

Extraction of Phenolic Compounds as Base catalyzed Lignin Depolymerization

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The polyphenol structure of lignin, which is an waste resource, has become depolymerization and has the possibility to substitute existing petroleum products. Lignin can be converted to a product with phenolic compounds by depolymerization. We report the yield of phenolic compounds of products and its characteristic to depolymerizing lignin throught thermal catalyst process using NaOH. The NaOH inhibit repolymerization as a base catalyst to depolymerizes lignin. It was confirmed that the yield of the products were changed by depolymerized lignin with the temperature of reaction and the concentration of catalyst. Lignin, which has been subjected to a thermal catalyst process, is depolymerized to produce oil containing the phenolic compounds, and they are separated by filtration and extraction to obtain an oil component. The FT-IR was used to find the aromatic-OH group of the products, and the presence of the phenolic compound was confirmed. They were confirmed that depolymerization of lignin occurred in the analysis through MALDI-TOF to molecular weight.