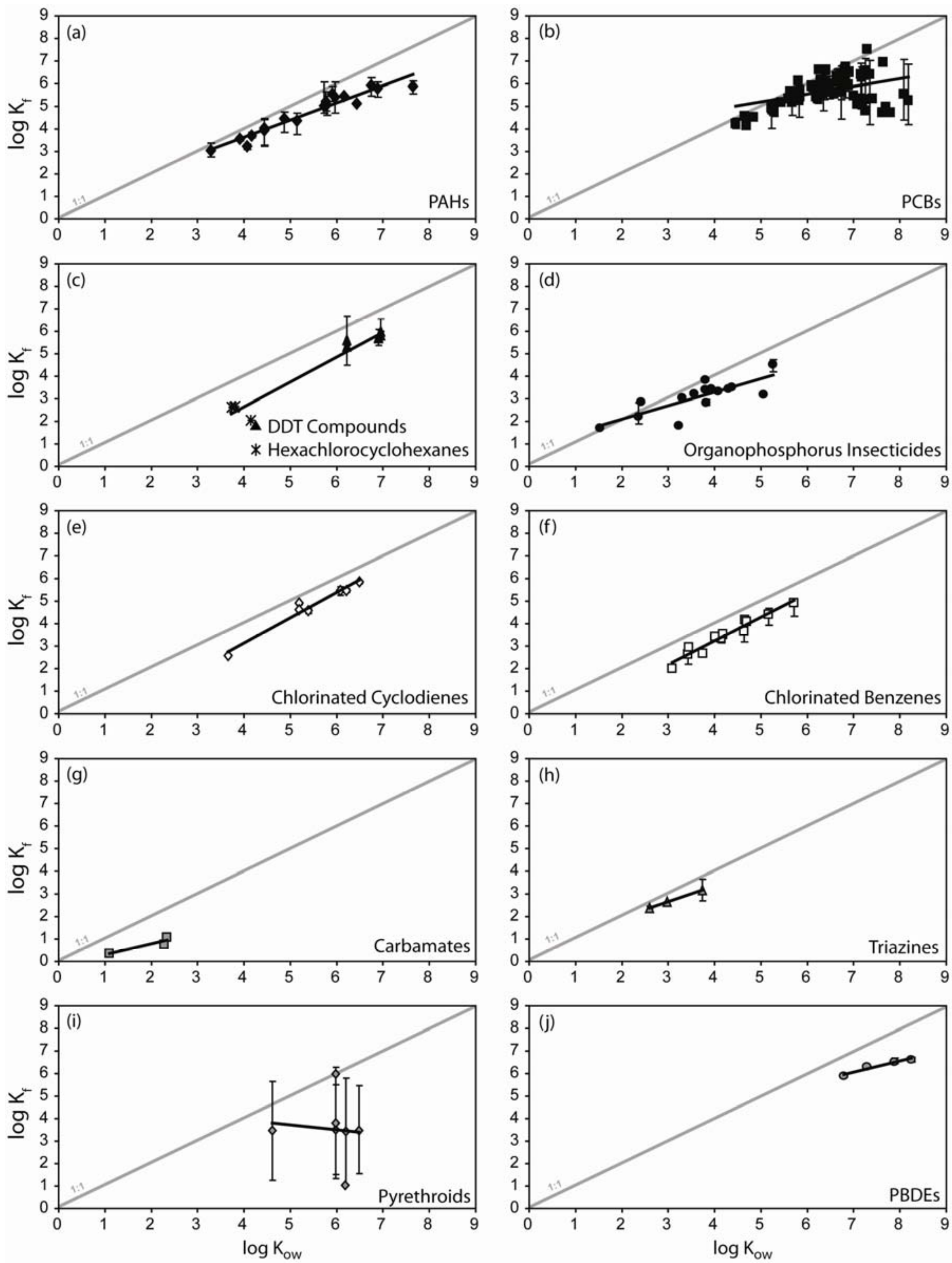
(a)
PAHs
(b)
PCBs
(c)
DDT Compounds
Hexachlorocyclohexanes
(d)
Organophosphorus Insecticides
(e)
Chlorinated Cyclodienes
(f)
Chlorinated Benzenes
(g)
Carbamates
(h)
Triazines
(i)
Pyrethroids
(j)
PBDEs
1:1
log K_f
log K_{ow}
0
1
2
3
4
5
6
7
8
9

