

## Production of L2 lipase by *Bacillus* sp. strain L2: nutritional and physical factors

### ABSTRACT

A thermophilic bacterium, *Bacillus* sp. strain L2 was isolated from a hot spring in Perak, Malaysia. An extracellular lipase activity was detected through plate and broth assays at 70 °C after 28 h of incubation. The L2 lipase production was growth dependent as revealed by a number of factors affecting the secretion of extracellular lipase. As for nutritional factors, casamino acids, trehalose, Ca<sup>2+</sup> and Tween 60 were found to be more effective for lipase production. The optimum physical condition for L2 lipase production was obtained at 70 °C after 28 h of cultivation time, at pH 7.0, 150 rpm of agitation rate and 1% of starting inoculum size. The activity staining of crude L2 lipase revealed a clearing zone at 39 kDa.

**Keyword:** Thermophilic *Bacillus* sp. strain L2, Lipase production