Fabrication and properties of natural rubber latex/poly(vinyl alcohol)/water hyacinth fiber
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Abstract: The objective of this work was to investigate the preparation of natural rubber latex (NRL)/poly(vinyl alcohol) (PVA) blends reinforced with water hyacinth fiber as a filler. The blends were prepared by solution technique from solution mixture of NRL and PVA prepared with ground water hyacinth fiber and chemicals. The effects of water hyacinth fiber loading (0, 10, 20, 30, 40 and 50 phr) on the mechanical properties, water uptake and morphology were examined. It was found that the tensile strength and elongation at break of specimen decreased but water uptake increased when the amount of water hyacinth fiber in the NRL/PVA increased. The images from scanning electron microscope showed an increase of aggregate structure when water hyacinth fiber content in NRL/PVA blends increased.

Keywords: Natural rubber latex; Poly(vinyl) alcohol; Water hyacinth fiber; Water uptake properties