SYNTHESIS 2- HYDROXY PROPYL OLEATE FROM OLEATE FATTY ACID

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Abstract
Sulphur can reduce diesel lubricity so that standardisation as fuel can’t reached and cause machine damaged so it must be desulfurate. Discovery additive as one of alternative to increase diesel lubricity and can reach standardisation as fuel. There are many kinds of additive, one of them synthesized from derivate fatty acid was produced by the esterification with BF$_3$ and propilen glycol. Research about synthesis of hydroxyl ester from soybean oil have been done by Rezende (2004) become additive. This Research used fatty acid from vegetable oil (CPO) PT. Ikan Dorang, Surabaya. Separation of oleic acid from vegetable oil with distillation. Esterification get oleic acid derivat is 2-hidroxy propyl oleate used BF$_3$/methanol and propilen glikol become additive diesel. The characterization of lubricity improver additive by GC-MS is important tool for the development and monitoring. Randement that showed from methyl oleate yield 2.7% and 2-hidroxy propyl oleate yield 1.14 % from methyl oleate.

Key word: Additive, Esterification, Fatty acid, 2-Hydroxy Propyl Oleate, GC-MS.