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Dextranase from Penicillium sp. strain 61 has been immobilized on 8-16 mesh activated carbon via covalent binding by the use of 3-aminopropyltriethoxysilane and glutaraldehyde as activator and intermolecular cross-linker respectively. The optimum conditions for immobilization were : 2% (v/v) 3-amino-propyltriethoxysilane, 2.5% (v/v) glutaraldehyde and 25 units/ml of crude dextranase at room temperature, pH 6. Times required for activating, cross-linking and enzyme immobilizing were 3,2 and 2 hours respectively.

Characteristics of the immobilized enzyme have been studied and revealed, it was found that the immobilized form possesses higher specific activity, more stable to pH and temperature effects compared to native from while optimum operating pH shifed from 5.5 to 5.0 and optimum temperature remained unchanged. A half-life of over 45 days was obtained when the immobilized enzyme was stored in 0.1 M. phosphate buffer pH 7, 4°C. Moreover, the apparent Km of the immobilized enzyme toward its substrate, dextran T-2000 was lowered to 9.1×10^{-7} M.

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