

## ABSTRACT

The present work is concerned with the production of  $\beta$ -galactosidase by *Aspergillus oryzae* GCB-32 by submerged fermentation in shake flask. Six culture media such as whey, wheat bran, corn steep liquor, soybean meal and complex media were evaluated for the synthesis of enzyme. Of all the substrates examined, wheat bran (1.0 %) in distilled water gave maximum  $\beta$ -galactosidase activity (30.0  $\mu$ M/ml) 48 h after the inoculation with fungal conidia. The initial pH 5.5 was suitable for enzyme formation. Further decrease in initial pH level reduced the enzyme synthesis. The volume of the fermentation medium was also changed, 50 ml per flask was most suitable for the propagation of mould, hence enzyme formation. Effect of the size of inoculum (conidial or vegetative) was also investigated. The yield of enzyme was better with the use of conidial inoculum rather than vegetative inoculum.