



Adsorción de Cr(VI) por Cocos nucífera L. en residuales de Fibrocemento en Santiago de Cuba [

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text (article)

Analítica

Adsorption and/or formation of complexes of heavy metals based on the chemical activity of biomass, is the process known as biosorption and is the base of a new technology for its removal in industrial effluent and its posterior recovery. In this technology, different kinds of biomasses can be utilized such as: algae, microorganisms and agricultural subproducts. In this work, the adsorption of Cr(VI) was studied, utilizing the nutshell of *Cocos nucífera L* plant's fruit as organic biomass. The optimal values of adsorption of Cr(VI) are: pH of 3 units, size of particle smaller than 0.074 mm, doses of adsorbent of 5 g.dm⁻³ and 1 hour of contact time. At low values of concentration of the metal (1.0, 1.5 and 1.84 mg.dm⁻³) percentages of removal superior to 90% were obtained; however, at high values of concentration (2.5 and 3 mg.dm⁻³) values inferior to 90 % are obtained. The process can be studied by the models of both, Langmuir and Freundlich, because the coefficient of correlation for these two models was 0.994 and 0.991 respectively. The ions Cr(VI) can be removed at values of 3 and 7 units in a real matrix, reaching removal values of 96.85% and 93.71% respectively

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Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es