

Design an immobilized lipase enzyme for biodiesel production

Abstract

In this study, an eco-friendly immobilized lipase was designed for biodiesel production process. Lipase enzyme was encapsulated in kappa-carrageenan by coextrusion technique. The various parameters, such as catalytic activity, stability, reusability, shape, and size of the encapsulated lipase, were studied to design an immobilized lipase for biodiesel production. Transesterification of palm oil with methanol was used for biodiesel production. At the optimum conditions, the results were found to be quite promising, converting the raw material near to 100% biodiesel production. This attempt was found to be very effective and eco-friendly with the environmentally benign novel technique.

(C) 2009 American Institute of Physics. [doi: 10.1063/1.3256191]