Control and Regulation of PH in a lactic fermentation using Calcium Carbonate as a regulator and microbiota of Kefir Grains as biological agent

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ABSTRACT

In the current investigation work was demonstrated the possibility to control the negative effect of the excess of acidity that takes place in the lactic fermentations by the use of the calcium carbonate like regulator and the microbiota of the grains of Kefir as biological agent. The calcium carbonate, apart from its low cost and easy obtaining, seems to gather some special characteristics to regulate the pH of the lactic fermentations, since the lactic bacteria have a good pH of growth around 4 and since the calcium carbonate is recently soluble only in an inferior pH at 5. The tests were carried out using the microbiota of Kefir grains, as we already said, because in their great majority are a symbiotic mixture of lactic bacteria. The obtained results demonstrate convincingly that the calcium carbonate is a good alternative to control the pH of the lactic fermentations, in those that the excess of acidity can make that the biochemical processes are inhibited or be affected by starting up, on the part of the microorganisms, the mechanisms of negative feedback or negative feedback.

Key words: acidity, microbiota, Kefir grains.