The Studies on Reversible Immobilized Chitinase and Protease from Bacillus sp.

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ABSTRACT

This research regards reversible solubility AS-L as immobilized carrier to fix enzymes produced from Bacillus cereus TKU006, B. subtilis TKU007, papain and bromelain. To probe into diversities of protease and chitinase in dissociated form and immobilized form, with the most opportune response temperature, hot stability, the most opportune response pH, pH stability and the percentage of recycle of immobilized enzymes, Futher substrate specifity. The experimental results show, to probe into dissociated form and immobilized form, it is with protease of papain and chitinase of bromelain in the most opportune response temperature. It is with protease of B. cereus TKU006 in the most opportune response pH. At the stability experiment, they were all stability, which the immobilized enzymes were more stability. At the percentage of recycle of immobilized enzymes, they all had more than 60% relative activity after 7 times of recycles. At the substrate specifity, immobilized enzyme of bromelain had higher activity which hydrolyze albumin. bromelain had the highest activities to hydrolyze artificial substrate of protein whether immobilized enzyme or free enzyme.

Keywords : B. cereus, B. subtilis, AS-L, protease, chitinase

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