Uranium adsorption by biosourced hydroxyapatite with a large specific surface area

Supplementary Materials

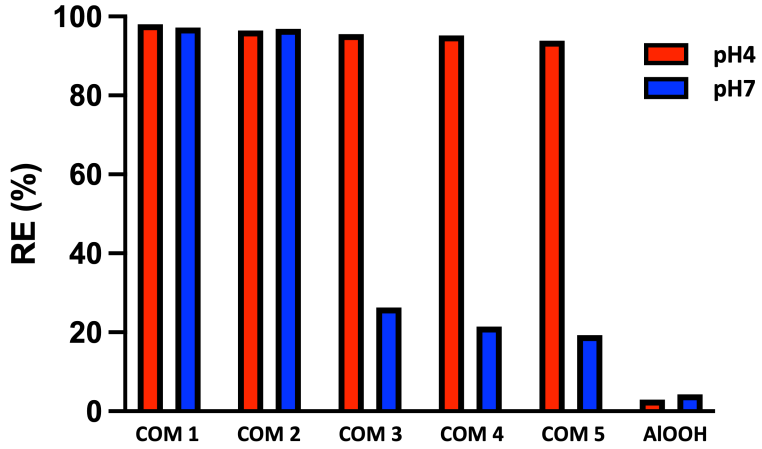


Figure S1: Uranium removal efficiency (RE) of 5 different commercial hydroxyapatite powders and a pseudoboehmite (AlOOH) at pH4 and pH7.

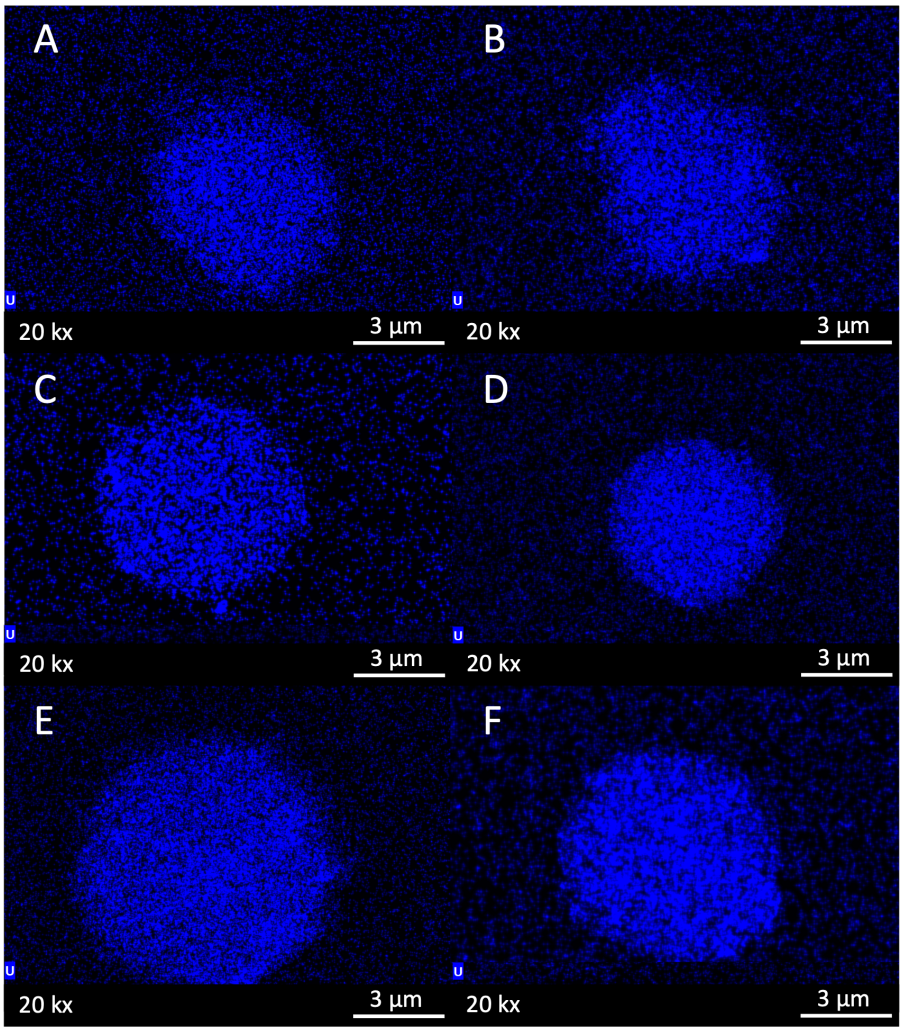


Figure S2: EDS of U-distribution on the surface of commercial HA [A-B], composite calcined bovine bones with AlOOH [C-D], HA obtained by OHT of bovine bones [E-F] after U extraction at pH 4 [A-C-E] and pH 7 [B-D-F].

