

Partial purification and characterization of lipases from thermophilic *Rhizopus rhizopodiformis*

ABSTRACT

Lipase from a newly isolated strain of *Rhizopus rhizopodiformis* was partially purified and characterized. By acetone fractionation, the enzyme was purified to about 2.8 fold, with 62.5% recovery and with specific activity of 3.2 U/mg. By gel filtration through Sephadex G-100, the enzyme was further purified to 9.7 fold and had a specific activity of 11.1 U/mg. By polyacrylamide gel electrophoresis, five protein bands were observed after acetone fractionation, while two protein bands were observed after the preparation was passed through Sephadex G-100. It has a pH optimum at 6.0 and a temperature optimum at 45°C. The enzyme is most stable at pH 7.0 and temperature of 50°C. The enzyme has a preference for short chain triglycerides and can also hydrolyse some methyl esters. The lipase is specific for 1,3 positions.

Keyword: *Rhizopus rhizopodiformis*; Lipase; Purification; Characterization