

## **Preparation and Characterization of Chitosan / Polyacrylic Acid / Ag-nanoparticles Composite Membranes**

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**Abstract :** Chitosan polyacrylic acid composite membranes were prepared by a bulk polymerization method in the presence of N, N'-methylene bisacrylamide (crosslinker) and ammonium persulphate as initiator. Membranes prepared from this copolymer in presence and absence of Ag nanoparticles were characterized by measuring mechanical and physical properties, water uptake and antibacterial properties. The results obtained indicated that the prepared membranes have antibacterial properties which increases with adding Ag nanoparticles.

**Keywords :** Ag nanoparticles , antimicrobial, Membrane, composites, mechanical properties, physical properties

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