

### Charateristics of Simultaneous Saccharification and Fermentation of Pretreated Rice Straw by Soaking in Aqueous Ammonia

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The manufacturing process of lignocellulosic bioethanol is need multiple unit operations with high cost. The development of each process has been needed. In this research, rice straw of which the production is outstandingly high in domestic agriculture residuals was chosen as raw materials and SSA(Soaking in Aqueous Ammonia) was chosen as pretreatment process for lignin removal as low cost. SSA pretreatment was conducted for 24 hr and 72 hr with rice straw. The enzymatic hydrolysis and SSF(Simultaneous Saccharification and Fermentation) were performed at 20 ~ 50 °C to take in characteristics of SSF. In comparison of ethanol yield by pretreated rice straw for 24 hr with for 72 hr in SSF, effects of pretreatment time were investigated. As a result, this SAA of rice straw took possibility to bioethanol production in low temperature conditions than its conventional SSF.