

**A new thermostable lipase by Aneurinibacillus thermoaerophilus strain HZ :
nutritional studies.**

ABSTRACT

A thermophilic Aneurinibacillus thermoaerophilus strain HZ producing a thermostable lipase was isolated from hot spring in Malaysia. Maximum lipase production by A. thermoaerophilus strain HZ was obtained at pH 7.5 when grown under shaking condition (150 rpm) at 60 °C for 48 h. In order to increase the lipase production, optimization of nutritional factors was studied. Maximum lipase production was obtained in the presence of peptone as the best nitrogen source. Among the various natural and synthetic triglycerides used, olive oil served as the best substrate for production of extracellular lipase. Additional carbon sources added in this study did not significantly increase the lipase production while metal ions, Mg²⁺, Na⁺, Ca²⁺ and K⁺ were found to enhance lipase production. In addition, lipase production was stimulated by Tween 85 as a surfactant.

Keyword: Aneurinibacillus thermoaerophilus strain HZ; Thermostable Lipase; Optimization.