

Activity of Cellulase of Filamentous Fungi Isolated From Substrate Lignocelulolitic

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By use of extracellular enzymes such as cellulases, the fungi are the main decompositor of substances that make the structural role of the body being broken, such as cellulose and lignin. The hydrolysis of cellulose by cellulases results in the final production of glucose. The scientific community has shown strong interest in cellulases because of its applications in industry such as starch processing, production of food, alcoholic fermentation from grain and malt, extraction of juice from fruits and vegetables in the industry of fruit pulp and paper and textile industry. Therefore this study aimed to evaluate the potential for production of cellulase by fungi from the collections - RMU Department of Mycology of the CCB come from sugar cane bagasse. We used 8 species of fungi. The cultures were maintained in medium BDA. The lines were grown in a synthetic medium with cellulose (treated) as the sole source of carbon. The fungi were inoculated with needle in the center of Petri dishes. These were incubated for 4 days at 28 degrees C and then were subjected to thermal shock for 16 h at 50 ° C. After that period, were added to 10 mL solution of red dye congo (2.5 g / L) in 0.1 M Tris HCl buffer, pH 8.0. After 30 minutes the solution was discarded and the cultures were washed with 5 mL of solution of NaCl 0.5 M in the same buffer. The diameters of the colonies and halos produced were measured with caliper. For the selection was an index enzyme which is the result of the diameter of the halo by the colony, and through this it was noted that the index ranged between 3.00 for *Aspergillus niger* and 5.42 for *Fusarium moniliforme*, while the halo indicator of degradation was not observed in the fungus *Rhizopus arrhizus*. The fungus *Fusarium moniliforme* presents itself to promising research into the production of cellulase lignocelulolitic substrates, which already had a high rate of degradation in relation to other species.

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