ALPHA-AMYLASE PRODUCTION FROM Aspergillus oryzae M BY SUBMERGED FERMENTATION

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The main goal of present study was implementation of the Aspergillus oryzae M strain improved technology using earlier developed method of microorganism selection. 8 pure strains of Aspergillus
fungi were screened for the production of extra cellular alpha-amylase using agar medium with starch as a substrate and incubated for 72h at 30 ºC. Zone of clearance was observed for screening of the amylolytic fungi (in mm).

Aspergillus oryzae M

has demonstrated the highest zone of clearance.

Aspergillus oryzae M

was cultivated for 42 days in submerged conditions of growth using new method of fungal cultivation. This method based on immobilizing enzymes producers on solid career in submerged conditions of growth gives the way to improve quality of filtrates, which remain clear, does not require additional filtering and easily separated from the mycelium. Moreover, it allows to prolong the process of fungal cultivation and to maintain high enzymatic activity for a long period of time. Presented method allowed increasing alpha-amylase production from 321 U/ml (before immobilization) to 502 U/ml (after immobilization).

**Key words**: α-amylase, *Aspergillus oryzae*, submerged fermentation, immobilization.

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