

Enzymatic conversion and surface area changes of tulip tree sawdust through some drying steps

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Because lignocellulosic biomass is abundantly available and eco-friendly, it is one of the outstanding alternative energy resources. Lignocellulosic biomass is composed of cellulose, hemicellulose and lignin. Cellulose, which takes almost 40 percent of lignocellulosic biomass composition, can be converted to glucose through enzymatic hydrolysis. Among some steps converting lignocellulosic biomass to glucose, drying steps have been known for decreasing conversion. In this research, some changes of conversion and surface area were observed through drying. Different drying steps; oven drying, freeze drying, supercritical CO<sub>2</sub> drying were conducted for comparison. tulip tree and bleached cellulose fiber using tulip tree were selected for this experiment.