

**FATTY ACID PROFILE OF RUBBER SEED OIL
SUBJECTED TO VARIOUS TREATMENT**

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ABSTRACT

FATTY ACID PROFILE OF RUBBER SEED OIL SUBJECTED TO VARIOUS TREATMENT

The study was carried out to produce biodiesel via methylation of oil using rubber seed and n-hexane as the solvent for soxhlet extraction. The rubber seed was prepared and being placed into two different environment which is inside the oven and another one at laboratory temperature (room temperature). Each place had four samples and each sample was extracted using soxhlet extraction at predetermined time. The oil was recovered from the solvent used in the extraction under pressure in a rotary evaporator. The extracted oil was treated with heptane and methanolic potassium hydroxide solution under the methylation of oil in order to convert to fatty acid methyl ester (FAME) and glycerol as the by-product. The rubber seed oil showed increases in acid value for both samples at two different places where sample inside oven showed 20.3 mg KOH/g and the sample at room temperature showed 18.8 mg KOH/g. For the fatty acid profile, palmitic acid showed itself as the most abundance fatty acid detected by GCMS for all samples inside oven. The linolenic acid showed its presence in the sample inside oven. For the effect of storage of dried rubber seed on fatty acid profile of sample at room temperature, the palmitic acid and the linoleic acid showed themselves as the most abundance fatty acids detected by GCMS for all samples at room temperature. The major saturated fatty acid detected by GCMS was palmitic acid while the main unsaturated fatty acid was linoleic acid.