

Production of biodiesel using immobilized lipase - A critical review

Abstract

Increase in volume of biodiesel production in the world scenario proves that biodiesel is accepted as an alternative to conventional fuel. Production of biodiesel using alkaline catalyst has been commercially implemented due to its high conversion and low production time. For the product and process development of biodiesel, enzymatic transesterification has been suggested to produce a high purity product with an economic, environment friendly process at mild reaction conditions. The enzyme cost being the main hurdle can be overcome by immobilization. Immobilized enzyme, which has been successfully used in various fields over the soluble counterpart, could be employed in biodiesel production with the aim of reducing the production cost by reusing the enzyme. This review attempts to provide an updated compilation of the studies reported on biodiesel production by using lipase immobilized through various techniques and the parameters, which affect their functionality. Copyright © Informa UK Ltd.