Extractant Effect on Enzymatic Digestibility of Lignocellulosic Biomass after Hot Compressed Water Pretreatment

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Lignocellulosic biomass is outstanding alternative energy resource because of its eco-friendliness and ease of acquisition. Lignocellulose biomass is composed of cellulose, hemicellulose and lignin. Cellulose, which takes almost 40 percent of lignocellulosic biomass composition, can be useful material if it is separated from other substances well. Extraction and hot compressed water (HCW) pretreatment are required to separate cellulose. Extractant, one of experiment factors, removes extractives which decrease enzymatic digestibility. Enzymatic digestibility is sugar conversion in enzymatic hydrolysis process conducted after extraction and HCW pretreatment. In this study, enzymatic digestibility was measured with different extractants. Water, ethanol and benzene-ethanol mixture were used as extractants. Enzymatic digestibility and the amount of extracts were measured to evaluate each extractant.