พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสีเขียวนี้เพียงแผ่นเดียว

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RAGCHANOK THERAGAWINSAGUL : PARTIAL PURIFICATION AND CHARACTERIZATION OF LIPASE FROM *Pseudomonas aeruginosa*. THESIS ADVISOR : ASSOC. PROF. NAPA SIWARUNGSON. THESIS COADVISOR : ASSO. PROF. VILAI ANOMASIRI, Ph.D. 92 p.p. ISBN 974-636-413-8

A chemical-defined medium with 0.13 %ammonium sulphate as nitrogen source and 2% fructose as carbon source at pH 7.0 and 37°C were the most suitable culturing condition for the production of extracellular lipase by a local strain of *Pseudomonas aeruginosa*. Glucose was found to repress on the lipase production through catabolite repression. Lipase from *P.aeruginosa* was partial purified 10.92 fold by using ultrafiltration and Sephadex G-100 gel chromatography. The partial purified enzyme was a complex of subunits with molecular weight of 63,000. The optimum pH and temperature were 6.5 and 35°C, respectively. The enzyme was able to hydrolyse both long chain fatty acyl ester and short chain fatty acyl ester of glycerol. Enzyme activity was activated by calcium ion but was completely inhibited by Mn^{2+} and was partially inhibited by Fe^{2+}, EDTA and SDS. The Km for the purified lipase with olive oil was found to be 4.09 mg./ml. at 37°C and then assayed at pH 6.0 and 37°C,the purified enzyme was found to be stable in the pH rang 6.0-7.5. The purified enzyme was stable over 30-40°C at pH 6.0 .

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