

Degradation characteristics of SPF/SPS biocomposites

Abstract

In this work, sugar palm fibres (SPF) were used as a biodegradable reinforcement. SPF were incorporated into sugar palm starch (SPS) plasticised with glycerol using the compression molding process. Then the SPS and SPF/SPS biocomposites were submitted to biodegradation by means of soil burial experiments. The environmental effect on the SPS and SPF/SPS biocomposites were a loss in tensile strength of 78.09% and 53.67%, respectively, at the end of 72 hrs of the weathering testing period. The biodegradation test shows that SPS degrades very quickly and loses 63.58% of its weight at the end of 72 hrs compared to the SPF/SPS biocomposites.

Keyword: Sugar palm fibres; Sugar palm starch; Biodegradable; Environmental