

Screening, isolation and identification of microbial lipase producers from palm oil mills

ABSTRACT

Screening, isolation and identification of microbial lipase producers from 16 locations of palm oil mills in Malaysia were successfully conducted. A total of 52 different strains were found to be lipase producers. These isolates were identified and divided into three different groups i.e. bacteria, yeast and mould. Twenty-five isolates were bacteria, 10 were yeast and the remainder were mould. Out of the 52 isolates, four were found to be new lipase producers and identified as *Klebsiella pneumoniae rhinoschlero*, CDC gr. IV C-2, *Geotrichum penicillatum* and *Rahnella aquaticus*. Lipases from *Bacillus lentus*, *Bacillus sphaericus*, *Tatumella ptyseos*, *Geotrichum capitatum* and *Thielaviopsis* sp. have been less reported and studied as lipase producers. Both *Bacillus lentus* and *Bacillus sphaericus* were found to be thermophilic bacteria and produce alkaline tolerant lipase.

Keyword: screening, isolation, identification, microbial lipase producer, palm oil mill