

The study of the kinetics of polymerization of α,ω -dimethacryl-(bis-triethyleneglycol)phthalate (MGPh-9) at elevated temperatures

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Abstract

IR spectroscopic method was used to study the kinetics of polymerization of α,ω -dimethacryl-(bis-triethyleneglycol)phthalate (MGPh-9) at low (20, 65 °C) and high (80 °C) temperatures in thin films on a substrate of KBr without and in presence of benzoyl peroxide. Different character of MGPh-9 polymerization at low (20, 65 °C) and high (80 °C) temperatures and a significant difference in the degree of polymerization of the oligomer during the process in the thin layer and the block under the same temperature-time parameters have been established. The dominant influence of temperature on the degree of MGP-9 polymerization process has been noted as compared to the action of benzoyl peroxide. Extreme dependence of the polymerization degree on the content of benzoyl peroxide has been obtained.