Immobilization of *Coprinus plicatilis* onto different carriers

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Abstract

The utilization of immobilized cells has shown potential in several bioprocesses including wastewater treatment. Immobilization can be considered as the natural state for several microorganisms; for example, most fungi tend to attach firmly to natural surfaces. Therefore, it is not surprising that artificially immobilized microorganisms can produce extracellular secondary metabolites. In industrial operations, immobilized microbial cell systems could provide additional advantages over freely suspended cells such as simple reuse of the biomass, easier liquid-solid separation and minimal clogging in continuous-flow systems. The immobilization of microorganisms can be defined as any technique that limits the free migration of cells. Basically, there are two types of cell immobilization: entrapment and attachment. In the former, the organisms trapped within the interstices of fibrous or porous materials are physically restrained by a solid and porous matrix. Our research focused on the immobilization of *Coprinus plicatilis* on kaolin, Ca-alginate and gelatin. 3 or 4 age cells and different amount of cells were used for immobilization studies. To the best of our knowledge, the results showed that gelatin was chosen as a support material because it is a natural material with a higher immobilization capacity and is less expensive.

Biography

Hatice A Akdogan has completed her PhD and works at the Pamukkale Umiversity in the Department of Chemistry, Biochemistry subdivision as an Associate Professor. She studies Environmental Biotechnology, Water and Soil Bioremediation, Chromatographic Monitoring of some organic contaminants during microbial biodegradations, microbial enzymes and their roles.

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