

Tables:

Table S1 Active groups in sludge filter cake and filtration

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Active groups	Chemical bond	Sludge filter cake		Sludge filtration	
		Raw	Treated	Raw	Treated
		sludge	sludge	sludge	sludge
Alcohol hydroxyl (a)	a1(O-H)+a2(C-O)	D <sup>a</sup>	D	D	D
Amidogen (b)	b1(Stretching, N-H)+b2(Deformation, N-H)+b3 (Bending, N-H) +b4(C-N)	D	D	D	D
Carboxyl (c)	c1(O-H)+c2(C-O)+c3(C=O)	D	D	D	D
Aldehyde group (d)	d1(C-H)+d2(C-H)+d3(C=O)	D	D	ND <sup>b</sup>	D
Phenolic hydroxyl(e)	e1(O-H)+e2(C-O)+e3(C=C)+e4(C=C)	D	D	ND	D
Quinonyl (f)	f1(C=O)+f2(C=C)	D	D	ND	D
Phosphate group (g)	g(P=O)	D	D	ND	D
Sulfate group (h)	h1(O-H)+h2(S=O)	D	D	ND	D

<sup>a</sup> Detected—D; <sup>b</sup> Not Detected—ND