

Thermo-mechanical properties of palm fiber plastic (PFP) composites

ABSTRACT

The oil palm Empty Fruit Bunch fibers (size in the range from 75 to 400 μm) have been prepared by wet and dry grinding methods. The prepared fibers were blended with polypropylene to achieve EFB-Polypropylene plastic composite denoted as EFB-PP plastic composite. Various weight contents (20, 35 and 50%) of the fibers were reinforced in the polypropylene matrix. The effect of the fiber weight contents on thermal and mechanical properties of the obtained EFB-PP plastic composite was investigated. The wet disk milled fiber reinforced EFB-plastic composite shows the superior mechanical properties.

Keyword: Biocomposite; Mechanical property; Natural fiber; Oil palm; Wet disk mill