



## SHAKE FLASK STUDIES FOR THE PRODUCTION OF PENICILLIN G ACYLASE FROM *ASPERGILLUS NIGER*

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### ABSTRACT

Thirty different strains of fungi were isolated from local habitats. The cultures were grown aerobically under submerged condition in 250 ml shake flasks containing 50 ml basal media. Lactose was used as a source of carbon. The enzyme activity was determined by quantification of 6-amino penicillanic acid in the reaction mixture. After screening and identification of 12 fungal strains, only one strain of *Aspergillus niger* (17-M) was showing the highest activity of enzyme (40 IU/ml). Out of seven different carbon sources studied, 0.4% lactose was found as the best carbon source, which exhibited the highest enzyme activity (48 IU/ml) at pH 5.5. The conversion rate of 3% and 5% potassium salt of benzyl penicillin by penicillin G acylase of *A. niger* (17-M) was 35% and 26%, respectively. Km value (0.82 mM) was promising in terms of better enzyme production.

**Key words:** *Aspergillus niger*, penicillin G acylase, phenyl acetic acid, 6-amino penicillanic acid.

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