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Physicochemical and sensory evaluation of fermented sugarcane beverages using diferent strains of *Saccharomyces cerevisiae*

Jose Guilherme Lembi Ferreira Alves
Federal University of Lavras, Brazil

The goal of this research was to produce and evaluate physicochemically and sensorially alcoholic sugarcane beverages using 5 different commercial strains of *S. cerevisiae*, strains (1) and (2) for cachaça, (3) and (4) for wine and (5) a baking yeast. The fermentations were carried out at 20°C without agitation for 21 days in ellenmeyers with 1L of sterilized sugarcane juice and inoculated (10% v/v) with the previously hydrated and activated strains. For clarification, 1g/L bentonite was added, and the fermented must be maintained at 4°C/96 h. The beverage was then bottled, matured for 90 days. At the end of the fermentation, pH, titratable total acidity, soluble solids content, total reducing sugars (TRS) and alcohol content were analyzed. After maturation, sensory analysis was performed through an acceptance test using 100 non-trained panelists. The results of the physicochemical and sensory analyzes indicated statistically significant differences by Tukey test (α=0.05). The strain (5) produced the beverage with a higher total acidity (55.3 mEq/L) and lower pH (3.59). Strain (4) produced the beverage with the highest alcohol content (14% v/v), the lower concentration of TRS (8.8 g/L) and soluble solids content (7.1 °Brix). The results of the sensory analysis showed that for flavor, overall impression and purchase intention attributes the most accepted beverage was the one made with the strain (1), indicating that a wine-like beverage could be a good alternative use for sugarcane.

Biography

Jose Guilherme Lembi F. Alves is bachelor's at Chemical Engineering from Federal University of Lavras Minas Gerais (1992) in Belo Horizonte//Brazil, Master's in Food Engineering at Estadual University of Campinas (1996) and Doctorate in Food Engineering at Estadual University of Campinas (2003), in Campinas/Brazil. He is currently Associate Professor II at Federal University of Lavras (UFLA). He has experience in Food Engineering, acting on the following subjects: industrial fermentations; optimization of fermentative processes; purification of biological products using Liquid-liquid extraction. He has published 20 papers in reputed journals and has been serving as an Editorial Board Member of reputed journals.

jlembi@dca.ufla.br

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