

Thermomyces lanuginosus lipase-catalyzed esterification of 9,10-dihydroxystearic acid and monohydric alcohol

ABSTRACT

An enzymatic method has been developed for the preparation of dihydroxystearic acid ester in high conversion (~90%) by esterification of 9,10-dihydroxystearic acid and 1-octanol at moderate temperature (50 °C) using immobilized lipase from *Thermomyces lanuginosus* (Lipozyme TL IM) as biocatalyst. The effects of enzyme dosage, reaction temperature, reaction time and reusability of the enzyme in esterification were studied.

Keyword: Dihydroxystearic acid; Esterification; Immobilized lipase; *Thermomyces lanuginosus*