

**PENGARUH PENAMBAHAN KATALIS ASAM SULFAT DAN
PELARUT METANOL PADA PROSES PEMBUATAN BIODIESEL
DARI BIJI NYAMPLUNG (*CALOPHYLLUM INOPHYLLUM*)**

**EFFECT OF ADDITION CATALYST SULFATE ACID AND SOLVENTS
(CH₃OH) BIODIESEL PRODUCTION PROCESS OF SEEDS NYAMPLUNG
(*CALOPHYLLUM INOPHYLLUM*)**

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ABSTRACT

Biodiesel is made by taking the oil from the seeds by pressing nyamplung then processed through two stages of esterification and transesterification of the oil with solvent ratio between 1:1, 1:2, 1:3, 1:4 and 1:6 and added catalyst H₂SO₄ at process of esterification and transesterification catalyst NaOH in the process. In the process of varying the acid catalyst esterification 0.4%, 0.5%, 0.6%, 0.7% and 0.8% of the seed oil nyamplung. Operating condition is maintained at a temperature of 70 ° C, process time of 60 minutes with a time separation of 3 hours. Biodiesel products that meet the Indonesian National Standard is the composition ratio nyamplung seed oil and methanol is 1:1, the catalyst is used as much as 0.5% with an analysis of the quality of the density of 0.8870 g / ml, pH 7.30, level water 0.0616%, 1.3387 refractive index, 3.7480 cSt viscosity, Flash Point 56oC, calorific value of 9001 cal / g and 48.03 Cetane number.

Key words: Nyamplung, Biodiesel, Esterification and Transesterification