

**PRODUCTION OF BIODIESEL FROM RUBBER SEED OIL
CATALYZED BY EGG SHELL**

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ABSTRACT

PRODUCTION OF BIODIESEL FROM RUBBER SEED OIL CATALYZED BY EGG SHELL

In this study, the presence of FAMES by biodiesel produced by base transesterification from rubber seed oil (RSO) as non edible vegetable oil has been studied. The influence of raw material composition on properties such as saponification value and acid value were more dependent on characteristics of production process especially on the pure oil. Biodiesel produced by used a new solid base catalyst containing CaCO_3 and modified to CaO by thermal processing method (calcination). Therefore, the catalyst was used in the transesterification of RSO with methanol to produce biodiesel. The drawback of various factors was investigated to optimize the reaction condition. The results showed that methyl ester (ME) content only reached at 32.3% after reacting for 4 hours at 70°C , with methanol/oil molar ratio of 3:1, the amount of catalyst of 2.0 g and the stirring rate 600 rpm due to high evaporation methanol in transesterification process. From GC-MS analysis result, showed there have three main spectrums that can be detected while five are presents in the biodiesel oil.