Purification and Characterization of a Solvent Stable Protease from Bacillus sp.TKU004

高德一、王三郎 ; 顏裕鴻

E-mail: 9417979@mail.dyu.edu.tw

ABSTRACT

The protease-producing bacterium, Bacillus sp.TKU004, was isolated from soil in the central Taiwan. The optimized culture was composed of 2% squid pen powder(SPP), 0.1%K2HPO4, 0.05%MgSO4．7H2O at pH7. The bacterium was incubated in 250mL Erlenmeyer flask containing 100mL of above liquid medium and kept shaking at 30°C for four days. The protease of Bacillus sp.TKU004 was produced under the optimized culture condition. The supernatant was first precipitated by ammonium sulfate. The further purification and separation procedures of protease were processed by DEAE-Sepharose , CM-Sepharose ionic exchange chromatography, and Sephacryl S-200 gel chromatography. The overall activity yield of the purified protease were 14%, with specific protease activities of 0.062 U/mg. The optimum temperature and pH of the emzyme were 60°C and 7 respectively, and the emzyme was stable at

Keywords : Bacillus sp.TKU004, protease, squid pen, deproteinization

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