

Immobilization of Polymethylgalacturonase Producing *Aspergillus niger* on *Luffa* Sponge Material

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The vegetable sponge of *Luffa cylindrica* was studied as a matrix for the immobilization of *Aspergillus niger* 26, producer of polymethylgalacturonase (PMG). Entrapped spores could grow and multiply within the lattice of the sponge. The influence of loofa sponge inoculum content, initial spore inoculum content, and duration of the growth cycle on the enzyme activity and mycelium growth was studied. The best yield of PMG was reached with 1 piece of loofa sponge (approx. 0.10 g dry weight), 10^9 spores per g carrier and 48 h duration of one cycle. Data obtained during long-term semicontinuous cultivation showed that production capacity increased significantly and the production period was extended more than 10 times compared with the free cell culture.

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