

## **EVALUATION OF MECHANICAL PROPERTIES OF AGAVE AMERICANA AND OKRA HYBRID POLYPROPYLENE COMPOSITES**

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### **Abstract:**

In the present work, agave americana and okra hybrid polypropylene composites are fabricated and the mechanical properties of these composites are evaluated. Fibers are chemically treated with Sodium hydroxide (NaOH) and the effect of fiber treatment is investigated. The mechanical properties of chemically treated fiber composite exhibited better strength than that of untreated fiber composite. Experimental results are analysed using statistical techniques like Degree of experiments (DOE) and Analysis of Variance (ANOVA). Multiple regression analysis technique is applied to obtain the mathematical model for tensile, flexural and impact strengths.

**Keywords:** Natural fibers, Polypropylene composites, chemical treatment (NaOH), Statistical analysis