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## ABSTRACT

In the present study effect of highly thermophilic cellulolytic enzymes i.e. endoglucanase, exoglucanase and  $\beta$  glucosidase was checked on the hydrolysis of bagasse. Different pretreated samples of bagasse were screened and bagasse A pretreated with alkaline peroxide was selected as it gave best possible results. Maximum yield of 29.19% was obtained by using citrate phosphate buffer of pH 7 in 0.25:1 buffer to enzyme volume ratio. Optimum temperature and substrate concentration was 80°C and 0.075% (w/v) respectively. The enzyme units were also optimized 150 U of endoglucanase, 300 U of exoglucanase and 600 Units of  $\beta$ -glucosidase produced highest percentage saccharification (29.19%) when added in simultaneous manner in the reaction mixture.