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Synthesis and thermal studies of polyesters derived from 6-(N-(3-Chlorophenyl)piperazinyl)-2,4-bis-(7-hydroxycoumarin-4-acetylchloride)-1,3,5-triazine

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ABSTRACT

Polyesters containing substituted s-triazine ring in the backbone were synthesised by high temperature polycondensation of 6-(N-(3-chlorophenyl)piperazinyl)-2,4-bis-(7-hydroxycoumarin-4-acetylchloride)-1,3, 5-triazine with different diols such as Bisphenol-A, diethylene glycol, resorcinol, catechol, phenol-phthalein, 1,4-dihydroxyanthraquinone, 1,5-dihydroxyanthraquinone, 1,8-dihydroxyanthraquinone, hydro quinone and ethylene glycol. All polyesters were obtained in good yield and were characterized by solubility, Viscosity measurement, FTIR and NMR spectral analysis. Thermal stability was studied by TGA technique. The synthesized polyester showed good thermal stability along with good solubility in common organic solvent.

Highlights:

- Polyesters containing substituted s-triazine ring in the backbone
- High Temperature polycondensation reaction
- Characterized by solubility, Viscosity measurement, FTIR and NMR spectral analysis
- The synthesized polyester showed good thermal stability
- Good solubility in common organic solvents

Keywords: Broido method, Horowitz and Metzger method, High temperature polycondensation, Polyesters, Triazine, Thermal Analysis.