Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary data

A green adsorbent for the removal of BTEX from aqueous media

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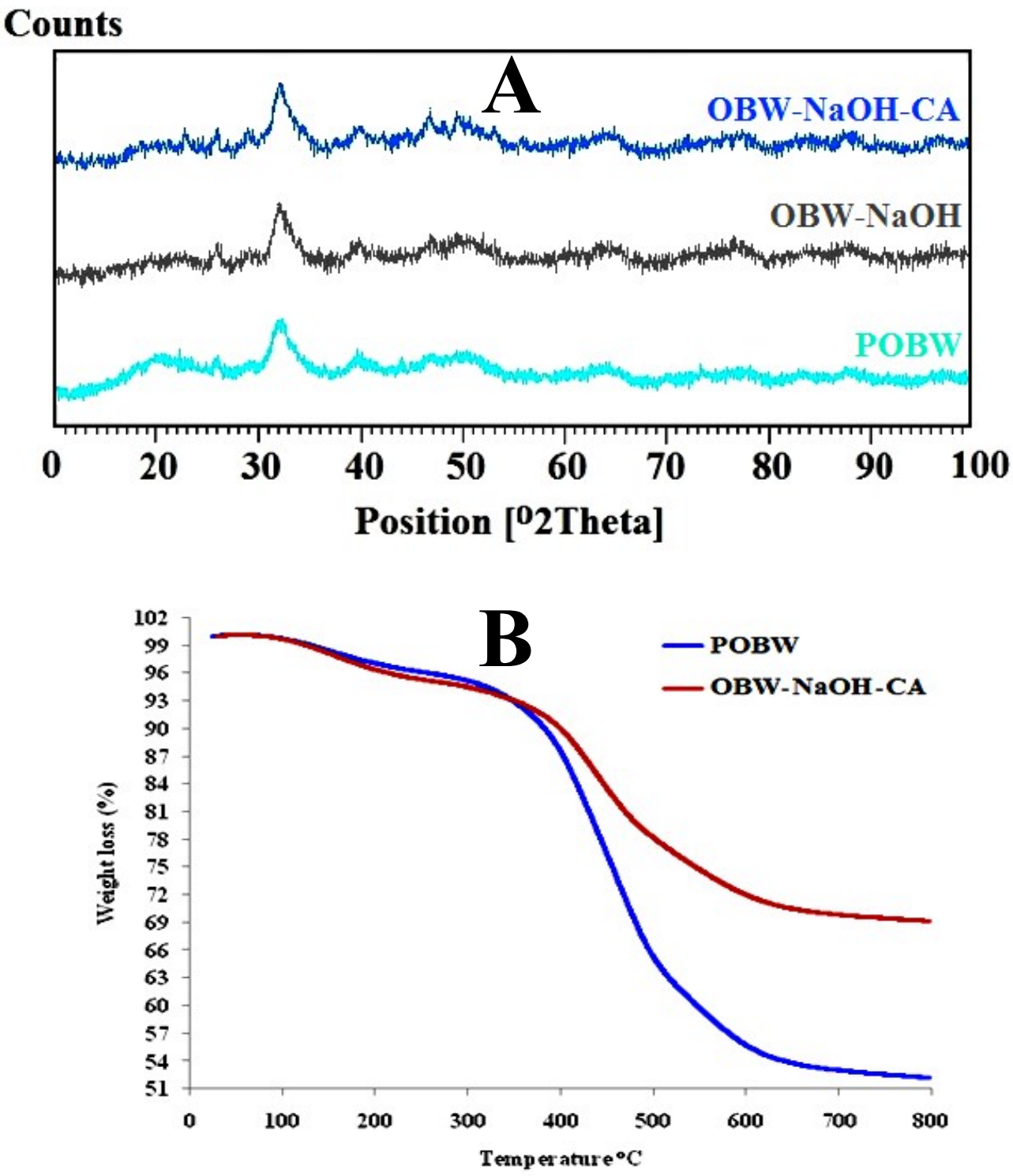

Fig. S1. Wide-range X-ray diffraction (A) and TGA curves (B) of the prepared biomaterials.

