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Synthesis and Characterisation of New Copolymer Resin Derived from 4-Hydroxybenzoic Acid and Adipamide

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Abstract

A new copolymer 4-hydroxybenzoic acid – Adipamide –Formaldehyde resin was synthesized using 2M HCl as a catalyst by condensation of 4-hydroxybenzoic acid and adipamide with formaldehyde. The copolymer resin composition has been determined on the basis of elemental analysis. The number average sub-atomic mass of the resin was dictated by conductometric titration in a non-aqueous medium, viscometric estimations in dimethyl suphoxide were done to ascertain the trademark capacities and constants. The copolymer has been portrayed by uv-obvious, I.R., proton NMR spectra and thermo gravimetric examination. The structure of the copolymer was affirmed based on otherworldly information. The morphological element of the 4-HBAF copolymer was built up by examining electron microscopy (SEM). Thermogravimetric analysis of copolymer resin in present study has been carried out by non-isothermal thermogravimetric analysis technique. Thermal study of the resins was carried out to determine their mode of decomposition and relative thermal stabilities.

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Keywords: Resins,Terpolymer,Polycondensation,Degree of polymerization(DP),Viscosity,NMR,FT-IR,SEM.

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