279b Simultaneous Saccharification and Fermentation (Ssf) of Afex Treated Corn Fiber, Bagasse and Cane Leaf Matter (Clm) Using Fed-Batch Technique

Farzaneh Teymouri, Michael Guettler, Darold McCalla, and Mark Stowers

Most fermentation processes produce large volumes of dilute aqueous streams of fermentation products. The recovery cost for these products from aqueous mixture is often significant. Production of concentrated fermentation products such as ethanol is critical to the economy of recovery and the downstream processing systems. Performing Simultaneous Saccharification and Fermentation (SSF) using a fed-batch technique yields a higher concentration of fermentation products and allows a reduction in the required amount of yeast. In this study fed-batch fermentation of AFEX treated corn fiber, bagasse, and cane leaf matter have been investigated and the performance of ethanol fermentation including yield, final ethanol concentration, solid loading and volumetric productivity from these experiments will be discussed.