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SUPPLEMENTARY MATERIAL

Biosorption of residual cisplatin, carboplatin and oxaliplatin antineoplastic drugs in urine after chemotherapy treatment

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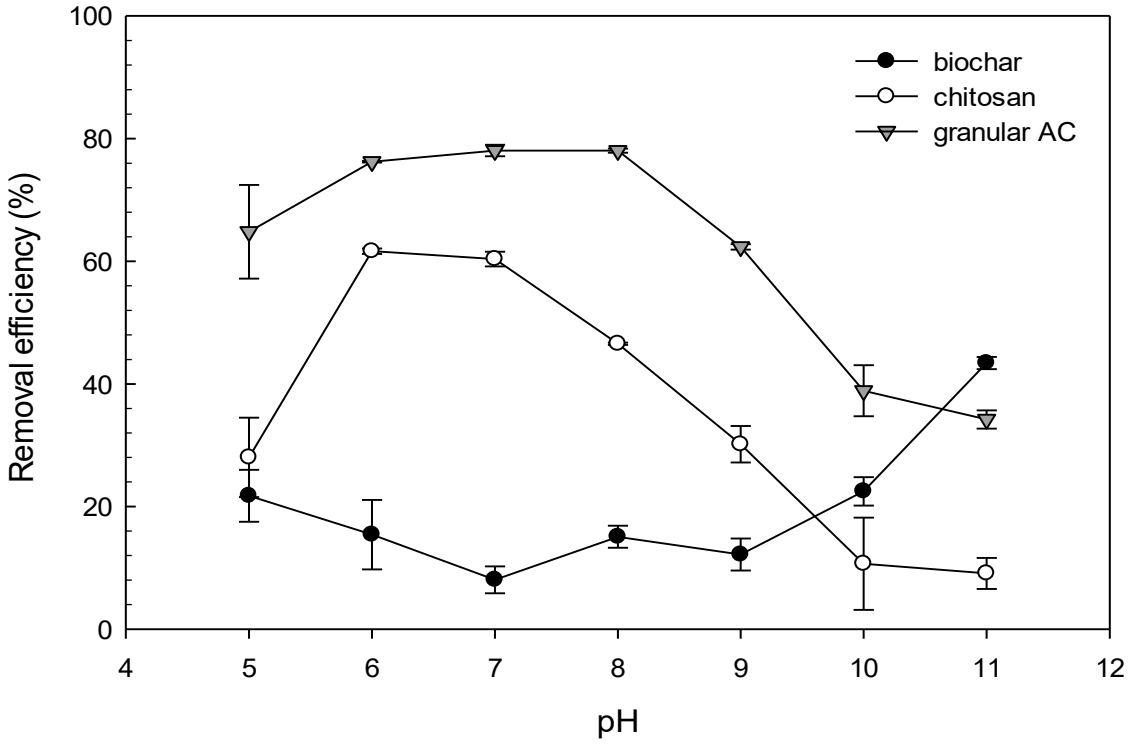

Figure S1 Relative removal of 100 µg L^{-1} $[PtCl_6]^{2-}$ in synthetic human urine by biochar, chitosan and AC at different pH levels. Error bars represent the standard deviation of *N* = 3 replicates. The removal of Pt^{IV} is pH dependent and highest efficiencies could be obtained by granular AC and chitosan in the neutral (6 < pH < 8) region. One-way ANOVA revealed that the effect of pH is significant for all biomaterials ($p < 0.001$).

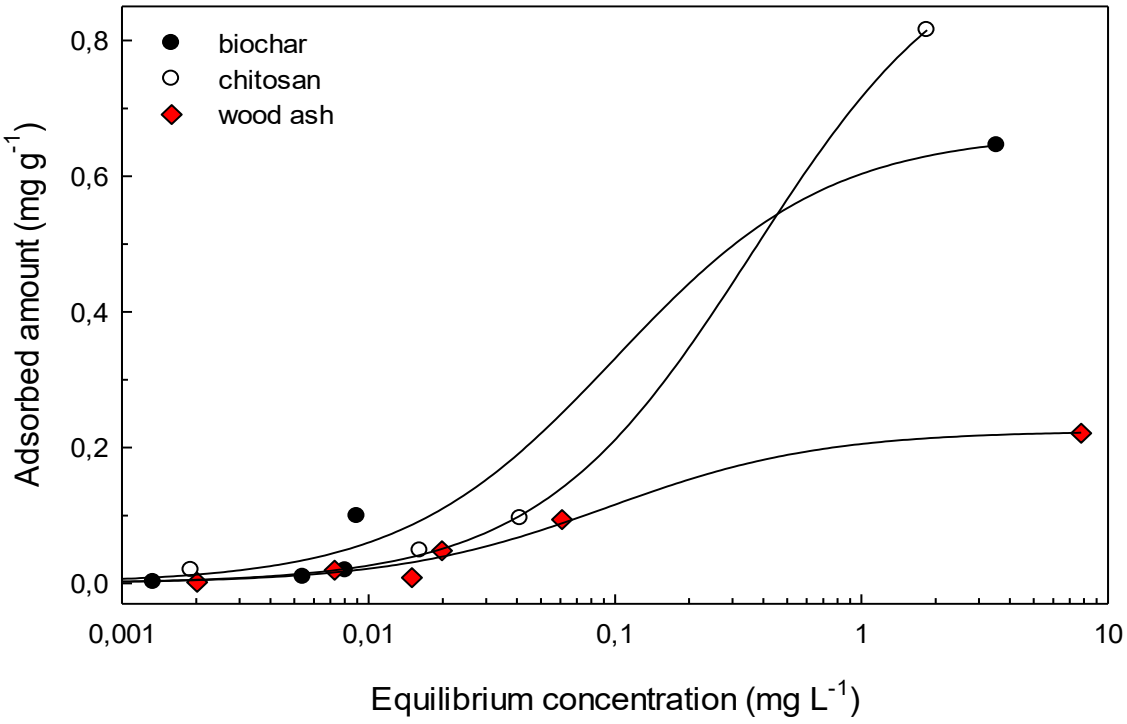

Figure S2 Langmuir adsorption isotherms of biochar, chitosan and wood ash for $[PtCl_6]^{2-}$ obtained from mixing 10 g L^{-1} biosorbent for 24 h in ultrapure water at pH 7. The Langmuir isotherms and Gibbs free energy associated to the reaction were derived using Equations S1 and S3 respectively and the resulting parameters are given below.

$$q_e = \frac{qK_L C_e}{1 + K_L C_e} \quad \text{(S1)}$$

$$\Delta G^0 = -10.92RT \ln\left(M_w \times K_L\right) \quad \text{(S2)}$$

Biosorbent	K_L **(L mg^{-1})**	q **(mg g^{-1})**	R^2
Biochar	9.965	0.664	0.990
Chitosan	2.773	0.974	0.993
Wood ash	10.68	0.225	0.985