

# **Biodiesel Production From Palm Oil Against Fuel Characteristics**

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## **ABSTRACT**

Biodiesel has the same properties and characteristics as diesel fuel so that biodiesel can be used as an alternative fuel in order to reduce the use of petroleum. This study aims to determine the production process of making biodiesel using palm oil added with methanol, NaOH and KOH catalysts using a reactor prototype and to determine the characteristics of biodiesel fuel with variations of NaOH and KOH seen from calorific value, viscosity, density, flash point and cetane number. The method used is experiment. The prototype has a minimum production capacity of 5 liters and a maximum capacity of 12 liters. This study used 4 liters of palm oil, 1 liter of methanol, and 22 mg of NaOH catalyst and 22 mg of KOH catalyst respectively. The results showed that palm oil biodiesel with NaOH catalyst had superior characteristics than palm oil biodiesel with KOH catalyst.

**Keywords:** fuel, palm oil biodiesel, calorific value, viscosity, density, flash point, cetane value.