A FACTORIAL PLANNING 2^{6-2} FOR *SACCHAROMYCES CEREVISIAE* GROWTH IN MOLASSES TO PRODUCE BAKER YEAST

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The growth of different microorganisms in industrial residues, in special some yeast species, has been focused for Single Cell Protein production. The sugar cane molasses is constituted by great amount of vitamins and it has been used as substrate for yeast growth. However, this residue is poor in nitrogen and phosphate, which are essential for the development of the microorganisms. So it was developed a fractionary factorial planning 2^{6-2}, analyzing 6 factors in 2 levels with the aim of increasing the production of biomass by *Saccharomyces cerevisiae*. In this work was tested sugar concentration (50 (+) and 80g/l (-));nitrogen source (ammonium sulphate (+) and urea (-)); phosphorous source (sodium phosphate (+) and potassium phosphate (-)); pH (natural (+) and 7,0 (-));agitation (120rpm (+) and 180rpm (-)) and inoculums rate (0.1 (+) and 1,0 (-) cels/ml). The best result (X= 8,9g/l) of biomass was achieve using 50g/l molasses, urea, potassium phosphate, inoculum rate 1,00 cels/ml, natural pH (~5.0) and 180 rpm. These data can be used for yeast production optimization from molasses in the Northeast region, a product that can be used to reduce essential food coast, like bread.