

ABSTRACT

Present study describes the production and purification of alkaline protease from *Aspergillus niger*. Different physical parameters were optimized for the maximum production of protease enzyme, such as temperature of incubation, incubation period, pH of medium and different levels of moisture content. The maximum production of protease enzyme was obtained after incubation of 96 hrs. at 30°C with optimum pH of 8. Glucose was used as a carbon source for maximum protease production. The medium containing Na₂CO₃, KH₂PO₄, MgSO₄, and Polypeptone, showed the maximum protease production. Fractional purification of enzyme was carried out with 70% ammonium sulfate precipitation where the enzyme showed the maximum purification with 1.39-fold with specific activity of 48 U/mg. To determine the molecular weight of protease produced from *A. niger*, SDS-PAGE analysis was done. The purified enzyme was used to form the hydrolysates from the rice proteins. To check the degree of hydrolysis, biuret test was used and followed by the spectrophotometry.