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Purification and characterization of acido-thermophilic xylanase from aspergillus terrus

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Abstract

Purification and characterization of extracellular xylanase from *Aspergillus terrus* was recorded. The enzyme was purified to homogeneity by salting out with ammonium sulphate, dialysis and passage through gel chromatography resins (Sephadex G-200, Sephadex G-100 columns) followed by anion exchange chromatography (Diethylaminoethyl Sephadex column). The purified enzyme resulted in 516.4 fold increase over the crude extract exhibited a specific activity of 175.6 unit/mg protein with the recovery of 30.6 %. Two criteria for the purity of the purified *A. terrus* extracellular xylanase were used. DEAE-sephadex column (final stage of purification) resulted in a single sharp peak of *A. terrus* pure xylanase. The second criterion was given by applying SDS-PAGE electrophoresis technique. The molecular weight of *A. terrus* extracellular xylanase was 33 KDa. Studying factors affecting the activity of the purified xylanase were determined. An optimum temperature and pH for the acidothermophilic purified xylanase were 50 °C at pH 4, respectively.

Author Keywords

Aspergillus; Characterization; Purification; Xylanase

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