COMPARATIVE ANALYSIS OF TWO PASSION FRUIT FERMENTED BEVERAGES

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Abstract:

The preparation of fermented beverages from fruits is an alternative to avoid losses, generate technological innovations and new products with added value. Thus, the aim this study was to evaluate the action of metabisulfite on the yeast *Saccharomyces cerevisiae* CCMA 0200 and the action of this on passion fruit fermented beverage. Passion fruit pulp obtained by mechanical grinding was used for fermentation by *Saccharomyces cerevisiae* CCMA 0200, which showed good results in previous fermentations. Two distinct fermentations were performed, with and without metabisulfite. The must was adjusted to 20^{o} Brix with sucrose solution and metabisulfite was added (200mg / L), or not, and sterilized by flowing steam for 15 minutes. The yeast was inoculated in a concentration of 10^{7} viable cells /ml and incubated at room temperature. It was evaluated the pH of the fermentation, the viable cell number, Brix degree and the time of fermentation. The pH of both fermentations was constant, with no significant difference (pH 3.01 to 3.10 wine + metabisulfite and pH from 2.5 to 2.99, without metabisulfite). In the first fermentation, with metabisulfite, cells remained constant until day 8, when reduced to 14.5º Brix and increased number of cells 3.0×10^{6} to 7.0×10^{7} cells / ml and stabilization Brix to 9.0 after 12 days of incubation. The fermentation without metabisufite began instead first 24 hours and followed by fermenting stabilization to 10º Brix in a period of 7 days. Cell count showed a decrease from 1.0×10^{7} to 1.95×10^{6} cells / ml. The latter fermentation finished in a shorter time and stabilized with 1ºBrix more than fermentation with metabisulfite. The delay in starting the fermentation in the must containing metabisulfite may be due to competition with other microorganisms for nutrients. The metabisulfite did not influence survival of the yeast cells since an increase of cells was observed, however sensory and physicochemical analysis will be performed to compare the beverages.

Keywords: fermentation, metabisufite, passion fruit

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