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FABRICATION AND CHARACTERISATION OF CHITOSAN/COCONUT FIBER COMPOSITE MEMBRANES FOR ELIMINATING CU^{2+} AND PB^{2+} FROM AQUEOUS SOLUTIONS

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Abstract

Coconut fiber was chemically modified by NaOCl/NaOH, and then was composited through a cross-linking reaction with glutaraldehyde. The chitosan/coconut fiber (CTS/CF) composite membranes were prepared at various ratios of coconut fiber (CF) and then tested to determine their ability to eliminate aqueous heavy metals. The results showed that CTS/CF composite membranes having CF ratio of 80 wt% exhibited good mechanical strength as 89.8 MPa. In the elimination experiment of heavy metal ions, the CTS/CF 20/80 also showed that the removal capacity of Cu (II) and Pb (II) were over 90%.

Keywords: **Chitosan; Coconut fiber; Membrane; Heavy metals.**