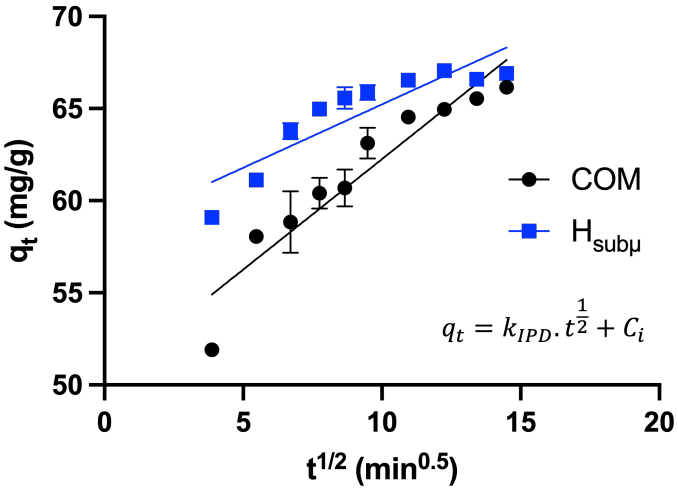


Figure S3: Comparison of the intra-particle diffusion in a commercial hydroxyapatite (COM) and the recycled bone ($H_{subμ}$) based on the Weber & Morris model.

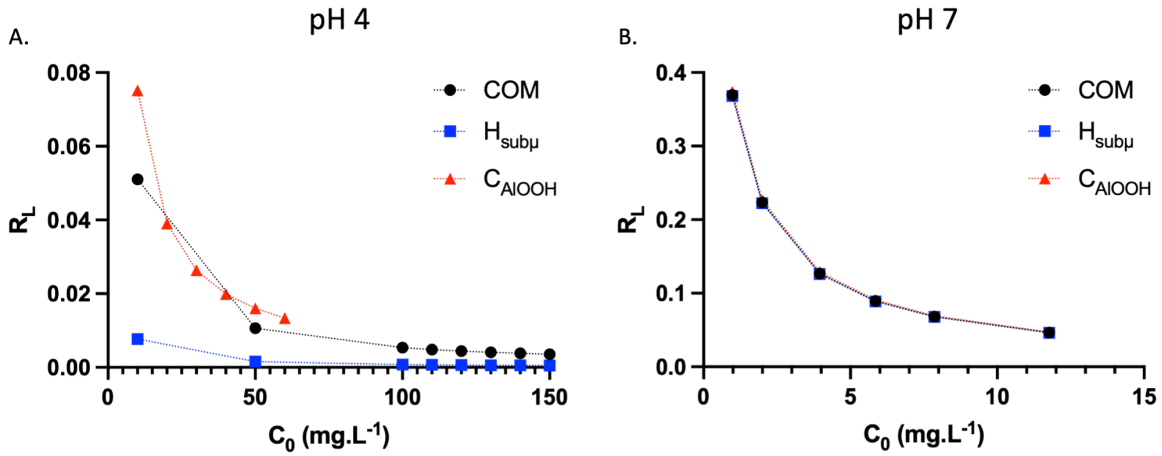
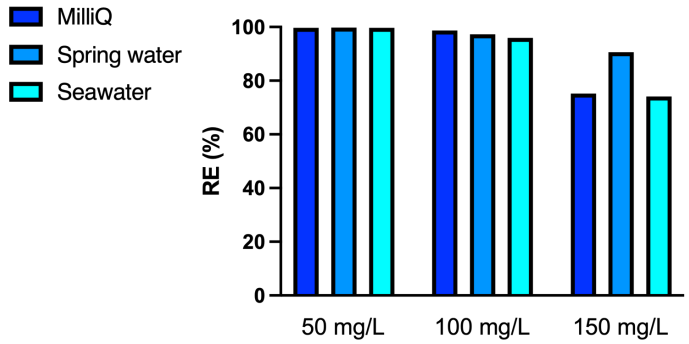


Figure S4: Distribution of the separator factor (R_L) as a function of the initial concentration in U(VI) at both pH4 (A) and pH7 (B).



Ion (mg/L)	Spring water	Seawater
Na^+	145	10,890
K^+	3	420
Ca^{2+}	136	428
Mg^{2+}	75	1,368
Cl^-	150	19,773
SO_4^{2-}	85	2,960

Figure S5: Influence of the presence of interfering ions on the removal efficiency of uranium at pH4.