Production and properties of an extracellular xylanase from *Aspergillus japonicus*

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Xylanase is the key enzyme for xylan depolymerization and cleaves internal glycosidic bonds at random or at specific positions of the xylan backbone into small oligomers. Xylanase have been extensively studied and could potentially be employed for the production of hydrolysate from agro-industrial wastes, nutritional improvements of lignocellulosic feeds, processing of food, increasing animal feed digestibility and for cellulose pulp biobleaching. A variety of microorganisms, including bacteria, yeast and filamentous fungi, have been reported to produce xylanase, in which the most potent producers are fungi. Xylanases are produced mainly by *Aspergillus* and *Trichoderma* sp. on an industrial scale. The objective of this work was to characterize the xylanase activity from *Aspergillus japonicus*. Xylanase was induced by wheat flour. Maximum enzyme production was achieved after 96h cultivation. It exhibited an optimal activity at 55^{o}C and pH 5.0, respectively. The xylanase was activated by KCl up to 142% of activity and was strongly inhibited by Hg^{+2}, Ba^{+2} and Cu^{+2} up to 49%, 33% and 22%, respectively. These findings in this study have great implications for the future applications of the xylanase.

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