Supplementary Materials: Combining Coagulation/MIEX with Biological Activated Carbon Treatment to Control Organic Fouling in the Microfiltration of Secondary Effluent

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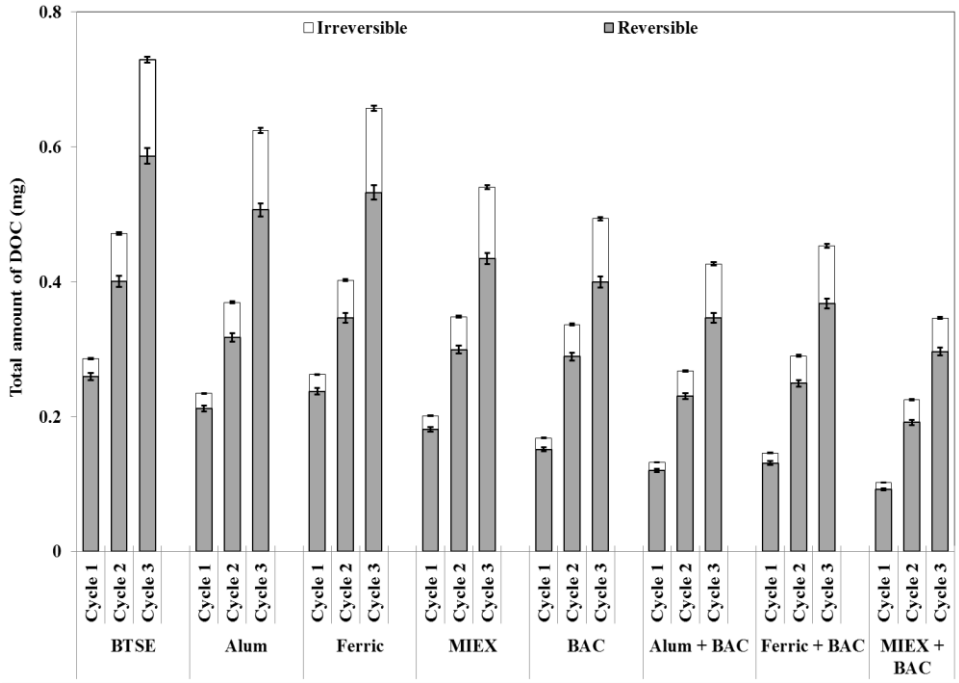
Table S1. Properties of the activated carbon used in the column.

Physical Properties	Virgin GAC
Surface area (BET m^2/g)	1017
Total pore volume (cm^3/g)	0.716
Micropore volume (cm^3/g)	0.297
Micropore content (%)	93
Mesopore content (%)	5
Macropore content (%)	2

Table S2. DOC removal using alum and ferric chloride coagulation.

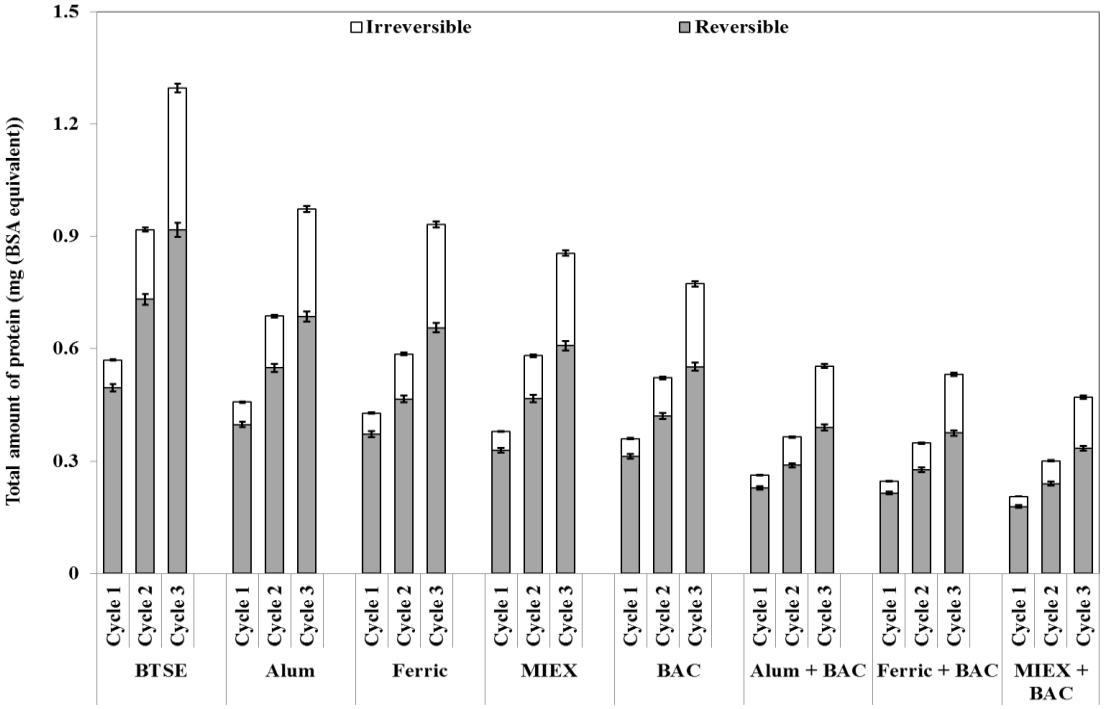
Coagulation	pH	Dosages (mg/L)			
		2.5 mg/L	5 mg/L	7.5 mg/L	10 mg/L
Alum	6	10.4	14.5	16.3	17.4
	5	12.5	16.3	17.8	18.4
	4	12.6	16.1	17.2	17.8
Ferric Chloride	6	14.6	15.8	18.1	19.8
	5	14.4	18.5	19.7	21.2
	4	13.6	19.2	20.1	21.8

