Biosorption Of Cadmium(II) And Lead(II) On White-Rot Fungi (Phanerocheate Chrysosporium) Immobilized Bentonite

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Heavy metals spread by industrial wastewaters to the surrounding area cause serious problems injuring living organisms. Most of heavy metal ions are highly toxic and are not biodegradable; therefore they must be removed from the polluted streams in order to meet increasingly stringent environmental quality standards. Pb(II), Cd(II), Cr(III), Cu(II), Fe(III) are widely distributed in nature that tend to accumulate in organisms, causing numerous diseases and disorders. A method for the determination of Cd(II) and Pb(II) by atomic absorption spectrophotometry after preconcentrating on a column containing white rot fungi (Phanerocheate chrysosporium) immobilized on bentonite. Optimum pH values, amount of adsorbent, elution solution, flow rate have been obtained for the elements studied. The effect of interfering ions on the recovery of the analytes have also been investigated. Recoveries of cadmium and lead were approximately 95-97%.

References