

## **Cotton reinforced biopolymer matrix composite: Effect of ultraviolet on its mechanical properties.**

### **ABSTRACT**

Research on the production of composites from natural fibers has an enormous attention from researchers due to environmental awareness, which focusing to produce compostable bio-based composites and renewable raw materials that can be safely disposed after their use without polluting the environment. This paper reports the study on the effect of the ultraviolet (UV) to the cotton/albumen composites (CAC). The CAC were prepared by using hands lay-up technique with 10 w/w % of cotton content and cured at room temperature for 14 days. The cured samples were cut before exposing to UV light up to 20 days. The increase in tensile strength was observed up-to 10 days of exposure before it is decreasing to about 15% after 20 days of exposure to UV. The morphological study through SEM micrograph shows that fibers breakage and the biopolymer matrix loss is more with longer duration of UV exposure.

**Keyword:** Composites; Cotton fiber; Albumen; UV; Water absorption.