



RESEARCH PAPER

# Micro-organism isolation and process optimization for lipase production

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A highly lipase producing *Bacillus* sp. was isolated from soil under optimized culture conditions such as medium pH, temperature, incubation period, carbon sources, nitrogen sources, lipid sources and various surfactants at different concentrations. The medium pH of 7.0 and temperature of 40 °C were optimum for maximizing lipase production. The maximal yield of lipase production by *Bacillus* sp. was obtained after incubation periods ranging between 3 and 4 days. Casein produced maximum lipase (6.5±0.015) U/ml) as compared to others nitrogen sources and the medium containing starch was more suitable for maximum lipase (15.60±0.20) U/ml) production than other carbon sources. The gingily oil was found to be most suitable for maximizing the lipase production (20.52±0.20) U/ml). The studies on the influence of surfactants on lipase production revealed that maximum lipase production was induced by tween-20 ((27.10±0.01) U/ml).

**Key words** : Lipases, *Bacillus* sp., Hydrolysis, Optimization

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