BIOCHEMICAL PROPERTIES OF THE ENDOXYLANASE AND β-XYLOSIDASE PROUCED BY *ASPERGILLUS OCHRACEUS*

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Xylan is the main component of hemicellulose and it is a complex molecule consisting of a backbone of β-1,4-linked xylose residues. However, in nature, acetyl 4-*O*-methyl-D-glucuronosyl and/or L-arabinofuranosyl substitute some residues. Because of the complexity of the xylan molecule, its complete breakdown requires the concerted action of several enzymes, such as endoxylanase and β-xylosidase. Xylanases have potential applications in food and feed industries, textile processes, enzymatic saccharification of lignocellulosic materials and waste treatment. The aim of this work was determine some biochemical parameters of the endoxylanase and β-xylosidase from *A. ochraceus.* Endoxylanase activity was determined using Birchwood xylan as substrate. The reducing sugar released was quantified with 3,5 dinitrosalicylic acid (DNS). *Aspergillus ochraceus* was cultivated using Birchwood xylan as carbon source in Adams medium, at 30ºC, under 100rpm, for 120 hours. The optimal temperature and pH to hydrolysis of the substrate were 60ºC and 5.0 to endoxylanase and 75ºC and 3.0-5.0 to β-xylosidase, respectively. The endoxylanase and β-xylosidase were stable for one hour at 55ºC. At 60ºC both enzymes exhibited a t_{50} of approximately 55 minutes. Endoxylanase and β-xylosidase also were pH stable. The characteristics of the *A. ochraceus* enzymes, such as high temperature optimum, thermostability, and pH stability, suggest a possible practical application for this enzyme.

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