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Alkaline pretreatment and saccharification of woody biomass: Castor stalk

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Efficient pretreatment of lignocellulosic biomass to sugars is currently needed for viable biofuel production technology. This study investigates the efficiency of alkaline pretreatment for the saccharification of woody biomass, castor stalk. Alkaline pretreatment by using sodium hydroxide (NaOH) is capable of maintaining the highest cellulose recovery and enzymatic hydrolysis. The optimized conditions of NaOH pretreatment includes biomass load 8% (w/v), NaOH concentration 1% (w/v), pretreatment temperature 121°C and pretreatment time 15 min. The enzymatic hydrolysis using 50 FPU of enzyme at a biomass load of 5% (w/v) gave a hydrolysis of 46.78% in 24 h.

Biography

Santosh Sankh is working as Senior Scientist at Reliance Industries, Mumbai. He is having experience in Biofuels and Biomass Deconstruction Research.

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