Figure SI-3

Figure SI-3. Plot of log K_{ow} versus log K_f by compound class for all passing data. The plotted log K_f values are the average of all passing published data for compounds listed in Table SI-1. Bars indicate the range in data. The gray lines are the one-to-one relationships between log K_f and log K_{ow}. The black lines are the linear regression between log K_f and log K_{ow} for each compound class:

(a) PAHs: $\log K_f = 0.76 \log K_{ow} + 0.54$; $R^2 = 0.92$

(b) PCBs: $\log K_f = 0.34 \log K_{ow} + 3.947$; $R^2 = 0.17$

(c) DDT Compounds and Hexachlorocyclohexanes: $\log K_f = 1.09 \log K_{ow} - 1.70$; $R^2 = 0.96$

(d) Organophosphorus Insecticides: $\log K_f = 0.59 \log K_{ow} + 0.93$; $R^2 = 0.63$

(e) Chlorinated Cyclodienes: $\log K_f = 1.12 \log K_{ow} - 1.29$; $R^2 = 0.96$

(f) Chlorinated Benzenes: $\log K_f = 1.04 \log K_{ow} - 0.93$; $R^2 = 0.94$

(g) Carbamates: $\log K_f = 0.49 \log K_{ow} - 0.20$; $R^2 = 0.84$

(h) Triazines: $\log K_f = 0.69 \log K_{ow} + 0.54$; $R^2 = 1.00$

(i) Pyrethroids: $\log K_f = -0.20 \log K_{ow} + 4.71$; $R^2 = 0.01$

(j) PBDEs: $\log K_f = 0.49 \log K_{ow} + 2.66$; $R^2 = 0.94$

Table SI-3. Parameters for LSER approach

Compound[a]	log $K_{fiber, avg}$ [b]	σ_{Kf} [c]	n_{total} [d]	R_i	π_i	α_i	β_i	$V_i/100$ (cm^3/mol)	log $K_{fiber, calculated}$ [e]
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene[1]	2.94	0.21	8	1.34	0.92	0.00	0.20	1.09	2.85
Fluorene[1]	3.69	0.04	3	1.59	1.03	0.00	0.20	1.36	3.55
Phenanthrene[2]	3.88	0.34	13	2.06	1.29	0.00	0.26	1.45	3.64
Anthracene[3]	3.90	0.37	8	1.34	0.92	0.00	0.20	1.45	3.78
Fluoranthene[2]	4.29	0.31	12	2.38	1.55	0.00	0.20	1.59	4.05
Pyrene[2]	4.33	0.42	6	2.81	1.71	0.00	0.29	1.59	3.89
Chrysene[2]	4.93	0.23	5	3.03	1.73	0.00	0.33	1.82	4.46
Benzo[*a*]pyrene[2]	5.33	0.49	10	3.63	1.98	0.00	0.44	1.95	4.59
Acenaphthene[1]	3.49	0.05	3	1.60	1.04	0.00	0.20	1.26	3.30
Polychlorinated Biphenyls (PCBs)									
PCB 1[4]	4.20	0.22	5	1.48	1.07	0.00	0.20	1.45	3.70
PCB 15[4]	4.75	0.22	5	1.64	1.18	0.00	0.16	1.60	4.15
PCB 28[4]	4.91	0.31	8	1.76	1.33	0.00	0.15	1.69	4.35
PCB 47[4]	5.75	0.16	2	1.88	1.48	0.00	0.15	1.81	4.60
PCB 52[4]	5.32	0.34	12	1.90	1.48	0.00	0.15	1.81	4.60
PCB 77[4]	5.30	0.73	2	1.94	1.44	0.00	0.11	1.81	4.74
PCB 101[4]	5.81	0.51	6	2.04	1.61	0.00	0.13	1.94	4.92
PCB 105[4]	5.79	0.14	2	2.04	1.59	0.00	0.11	1.94	4.98
PCB 112[4]	5.64	0.10	2	2.05	1.61	0.00	0.13	1.94	4.92
PCB 118[4]	5.39	0.66	5	2.06	1.59	0.00	0.11	1.94	4.99
PCB 138[4]	6.00	0.29	2	2.18	1.74	0.00	0.11	2.06	5.23
PCB 153[4]	6.14	0.67	10	2.18	1.74	0.00	0.11	2.06	5.23
PCB 154[4]	6.03	0.20	2	2.16	1.74	0.00	0.11	2.06	5.22
PCB 155[4]	5.94	0.13	2	2.12	1.74	0.00	0.11	2.06	5.21
PCB 156[4]	6.04	0.35	2	2.21	1.72	0.00	0.09	2.06	5.30
PCB 180[4]	6.18	0.80	9	2.29	1.87	0.00	0.09	2.18	5.53
PCB 206[4]	6.60	0.62	2	2.60	2.13	0.00	0.04	2.43	6.19
PCB 209[4]	6.22	0.88	2	2.72	2.26	0.00	0.02	2.55	6.50

Table SI-3 (cont.)

