TITLE: ISOLATION OF YEASTS WITH BREWING POTENTIAL FROM FRUITS OF THE ZONA DA MATA MINEIRA REGION

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ABSTRACT:
Nowadays the production of commercial craft beers by micro-breweries has been intensified, as well as the production of homemade beers by amateur brewers. One of the four basic ingredients of beer is the yeast, which is some commercial lineage of yeast, mostly *Saccharomyces cerevisiae*, immobilized in a solid matrix. Yeasts are ubiquitous, as well as many other groups of microorganisms, and can be found inhabiting fruits, using their sugars as a source of energy and nutrients. From this perspective, the fruits from Zona da Mata, Minas Gerais, can be sources of yeasts. Thus, the aim of the present work to test the hypothesis that it is possible to isolate and select yeasts of fruits of the Zona da Mata that have potential of production of regional craft beers. Twenty five fruits from the Zona da Mata were collected from November 2016 to January 2017. The fruits were cut and added to Erlenmeyer flasks containing 100 mL of 0.9% saline and shaken for 10 minutes. Then, a 100µL aliquot was added and spread on the surface of a Petri dish containing EMP culture medium (17g of malt extract, 3g of peptone, 15g of bacteriological agar, 1L of deionized H_2O) pre-impregnated with the antibiotic streptomycin 4%. The plates were then incubated at room temperature (25-28°C) for three days. After the growth, 53 colonies with typical morphology of yeast were selected and isolated. Each isolate was observed under a microscope for confirmation that it was yeast. The isolated yeasts were then inoculated into erlenmeyers containing 100 mL of autoclaved brewer's wort. After 7 days of growth without agitation (fermentation), a sensorial evaluation was carried out in order to select isolates that produced a typical beer aroma. From 53 isolates, 3 were selected. In the continuity of the work these three isolates will be evaluated to analyze their real capacity to produce commercial beer.

Keywords: isolation, yeast, beer, Zona da Mata

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