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Synthesis and Characterization of Copolymer 2-Aminothiophenol-Oxamide -Formaldehyde.

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ABSTRACT

Copolymer (2-ATOF) has been synthesized by the polycondensation of 2-aminothiophenol, oxamide with formaldehyde in 3:1:5 molar ratios of reacting monomers using 2M hydrochloric acid as a catalyst. Various spectral and physiochemical techniques like Ultraviolet-Visible, XRD diffraction, Scanning Electron Microscope (SEM), Fourier Transform Infrared (FTIR) techniques have been promoted to illuminate the composed copolymer. Elemental analysis and Number average molecular weight (Mn) has been determined by Gel Permeation Chromatography. XRD pattern mark amorphous nature of copolymer. Particle size, porosity, density of copolymer has been calculated by XRD data. The surface morphology of 2-ATOF was studied by Scanning Electron Microscope (SEM).

Keywords: Polycondensation, spectral, physiochemical, morphology, catalyst.

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