

Chemical pretreatment of industrial lignin by dissolving in organic solvents

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In addition to hemicellulose and cellulose, lignin is one of the main components of lignocellulosic biomass. The proportion of lignin in lignocellulosic biomass depends on the source of biomass. In the industrial production of paper or second-generation ethanol production using the straw or wood waste as a feedstock, lignin is produced as a waste. To meet the request of a circular economy, there is an aim to further lignin utilization for the production of value added products or energy. Several options for lignin valorization are associated with lignin pretreatment. Pretreatment of lignin can be performed by biological, physical, chemical or physico-chemical pretreatment processes. This work aims to evaluate chemical treatment of lignin by dissolving of lignin in organic solvents. The study is based on the assumption that the amount of lignin ash in the filter cake is increased by dissolving of organic part of lignin in organic solvents due to the part of the organic matter passing into the filtrate after filtration. The influence of different solvents on the lignin dissolving is compared in the presented work.

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