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Synthesis and Characterization of Oligo-2-[(2-hydroxymethylphenylimino) methyl] phenol and Oligo-2-[(2-hydroxymethylphenylimino) methyl]-5-bromo-phenol

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Abstract: Oligo-2-[(2-hydroxymethylphenylimino) methyl] phenol O-(2-HMPIMP) and oligo-2-[(2-hydroxymet\-hylphenyl imino) methyl]-5-bromo-phenol O-(2-HMPIMBP) were synthesized by the oxidative polycondensation reaction using air as an oxidant in an aqueous alkaline medium at 70 °C. They were characterized by ^{1}H-NMR, FT-IR, UV-vis, TG, size exclusion chromatography (SEC) and elemental analysis. According to the SEC analyses, the number-average molecular weight (M_n), weight-average molecular weight (M_w) and polydispersity index (PDI) values of O-2-HMPIMBP and O-2-HMPIMP are 1100, 1600 g mol^{-1} and 1.45; and 6000, 6250 g mol^{-1} and 1.04, respectively. According to TG analyses, the weight losses of O-2-HMPIMP and O-2-HMPIMBP are 98.31% and 96.91%, respectively, at 900 °C.

Key Words: Oxidative polycondensation, oligo-2-[(2-hydroxymethylphenylimino) methyl] phenol, oligo-2-[(2-hydroxymethylphenylimino) methyl]-5-bromo-phenol, thermal analyses, 2-aminobenzyl alcohol

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