**Fabrication and flexural testing of DHAK fiber polyester composites**

**Srinivasa Rao Gorrepati**

Amity University, Noida, India

*srgorrepati@amity.edu*

**1Gadusu Babu Rao, 2Eswar Krishna Mussada,3** **Deepanshu Das, 4Shubham Singh**

1 Karunya Institute of Technology & Science, Coimbatore , INDIA;

2 AIT, Amity University , Noida, INDIA ; 3,4 ASET, Amity University, Noida, INDIA

**ABSTRACT**

This paper gives the information about the flexural properties of DHAK fiber composites. Hand layup technique was used for formulating the composites to the highest volume fraction of 0.18. The density of DHAK was calculated as 1098.5 Kg/m3. The flexural strength of the composites was examined as a function of fiber content. Composites produced for the volume fraction (0.15) showed relatively higher flexural strength and modulus compared to the base matrix. It has been observed that the maximum mean bend strength of the composite was223.54 MPa for the volume fraction (0.15), which was about 1.79 times higher than that of the bare specimens. The maximum mean flexural modulus of the composite was calculated as 3.879 GPa for the volume fraction (0.15), which was about 2.61 times higher than that of the bare specimens. From the obtained results, it has been concluded that DHAK fiber can be effectively used to fabricate the composites for various applications due to its high bend strength and modulus.

*Keywords: Natural fibers; fibers; flexural strength; DHAK*