

Supplementary Materials: Addition of Carbonaceous Material to Aquatic Sediments for Sorption of Lindane and *p,p'*-Dichlorodiphenyldichloroethylene

Zhiyong Guo, Tianyi Chen, Xinzhou Wang, Liwen Zhang, Liting Wang, Deming Dong and Xiuyi Hua

Table S1. Isotherm parameters for lindane and *p,p'*-DDE sorption by the sediments.

Model	Parameters	Sediments	
		Lindane	<i>p,p'</i> -DDE
Linear $Q_e = K_H C_e$	K_H ($L \cdot g^{-1}$)	6.136 ± 0.315	20.865 ± 1.109
	R^2_{adj}	0.984	0.983
	K_F	7.381 ± 0.619	21.825 ± 0.632
Freundlich $Q_e = K_F C_e^n$	$((\mu g \cdot g^{-1}) \cdot (\mu g \cdot L^{-1})^{-n})$		
	n	0.778 ± 0.095	0.763 ± 0.056
	R^2_{adj}	0.948	0.978

Table S2. Isotherm parameters for lindane and *p,p'*-DDE sorption by different kinds of CMs.

Sorbents	Lindane					<i>p,p'</i> -DDE				
	Linear $Q_e = K_H C_e$		Freundlich $Q_e = K_F C_e^n$			Linear $Q_e = K_H C_e$		Freundlich $Q_e = K_F C_e^n$		
	K_H (L·g ⁻¹)	R^2_{adj}	K_F ((μg·g ⁻¹)·(μg·L ⁻¹) ⁻ⁿ)	n	R^2_{adj}	K_H (L·g ⁻¹)	R^2_{adj}	K_F ((μg·g ⁻¹)·(μg·L ⁻¹) ⁻ⁿ)	n	R^2_{adj}
SC	33.505 ± 2.194	0.974	34.202 ± 1.691	0.718 ± 0.112	0.927	197.718 ± 34.287	0.836	140.205 ± 18.127	0.478 ± 0.103	0.815
BC450	35.216 ± 1.614	0.988	35.517 ± 1.510	0.818 ± 0.099	0.964	88.075 ± 7.396	0.958	75.032 ± 2.145	0.632 ± 0.036	0.990
BC850	49.266 ± 5.148	0.938	49.321 ± 1.815	0.517 ± 0.062	0.967	254.072 ± 54.234	0.768	128.253 ± 22.714	0.385 ± 0.097	0.772
AC	732.923 ± 89.684	0.916	478.490 ± 26.746	0.518 ± 0.042	0.983	2402.997 ± 120.537	0.985	1515.394 ± 163.900	0.770 ± 0.051	0.987

Table S3. Isotherm parameters for lindane and *p,p'*-DDE sorption by the sediments with different contents of SC.

Sorbents	Lindane					<i>p,p'</i> -DDE				
	Linear $Q_e = K_H C_e$		Freundlich $Q_e = K_F C_e^n$			Linear $Q_e = K_H C_e$		Freundlich $Q_e = K_F C_e^n$		
	K_H (L·g ⁻¹)	R^2_{adj}	K_F ((μg·g ⁻¹)·(μg·L ⁻¹) ⁻ⁿ)	n	R^2_{adj}	K_H (L·g ⁻¹)	R^2_{adj}	K_F ((μg·g ⁻¹)·(μg·L ⁻¹) ⁻ⁿ)	n	R^2_{adj}
SD	6.136 ± 0.315	0.984	7.381 ± 0.619	0.778 ± 0.095	0.948	20.865 ± 1.109	0.983	21.825 ± 0.632	0.763 ± 0.056	0.978
0.5%SC	11.531 ± 0.275	0.996	12.042 ± 0.292	0.889 ± 0.045	0.990	48.734 ± 1.180	0.996	47.879 ± 1.378	0.907 ± 0.070	0.982
1.5%SC	13.040 ± 0.528	0.990	14.261 ± 0.235	0.785 ± 0.030	0.995	55.552 ± 3.348	0.978	52.710 ± 1.647	0.734 ± 0.054	0.982
3.0%SC	19.264 ± 1.172	0.978	20.922 ± 0.631	0.709 ± 0.059	0.975	81.149 ± 5.310	0.974	73.446 ± 4.760	0.743 ± 0.094	0.948
5.0%SC	25.666 ± 2.346	0.950	28.340 ± 0.930	0.585 ± 0.062	0.962	104.484 ± 12.421	0.918	81.592 ± 6.843	0.558 ± 0.085	0.920
9.0%SC	32.401 ± 3.629	0.926	35.693 ± 0.682	0.492 ± 0.033	0.985	133.226 ± 18.545	0.890	94.191 ± 4.621	0.476 ± 0.042	0.973