## عنوان مقاله:

Production of Extracellular Protease and Determination of Optimal Condition by Bacillus Licheniformis BBRC ۱۰۰۰۵۳ ((RESEARCH NOTE

## محل انتشار:

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## خلاصه مقاله:

The production of protease by Bacillus licheniformis BBRC ۱۰۰۰۵۳ was studied. The most appropriate medium for the growth and protease production is composed of: lactose ۱%, yeast extract ۰.۵%, peptone ۰.۵%, KH۲PO۴ ۰.۱%, MgSO۴.۷H۲O ۰.۰۲%. Enzyme production corresponded with growth and reached a maximums level (۵۸۹ U/ml) during the stationary phase at ۳۵°C, pH equivalent to ۱۰ and with ۱۵۰ rpm after ۷۳ hours. Protease activity was highest at pH ۸ and ۴۵°C. The best carbon sources are respectively lactose and maltose and the best nitrogen source is peptone. The protease was highly active and stable from pH ۷.۰ to ۱۱.۰ with an optimum at pH ۷-۸. Thermo stability of the enzyme was considered in the presence and absence of ۲mM CaCl۲. Enzyme is non stable at temperatures higher than ۵۰°C while the thermal stability was enhanced in the presence of Ca۲+. The enzyme retained ۱۵ and ۸% of its initial activity after heating for ۶۰min at ۶۰°C in the presence and absence of ۲mM CaCl۲, respectively and retained ۷ . .and ۳% of at ۷۰°C in the presence and absence of ۲mM CaCl۲

## کلمات کلیدی:

Protease, Bacillus licheniformis, Thermo Stable Protease, Enzyme, optimization

## لینک ثابت مقاله در پایگاه سیویلیکا: