

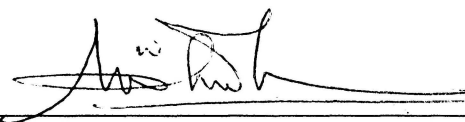
**PHYSICAL AND MECHANICAL PROPERTIES OF
KENAF FIBER-SBR BIOCOMPOSITE**

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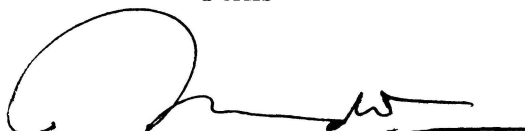
**Final Year Project Report Submitted in
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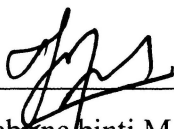
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ABSTRACT

STRENGTH OF KENAF BIOCOMPOSITE USING SYNTHETIC RUBBER AS THE POLYMER

Biocomposites are composite materials comprising one or more phase(s) derived from a biological origin. In terms of the reinforcement, this could include plant fibers such as cotton, flax, hemp and the like, or fibers from recycled wood or waste paper, or even by-products from food crops. Natural-fiber-reinforced polymer composites, or biocomposites, have gained renewed interest over the past decade because of their low material costs, light weight, high specific modulus (modulus over density), and environmental issues such as biodegradability, recyclability and eco-friendliness. In today's market, the cost, quality, and availability of fiber are of utmost importance. The new products that we called are Kenaf. Grower interest in kenaf arises primarily from its potential as a commercial fiber crop. In this research Kenaf biocomposite was prepared from Kenaf fiber mix with synthetic rubber (SBR) using electrical press and compression moulds. The purpose of this study is to determine the properties and the strength of various loading percentage of Kenaf fiber into synthetic rubber. In term, hardness test, tensile test where is elongation test and modulus test also have been studied, density test and water absorption test. Five sample of Kenaf biocomposite and one sample of pure synthetic rubber were prepared through 0%, 2.5%, 5%, 10%, 15% and 20 % of Kenaf fiber. The results for each test shown that 20% of Kenaf have a greater effect compared 0% of Kenaf which is having the toughest strengthen. Except for tensile test, sample with 20% of Kenaf show the lowest value for strength.