

Preparation of lignopolyols by chemical modification of Kraft lignin from oil palm lignocellulosic waste

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Abstract

The main objective of this research was to describe the thermal and chemical characteristics of lignopolyols. Lignin was extracted from oil palm empty fruit bunch after Kraft pulping process. xypropylation reaction was achieved by reacting Kraft lignin with propylene oxide under alkaline conditions at room temperature. The physical and chemical properties of lignopolyols were evaluated by FTIR, NMR, GPC and TGA. Lignopolyol exhibited higher chemical activity than Kraft lignin. The polyols used as precursors in biomass-based wood adhesives preparation demonstrated promising results.