

Supplementary material

Zinc(II) adsorption by low-carbon shungite: The effect of pH

Axel R. Fischer *, Luisa Sgolik , André Kreller and Christina Dornack¹

Institute of Waste Management and Circular Economy (IAK), Technische Universität Dresden, Pratzschwitzer Str. 15, 01796 Pirna, Germany; axel_rene.fischer@tu-dresden.de; luisa.sgolik@mailbox.tu-dresden.de (L.S.); andre.kreller@mailbox.tu-dresden.de (A.K.); christina.dornack@tu-dresden.de (C.D.)

* Correspondence: axel_rene.fischer@tu-dresden.de; Tel.: +49-351-463-441-20

Characterization of Taurit (low carbon shungite)

The elemental composition of the Taurit sample used was determined by X-ray fluorescence analysis (RFA determination, Spectro XEPOS, Spectro Analytical Instruments GmbH & Co. KG, Kleve, Germany). 1 g CEREON® Licowax C micropowder wax binder (FLUXANA GmbH & Co. KG, Bedburg-Hau, Germany) was mixed with 4 g Taurit. The mixture was pressed to a 32 mm pellet with a hydraulic press (SPECAC Ltd., Orpington, England), and analyzed. All determinations were performed by triplicate. Table S1 shows chemical characteristics of the Taurit used.

Table S1. Results of the chemical characterization of the Taurit used. Average values for 3 replicates, with coefficients of variation always < 5%.

Element	Na	Mg	Al	Si	P	S	Cl
Value (%)	0.27	0.59	6.0	33	0.081	0.013	0.003
Element	K	Ca	Ti	V	Cr	Mn	Fe
Value (%)	2.1	0.47	0.42	0.16	0.018	0.031	4.1
Element	Co	Ni	Cu	Zn	Ga	Ge	As
Value (%)	0.006	0.012	0.012	0.023	0.002	0.001	0.003
Element	Se	Br	Rb	Sr	Y	Zr	Nb
Value (%)	0.001	< 0.001	0.013	0.022	0.005	< 0.050	0.002
Element	Mo	Ag	Cd	In	Sn	Sb	Te
Value (%)	0.002	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Element	I	Cs	Ba	La	Ce	Hf	Ta
Value (%)	< 0.003	< 0.005	0.075	< 0.009	< 0.012	0.001	0.005
Element	W	Hg	Tl	Pb	Bi	Th	U
Value (%)	0.001	< 0.001	< 0.001	0.005	< 0.001	0.002	0.001