

Effect of the Carbon Source in the Regulation of Flocculation of Ale Brewer Yeast Strains

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Yeast flocculation has been used in many fermentation processes, being traditionally exploited in the brewing industry. The ideal brewing yeast grows as discrete cells and flocculate after sugar depletion from the media, leaving clear beer^[1].

Despite the commercial importance of yeast flocculation, little is known about the regulation of this characteristic. In a previous work^[2], it was found that a high flocculent ale brewer strain, when transferred to fresh rich medium with glucose, was induced to growth and progressively loss its flocculation ability.

In the present work, the loss of flocculation of three ale brewer strains (NCYC 1195, NCYC 1214 and NCYC 1364), was investigated. These strains were cultured in defined medium, with the principal sugars (except maltotriose), found in the wort: glucose, fructose, sucrose and maltose. Our studies showed that all sugars tested were able to induce the loss of flocculation of the strains. In the present communication, the different hypothesis to explain the loss of flocculation in the beginning of growth of the ale yeast brewer strains, are discussed.

[1] Stewart, G.G. and Russell, I. *Brewing Science*, Vol 2, *Edited by* J. R. Pollock. Academic Press, London, pp. 61-92, 1981.

[2] Soares, E.V. and Mota, M. *Can. J. Microbiol.*, **42**, 539 - 547, 1996.

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