Mass balance for organics in the filtration system

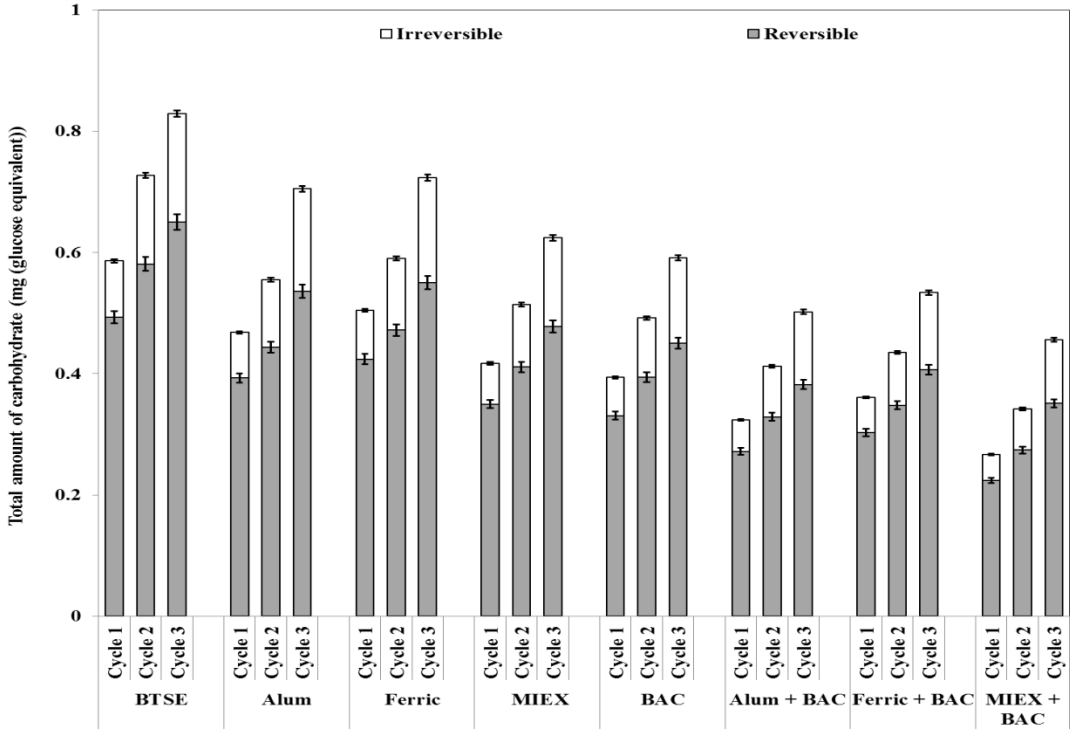


(**a**)

Figure S1. *Cont.*



(**b**)



(**c**)

Figure S1. Distribution of organics in reversible and irreversible fouling after MF (**a**) DOC; (**b**) protein and (**c**) carbohydrate contents (data points are average values of duplicate samples).

