ABSTRACT

The impact of matrix material on the tribology properties of natural-fiber-reinforced hybrid composites was studied by comparing their experimental analysis results. In the present work ProsopisJuliflora and Maize Fiber and Egg shell fiber were used as reinforcement and resin along with hardener were used as matrix materials. To study the influence of the matrix material, two sets of hybrid composites were fabricated by varying the matrix material. The composite samples were fabricated by using the molding technique followed by a hand layup process. A different composites were fabricated by varying the weight fraction of fiber material in each set based on the rule of the hybridization process. After fabrication, the tribology properties of the composite samples were tested and morphological studies were analyzed by using SEM analysis. The Wear-test fractured specimens were analyzed by using a scanning electron microscope (SEM). The results showed that the hybrid composites had superior properties to individual fiber composites.