

Catalytic conversion of lignin for the production of bio-alcohol

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Depolymerization and liquid phase radical oxidation were conducted with water soluble lignin with the hydrogen peroxide and iron were added in the batch reactor by controlling the reaction temperature. Many volatile carbons such as methanol, ethanol, carbon dioxide, formaldehyde, acetaldehyde, phenol, acetic acid and water were formed after radical oxidation it was found that major product is methanol through the GC-MS and GC-FID analysis. Among the water soluble lignin showed the highest yield of methanol analyzed by internal standard quantitative method. lignin, water, 30% hydrogen peroxide and iron(III) sulfate put into batch reactor without reacted temperature range of 100-350°C.