**Characterization of Mechanical Properties in Palmyra-KGK Bio-Composites**

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ABSTRACT

Development of green composites with enhanced mechanical properties is a challenging task for researchers and engineers in meeting the ever-increasing demand for environmentally friendly and sustainable materials. This work presents investigation of mechanical and flexural properties of biodegradable composite made of Kondagogu gum resin (KGK) reinforced with Palmyra fibers. Effects of fiber length, fiber loading on mechanical properties were investigated. NaoH Treatment is carried out to improve interaction between fibers and KGK matrix. Samples were prepared and tested as per ASTM standards. It is observed that the reinforcement improved the tensile and flexural strengths and fiber surface treatment showed significant improvement on fiber/matrix interaction.

Keywords: Kondagogu gum resin(KGK), Palmyra fiber, mechanical properties.