

Pemanfaatan Minyak Biji Kapuk Randu (*Ceiba Pentandra L.*) sebagai Biodiesel dengan Katalis Abu Kulit Buah Kapuk Randu (*Utilization of kapok seed oil (*Ceiba pentandra L.*) as biodiesel with kapok rind ash catalyst*). Mentored by: Siti Diah Ayu Febriani, S.Si., M.Si. and Yuli Hananto, S.TP., M.Si.

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ABSTRACT

Biodiesel is a biofuel for diesel engine applications that contain fatty acid methyl esters made from usable resources such as vegetable oils and animal fats. The biodiesel used in this research is biodiesel made from kapok seed oil with kapok rind ash catalyst. This research was intended to determine the highest yield and characteristics of biodiesel produced based on the requirements of SNI 7182: 2015. This research was designed using a completely randomized design (CRD) with 2 factorial, is the composition of the catalyst (K): 4%, 5%, 6% and the duration of the transesterification reaction (T): 90 minutes and 120 minutes. The highest yield obtained from KIT2 qualification with a catalyst composition of 4% and the duration of the 120 minutes transesterification reaction was 62,968%. The test results showed that several parameters in accordance with SNI 7182-2015 standards were reported: density 854 kg / m³, acid number 0.355 mg-KOH / g, methyl ester content (FAME) 153.028%, iodine number 5.93 g-I₂ / 100g, and the heating value of 45,251 MJ/Kg

Keywords : *Biodiesel, Kapok Rind, Kapok Seed Oil.*