

POSTER ABSTRACTS

26. IMPROVING A BREWER'S YEAST STRAIN FOR HIGHER PRODUCTIVITY OF BREWING FERMENTATIONS

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The amounts of beer produced by a world spread brand mark and the competitiveness of this market drive consistent research programs in order to improve and make the brewing process more profitable. In previous work, the nutritional aspects of yeast concerning needs and limitations during fermentation of very high gravity (VHG) worts were studied. Yeast pre-conditioning was tested using nutritive compounds in industrial yeast sludge. However, the performance in brewing fermentations can be improved by selecting 2-deoxy-D-glucose (2-DOG) resistant cells (as it has been reported). This selection can avoid the lag-phase of the maltose consumption that occurs until the glucose reaches the minimum repression concentration and make the fermentation of high sugars content faster. An industrial brewer's yeast strain has been submitted to UV-light and Ethyl Methane Sulfonate (EMS) mutagenesis in order to increase the heterogeneity of phenotypes, followed by different types of selections. The resistance to the 2-DOG is intended to be compared with different types of selection. Ten re-cycles of yeast after 25 °P fermentations were carried out to study the adaptation of the target brewer's yeast to VHG fermentations. The freezing and heat tolerance is also considered in this study. Stability tests of the individuals that could present different phenotypes will be done.

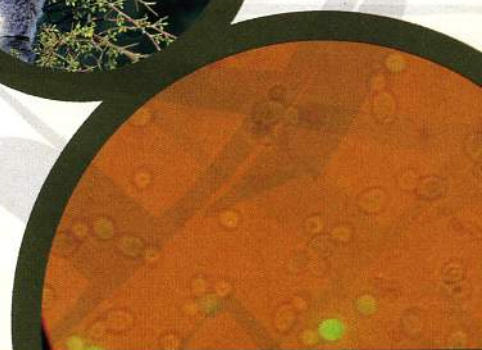
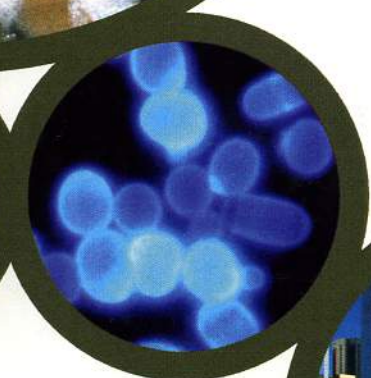
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