ABSTRACT

Sixty eight fungal strains isolated from different agricultural lands were screened for xylanases activity. The strain Xy31 gave maximum production of xylanases (6.28 U/ml). The conditions for xylanases synthesis were optimized for their enhanced production in 250 Erlenmeyer flask under submerged fermentation. The highest yield (6.32 U/ml) was obtained using 1% wheat straw as carbon source and 0.3% urea as nitrogen source at pH 5.5, when it was incubated at 30°C for 96 hours using 1ml inoculum size and 0.5mm particle size. The xylanase produced after optimization was partially purified by ammonium sulphateprecipitation and characterized to find out its maximum conditions for functionality. The enzyme was most active at pH range of 5 to 5.5. The working temperature range for partially purified enzyme was from 45 to 50°C. However the maximum activity of partially purified xylanase achieved at pH 5.5 and temp 45°C, similar to the production conditions.