

Successful Immobilization of Alcohol Dehydrogenase on Natural and Synthetic Support and Its Reaction on Ethanol

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Abstract : We have immobilized alcohol dehydrogenase on k-carrageenan, which is a natural polysaccharide obtained from seaweeds by entrapment and on copolymer of acrylamide and 2-hydroxy ethylmethacrylate by covalent coupling. We have optimized all the immobilization parameters and also carried the comparison studies of both. In case of copolymer of acrylamide and 2-hydroxy ethylmethacrylate, we have activated both the amino and hydroxyl group individually and simultaneously using different activating agents and obtained some interesting results. We have found that covalently bound enzyme was found to be better under all tested conditions. The reaction on ethanol was carried out using these immobilized systems.

Keywords : alcohol dehydrogenase, acrylamide-co-2-hydroxy ethylmethacrylate, ethanol, k-carrageenan

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