

ABSTRACT

The present study is concerned with the production of cellulase-free xylanase by *Thermomyces lanuginosus* in shake flask. Different culture media were tested for the production of enzyme and medium containing (% w/v) $(\text{NH}_4)_2\text{SO}_4$ (1.4), KH_2PO_4 (2.0), Urea (0.3), $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ (0.3), $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ (0.0014), $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ (0.005), MnSO_4 (0.0016), CoCl_2 (0.002), CaCl_2 (0.002), Tween-80 (2.0 ml) and polypeptone (1.0) was found to be comparatively better for the xylanase production. Wheat straw, an inexpensive and abundant source of carbon, supported maximal xylanase activity (97 U/ml). The culturing conditions such as incubation temperature (50°C), initial pH (7.0) inoculum size (1 %) and nitrogen sources were also optimized. The maximal production of xylanase (125 U/ml) was achieved in 72 hours after inoculation.