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Biodiesel production from palm oil using KOH-supported polyvinyl alcohol as the catalyst (Article)

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Abstract

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The aim of this study is to optimize the transesterification using potassium hydroxide (KOH)- supported polyvinyl alcohol to ease the separation process between glycerol and biodiesel. The design of experiment used was factorial composite design (FCD) and the effects of the amount of catalyst ranging from 0.5 wt% to 10 wt%, methanol to oil ratio from 6:1 to 18:1, and reaction temperature from 55°C to 65°C were studied. Biodiesel yield of 89.9% was obtained at the reaction temperature of 65°C, methanol to oil ratio of 18:1, and 0.7 wt% amount of catalyst. © 2017 Taylor & Francis Group, LLC.

Author keywords

Biodiesel palm oil polyvinyl alcohol potassium hydroxide transesterification

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(2012) *Proceedings of the 9th
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