Compound[a]	log $K_{fiber, avg}$ [b]	σ_{Kf} [c]	n_{total} [d]	R_i	π_i	α_i	β_i	$V_i/100$ (cm^3/mol)	log $K_{fiber, calculated}$ [e]
Chlorinated Benzenes									
1,2-Dichlorobenzene[1]	2.65	0.38	3	0.87	0.78	0.00	0.04	0.96	2.83
1,4-Dichlorobenzene[1]	2.93	0.03	2	0.83	0.75	0.00	0.02	0.96	2.88
1,2,3-Trichlorobenzene[1]	3.34	0.14	4	1.03	0.86	0.00	0.00	1.08	3.23
1,2,4-Trichlorobenzene[1]	3.43	0.09	3	0.98	0.81	0.00	0.00	1.08	3.25
1,3,5-Trichlorobenzene[1]	3.55	0.16	3	0.98	0.73	0.00	0.00	1.08	3.31
1,2,3,4-Tetrachlorobenzene[1]	3.64	0.32	4	1.18	0.92	0.00	0.00	1.21	3.55
1,2,3,5-Tetrachlorobenzene[1]	4.18	0.08	2	1.16	0.85	0.00	0.00	1.21	3.60
1,2,4,5-Tetrachlorobenzene[1]	4.09	0.08	2	1.16	0.86	0.00	0.00	1.21	3.59
Pentachlorobenzene[2]	4.39	0.24	8	1.33	0.96	0.00	0.00	1.33	3.89
Hexachlorobenzene[2]	4.83	0.29	8	1.49	0.99	0.00	0.00	1.45	4.24
Organophosphorus Insecticides									
malathion[5]	2.21	0.53	3	0.82	2.04	0.00	1.45	2.32	2.03
parathion[6]	2.83	0.17	2	1.76	0.05	0.72	1.33	2.00	2.54
dichlorvos[5]	1.88	0.04	2	0.42	1.31	0.00	1.06	1.31	0.79
Triazines									
terbutryn[6]	3.13	0.66	2	1.33	-0.12	0.95	1.21	1.94	2.38
atrazine[5]	2.35	0.07	2	1.95	1.64	0.00	1.04	1.62	1.96

[a] Superscripts indicate the source publication for the physico-chemical parameters.
[b] The average log K_f value for all passing data measured in distilled water at 25 °C (see Table SI-1).
[c] The standard deviation of log K_f for all passing data measured in distilled water at 25 °C (see Table SI-1).
[d] Total number of measurements over which measured log K_f values were averaged.
[e] The calculated log K_f using the physico-chemical parameters in Table SI-3 and the LSER relationship presented in Figure 4.

Table SI-4. LSER parameters for BTEX compounds

Compound	log $K_{fiber, avg}$ [a]	σ_{Kf} [b]	n_{total} [c]	R_i	π_i	α_i	β_i	$V_i/100$ (cm^3/mol)	log $K_{fiber, calculated}$ [e]
Benzene	1.99	0.22	5	0.61	0.52	0.00	0.14	0.72	2.07
Toluene	2.48	0.29	5	0.60	0.52	0.00	0.14	0.86	2.42
Ethylbenzene	2.80	0.31	5	0.61	0.51	0.00	0.15	1.00	2.76
o-Xylene	2.74	0.33	5	0.66	0.56	0.00	0.16	1.00	2.70

NOTE: All LSER parameters for the BTEX compounds were taken from (*2*).

[a] The average log K_f value for all passing data measured in distilled water at 25 °C (see Table SI-1).

[b] The standard deviation of log K_f for all passing data measured in distilled water at 25 °C (see Table SI-1).

[c] Total number of measurements over which measured log K_f values were averaged.

[d] The calculated log K_f using the physico-chemical parameters in Table SI-4 and the LSER relationship presented in Figure 4.

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