Pengaruh Variasi Konsentrasi Asam Fosfat (H_3PO_4) Dan Massa NaOH Pada Proses *Degumming* Biji Ketapang Sebagai Bahan Baku Biodiesel *(The Effect of Variations in the Concentration of Phosphoric Acid (H_3PO_4) and The Mass of NaOH on the Degumming Process of Ketapang Seeds as Raw Material for Biodiesel)*

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ABSTRACT

Degumming is a process of separating gum (sap or mucus) in the form of phospholipids, proteins, carbohydrates, and resins (polymers) to facilitate the subsequent purification process, and minimize loss of oil. Usually this process is carried out by adding acids (H_3PO_4, H_2SO_4, and HCl) or bases (NaOH). One alternative raw material for making biodiesel is ketapang seeds, the utilization of ketapang seeds is still not optimal and usually only becomes waste, so this research uses ketapang seeds as biodiesel raw material. This study aims to determine the effect of variations in the concentration of phosphoric acid (H_3PO_4) and the mass of NaOH in the degumming process. This study used a 2-factor completely randomized design (CRD) with 3 levels of variations in phosphoric acid (H_3PO_4) concentrations (0.5%, 1%, 1.5% v/v) and NaOH concentration variations (0.5% respectively). , 1%, 1.5% w/w). If there is a difference in the average of the test results, it is continued with the DMRT (Duncan's Multiple Range Test). The best test parameters for FFA content were 0.4%, sediment value 1.4gr, water content 30%, viscosity 41.21 mm2/s, density 902.5 kg/m3, pH 8.5.

Keywords: *Degumming*, *Ketapang Seeds*, *Phosphoric Acid (H_3PO_4), NaOH*