

## Study of Sugarcane Straw Enzymatic Saccharification Aiming the Production of Cellulosic Ethanol

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Due to the mechanization of harvesting, the production of sugarcane straw has been increasing every year and its lignocellulosic nature makes with this material is the subject of many studies that aim its better use. This work has as goal the study of the enzymatic saccharification of sugarcane straw aiming to produce cellulosic ethanol. To this end, the straw was subjected to a sequence of chemical treatments, all of them followed by enzymatic hydrolysis. The results showed that the lower lignin content in the material the higher the enzymatic conversion of cellulose. The highest value found was 83.83% to a material with 88.27% of cellulose and 2.77% of lignin. The hemicellulose did not present interference in the process. It was also made the analysis of the enzymatic conversion considering the loss of cellulose during the chemical treatments, which was called global conversion. For this parameter, with a cellulose loss of 21.71%, it was obtained a global conversion of 65.63%. These results demonstrate that straw is a viable material for using it in the production of second generation ethanol.

*Supported by CNPq*

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