

Supplementary Materials

Contaminants	Methods	Surfactant	Dosage	Removal	Ref
PAH-mix 9	Ozonation and	Brij 35	1g/L	59.1%	[1]
	surfactant treatment				
PAH-mix 9	Ozonation and	Tergitol	1g/L	61.1%	[1]
	surfactant treatment				
PAH-mix 9	Ozonation and	Tyloxapol	1g/L	64.5%	[1]
	surfactant treatment				
ACN	Surfactant treatment	Tween 80	0.5g/L	78±0.2%	[2]
PHE	Surfactant treatment	Tween 80	0.5g/L	72±0.5%	[2]
FLU	Surfactant treatment	Tween 80	0.5g/L	69±1.0%	[2]
Anthracene	Surfactant treatment	Tween 20	0.5g/L	90%	[3]
Dye green	Polyelectrolyte and	Quartolan	1.02g/L	99%	[4]
	surfactant treatment				
PCB	EDDS and	Saponins	3g/L	45.7%	[5]
	surfactant treatment				

PCB	EDTA and	TX-100	3g/L	53.3%	[5]
	surfactant treatment				
Benzopyrene	Fenton oxidation	Brij 35	0.05g/L	85.7	[6]
	and surfactant treatment				

Table 1 The effects of surfactant on the removal of organic contaminants

The full names of the abbreviations in the table are listed as follows: polycyclic aromatic hydrocarbons (PAHs), polyoxyethylene lauryl ether (Brij-35), acenaphthene (ACN), polyoxyethylene sorbitan monooleate (Tween-80), phenanthrene (PHE), fluorene (FLU), octylphenoxy polyethoxy (Triton X-100), polyethylene glycol sorbitan monolaurate (Tween-20), polychlorinated biphenyl (PCB), ethylenediamine disuccinic acid (EDDS), and (Ethylenedinitrilo) tetraacetic acid disodium salt (EDTA).

[1] A. Bernal-Martínez, H. Carrère, D. Patureau, J.P. Delgenès, Combining anaerobic digestion and ozonation to remove PAH from urban sludge, *Process Biochemistry* 40 (2005) 3244-3250.

[2] X.J. Zheng, J.F. Blais, G. Mercier, M. Bergeron, P. Drogué, PAH removal from spiked municipal wastewater sewage sludge using biological, chemical and electrochemical treatments, *Chemosphere* 68 (2007) 1143-1152.

[3] A. Rodrigues, R. Nogueira, L.F. Melo, A.G. Brito, Effect of low concentrations of synthetic surfactants on polycyclic aromatic hydrocarbons (PAH) biodegradation, *International Biodeterioration & Biodegradation* 83 (2013) 48-55.

[4] G. Petzold, S. Schwarz, Dye removal from solutions and sludges by using polyelectrolytes and polyelectrolyte-surfactant complexes, *Separation & Purification Technology* 51 (2006) 318-324.

[5] M. Cao, Y. Hu, Q. Sun, L. Wang, J. Chen, X. Lu, Enhanced desorption of PCB and trace metal elements (Pb and Cu) from contaminated soils by saponin and EDDS mixed solution, *Environmental pollution* 174 (2013) 93-99.

Supplementary Materials

[6] V. Flotron, C. Delteil, A. Bermond, V.R. Camel, Remediation of Matrices Contaminated by Polycyclic Aromatic Hydrocarbons: Use of Fenton's Reagent, *Polycyclic Aromatic Compounds* 23 (2003) 353-376.