

Hydrolysis of olive oil by alginate-immobilized lipase

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Abstract

Lipases catalyze the hydrolysis of triglycerides at the interface between aqueous phase and organic phase. Immobilized lipases are useful for biotechnological processing. There are several advantages. Some immobilization methods can enhance the thermostability of an enzyme. Immobilized lipase can be used repeatedly.

In this study, hydrolysis of olive oil using alginate-immobilized lipase was investigated. The Cellulose Binding Domain derived from *Trichoderma harzianum* to a lipase from *Bacillus Stearotherophilus* L1 was immobilized by adsorption in avicel. After then, immobilized lipase was entrapped in alginate. The lipase entrapped in alginate showed optimal activity at pH 10. The optimal temperature for the lipase entrapped in alginate was 65 °C. The stability of lipase entrapped in alginate was examined.

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