Effect of physico-chemical pretreatment of corn stover on enzymatic hydrolysis

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Corn stover is one of the valuable lignocellulosic materials which are abundant and low cost feedstock in the world. Therefore, corn stover has potential advantages as use a biomass for the production of fermentable sugar. Corn stover primarily consists of cellulose (35–40%), hemicelluloses (25–35%) and lignin (20–25%). Among them, the nature structure of lignocellulose such as corn stover is difficult to hydrolyze using only celluloytic enzymes due to its recalcitrant structure. Thus, pretrement that increases the porosity of the material to provide the enzymes with easier access to main biomass component. The aim of this study is to evaluate the optimal conditions for physico-chemical pretrement of corn stover, which is evaluated by estimate glucose yield from the sequential enzymatic hydrolysis.