CHARACTERISTICS TESTS FOR THE PRODUCTION OF BIODIESEL RAW MATERIALS OF NYAMPLUNG OIL (Calophylum Inophyllum) BY THE TRANSESTERIFICATION PROCESS USING NaOH AND KOH CATALYST

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ABSTRACT

This research aims to produce biodiesel from nyamplung oil, which will then undergo testing of its characteristics (viscosity, density, flash point, and calorific value). This research utilizes an experimental method for data collection and analysis. Nyamplung oil, after undergoing transesterification with NaOH and KOH catalysts, is separated from glycerol for 24 hours and then subjected to a washing process. In this study, the two different catalyst samples are compared. The characteristic data produced are predominantly in the NaOH catalyst sample with the following values: viscosity: (8.2 cSt), calorific value: (9,620 cal/gram), flash point: (130.3 °C), density: (0.869 gr/cm3).

Keywords: Biodiesel, NaOH, KOH, viscosity, density, flash point, calorific value.