OPTIMIZATION PRODUCTIVITY OF *SACCHAROMYCES CEREVISIAE* IN A REGIONAL EXTRACT, UTILIZING A BIOREACTOR

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Nowadays, interest in the use of production technology and extraction of biologically active ingredients increase. *Saccharomyces cereviasiae* is yeast of high industrial interest. *Opuntia ficus-indica* presented as high carbohydrate source for yeasts growth. The main purpose of this work was to optimize the biomass production this yeast in cactus utilizing a bioreactor. The extract palm resulted from its trituration and centrifugation was used as culture medium. A pre-inoculation in YPD environment was made and, the growth cells washed in saline solution were inoculated in a bioreactor containing 4 l of the liquid extract. Samples were taken at equal time intervals for cellular quantification, total reductive sugars by espectrofotometry. The fermentation was conducted, utilizing the palm without its epidermis, in a 30º C, 400 rpm agitation, 1 vvm aeration, during 9 hours. The highest production was observed at the first 6 hours of yeast growth, having as result 220, 23 g L. The consumption of total reducers sugars were approximately of 63% in 9 h of fermentation. Relating to the total sugars hydrolyses; it was observed a consumption of 54%. Due the evaluation of the data satisfactory obtained were observed on the sixth cultivation hour. Confirming then, the cactus presented a satisfactory substrate for the yeast growth.

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