

Biosorption Characteristics of lithium (I), strontium (II) and lanthanum (III) on Ca-alginate beads

송동수, 강현우, 한종인, 박승빈*
KAIST
(seungBinPark@kaist.ac.kr*)

Ca-alginate beads were investigated as a biosorbent for trace metal and rare earth ions. The adsorption ability of Ca-alginate beads toward three trace metal ions were studied under various conditions, e.g. initial concentration, contact time and pH. The adsorption characteristics of Ca-alginate beads were examined by means of kinetic model and adsorption isotherms. Competition experiments were carried out to find out the effect of coexisting ions on the sorption phenomena. Finally, X-ray photoelectron spectroscopy (XPS) analysis was conducted to figure out the effect of adsorption on beads and cations.