

عنوان مقاله:

An Investigation on Lipase Production from Soybean meal and Sugarcane Bagasse in Solid State Fermentation using *Rhizopus oryzae*

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خلاصه مقاله:

In this study, solid-state fermentation of two types of agricultural residues/products for lipase production in a tray-bioreactor was investigated. *Rhizopus oryzae* was used as a potential fungus strain and two types of agricultural residues including soybean meal and sugarcane bagasse were utilized as substrates. Fermentation was carried out under two different operational conditions: one with controlled temperature and humidity, and the other without any controlling unit. Lipase activity remarkably increased in the former system using either of substrates, while maximum lipase activities were achieved after 72 hours of fermentation. Also, optimum conditions for lipase activity were identified with cabin temperatures of 35 and 45°C, cabin moisture content of 70 and 80%, pH value of 7.0 and 8.0 and enzyme assay temperature of equally 50°C for bagasse and soybean meal. Maximum lipase activities under optimum conditions were 199.66 and 235.79 U/gds for bagasse and soybean meal, respectively.

کلمات کلیدی:

Lipase, Enzyme activity, sugarcane bagasse, soybean meal, *Rhizopus oryzae*

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