

Improvement of enzymatic hydrolysis of lignocellulosic biomass by organosolv pretreatment with acid solution

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The pretreatment is an essential process for bioconversion of lignocellulosic biomass. The primary purpose of it is to make lignocellulosic biomass accessible and to attainable high yields on enzymatic hydrolysis. Although a number of pretreatment methods have been purposed and investigated, it is not identified definitely till now. Because these reason and established methods don't decompose biomass, we compared with the efficiency of organosolv pretreatment in acidic conditions of different concentrations. In this study, sulfuric acid is used as an acid catalyst, and percolation type reactor was used to perform pretreatment. An organosolv pretreated materials was produced at 150–190 °C, 10–30 min, 0–50% ethanol and 0.5–1.5% sulfuric acid. And then, pretreated biomass were performed with enzymatic hydrolysis for fermentable sugar production.