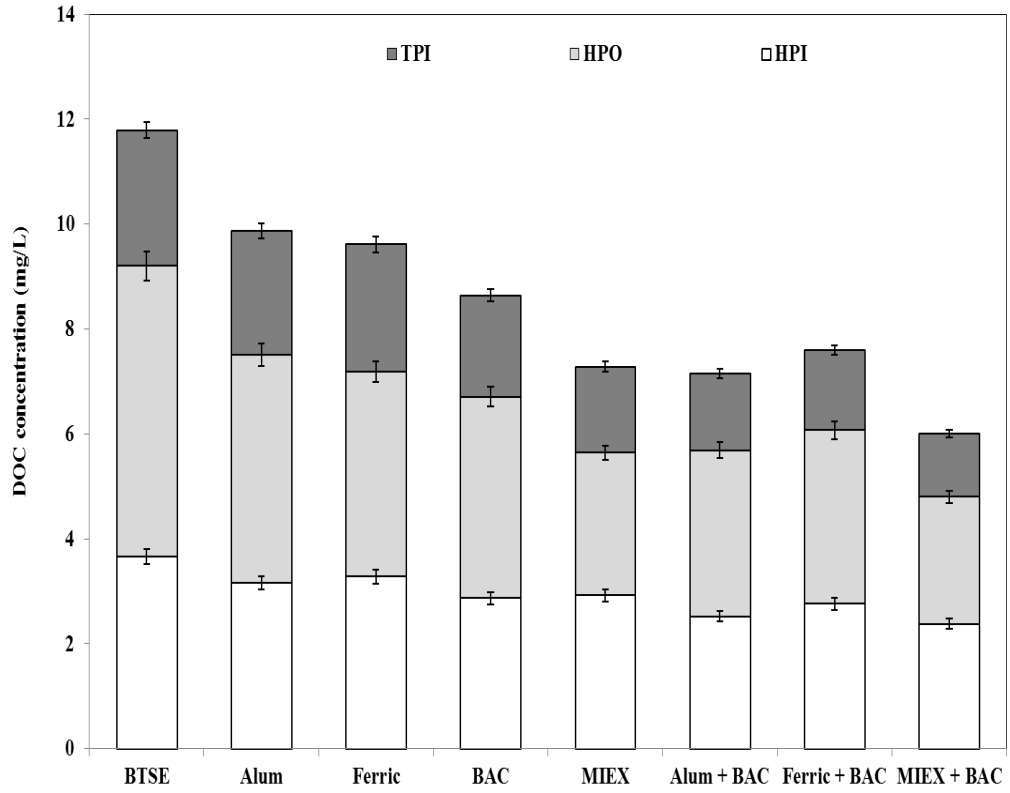


Figure S2. Organic fractions in BTSE and variously treated-BTSE samples (data points are average values of duplicate samples) (Note: HPI = hydrophilic, HPO = hydrophobic, TPI = transphilic).

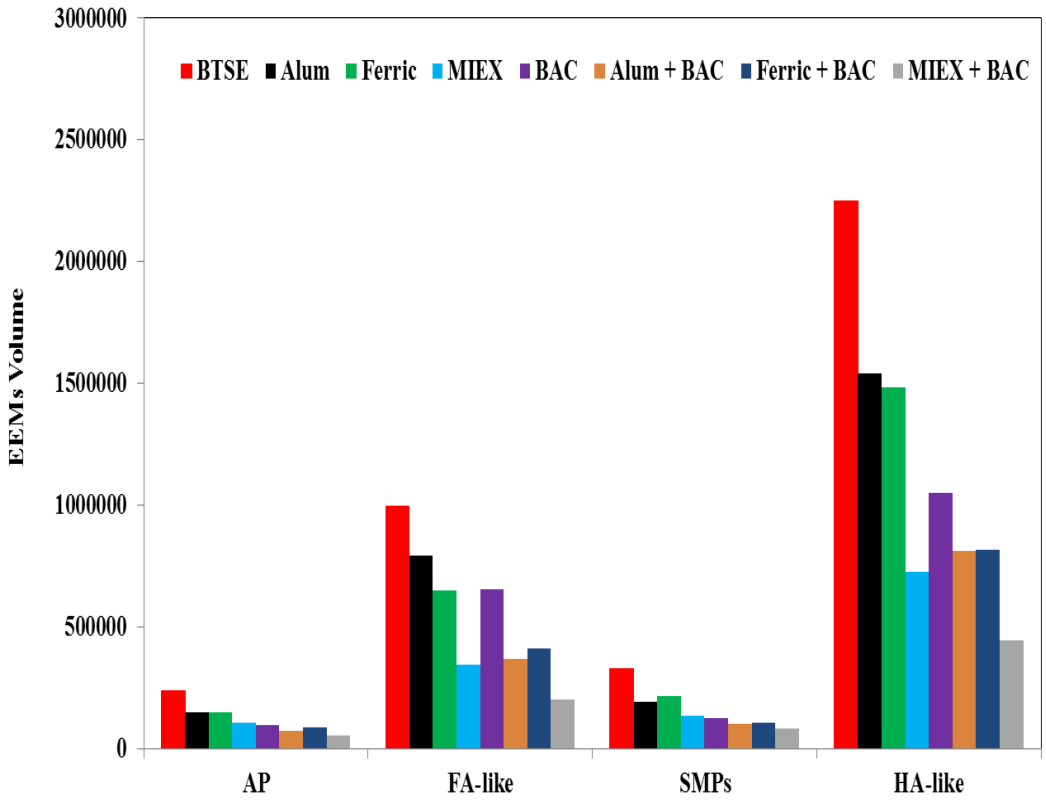


Figure S3. EEM spectrum volumes of the untreated and variously treated BTSE samples. (Note: AP = aromatic protein, FA = fulvic acid-like, SMPs = soluble microbial products, HA = humic acid-like).