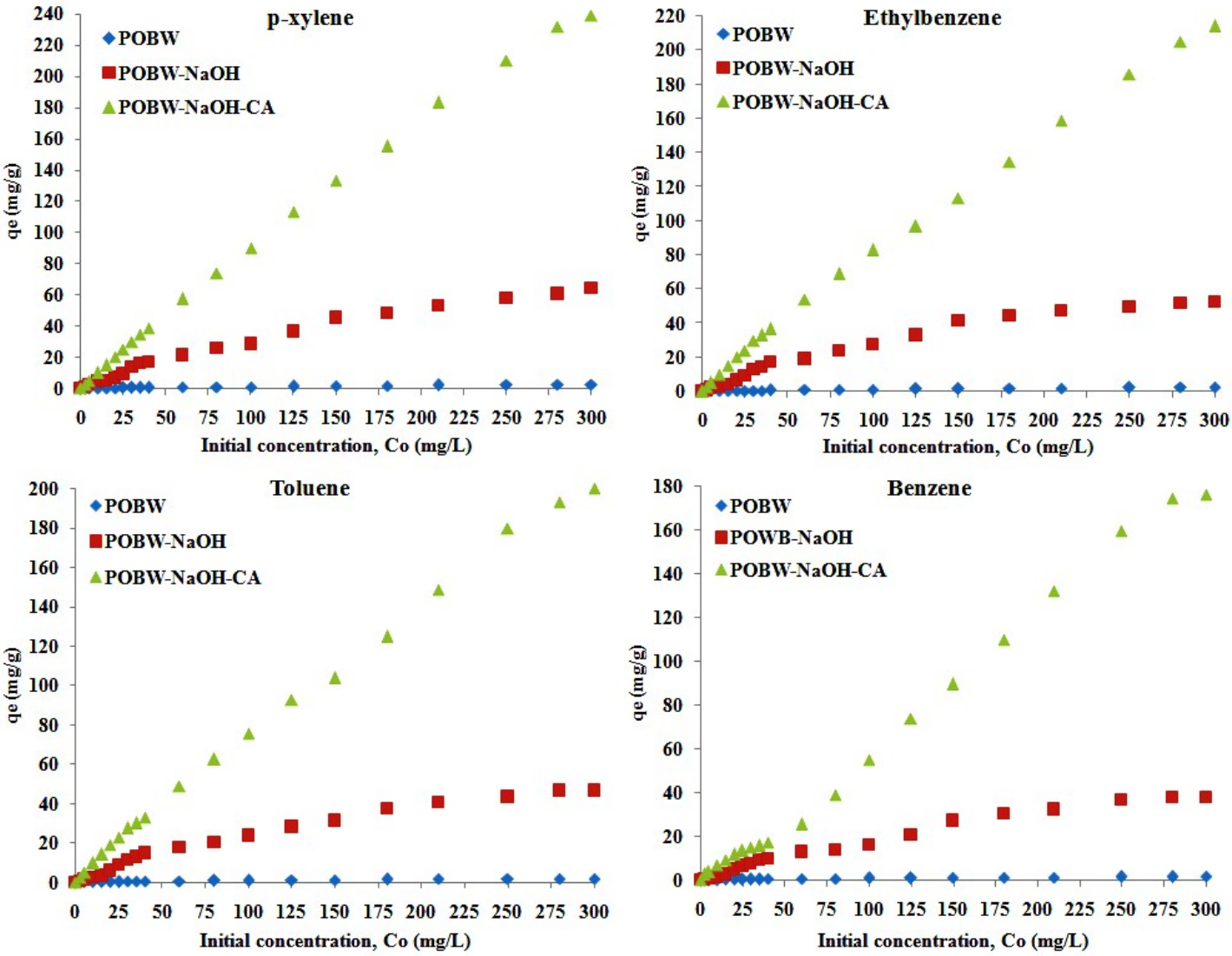

Fig. S2. Effect of initial concentrations for the adsorption of BTEX on the bone samples at 25 ^{o}C.

Table S1. Adsorption isotherm and kinetics equations.

Name	Equation*
Langmuir	$q_e = \frac{q_m K_L C_e}{1 + K_L C_e}$
Freundlich	$q_e = K_F C_e^{1/n}$
Pseudo-first-order	$q_t = q_e[1-exp(-k_1 t)]$
Pseudo-second-order	$q_t = k_2 q_e^2 t/1 + k_2 q_e t$
Intra-particle diffusion	$q_t = k_{int} t^{1/2}$
Initial adsorption rate	$h = k_2 q^2_e$

* q_e (mg g^{-1}) is the specific equilibrium amount of adsorbate, C_e (mg L^{-1}) is the equilibrium concentration of adsorbate, q_m is the maximal adsorption capacity and K (K_L and K_{LF}) (L mol^{-1}) and n are empirical constants that indicate the extent of adsorption and the adsorption effectiveness, respectively.