

Lactic acid fermentation of pretreated cellulosic hydrolysate

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Lactic acid (2-hydroxypropionic, $\text{CH}_3\text{CHOHCOOH}$) is a versatile chemical. It used in the food, cosmetic, pharmaceutical, biodegradable plastic, and chemical industries. Lactic acid is produced both route by a synthetic and a fermentation. Recently Fermentaion has increased considerably because of yield an optically pure form (L(+)-Lactic acid) of lactic acid. Generally, lactic acid was produced from pure starch or from glucose. To reduce the glucose cost of lactic acid production, cellulosic substances was chosen as a glucose source. Cellulosic substances which is the most abundant renewable resources on earth have been considered for conversion to readily utilizable hydrolysate. In this study, we conducted the fermentation method to produce L(+)-lactic acid production from pretreated cellulosic hydrolyzate was investigated by *Lactobacillus rhamnosus* ATCC 10863. The hydrolysate was obtained from pretreatment process of biomass using Ammonia percolation process (AP) followed by enzymatic hydrolysis. In order to effectively enhance lactic acid conversion and product yield, controlled medium, temperature, glucose concentration was conducted under pure glucose conditions.