

RESEARCH PAPER

Cellulytic activity of a thermophilic fungus *Aspergillus fumigatus* isolated from paper industry effluent

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Cellulases are used in numerous industrial applications and for cellulose conversion to value added products. A cellulase producing thermophilic *Aspergillus fumigatus* was isolated from paper industry effluent sample after 72 h incubation on potato dextrose agar at 45°C. In the present study the production of cellulase enzyme by *Aspergillus fumigatus* cultivated on wheat bran: rice straw (1:4) using solid state fermentation (SSF) technique. The ability to produce cellulase under varying conditions of temperature, pH, moisture content, and nitrogen sources was evaluated. The higher cellulase activity was obtained when the fungus was cultivated on substrate (wheat bran: rice straw (1:4)) with moisture content (1:4), pH 5.5, urea as nitrogen source and incubated in environmental chamber at 45°C for 3 days as it give 1.85FPU/ml.

Key words : Cellulase, Thermophilic, *Aspergillus fumigates*, Paper industry, Solid state fermentation

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