TITLE: COMPARATIVE STUDY OF MEAD PRODUCTION BY DIFFERENT YEASTS: *Saccharomyces cerevisiae*, *Saccharomyces bayanus* and wild yeast

AUTHORS: PINELLI. J. J.; PEREIRA, L. A. S.; GUIMARÃES, J. S.; LAMOUNIER, M. L.; GONÇALVES, M. C.; BOTREL, D. A.; PICCOLI, R. H.

INSTITUTION: FEDERAL UNIVERSITY OF LAVRAS, LAVRAS, MG (AV. DOUTOR SYLVIO MENICUCCI, 1001 - KENNEDY, CEP 37200-000, LAVRAS - MG, BRAZIL)

ABSTRACT: Fermented foods are among the oldest processed foods and for millennia have been revealed as a traditional part of the diet in most countries. Yeasts are the main group of microorganisms used in the fermentation of foods and beverages, especially the species of the genus *Saccharomyces*. Mead is a fermented beverage made from a solution of honey from bees through an alcoholic fermentation similar to that of wine. In addition to the basic formulation can be added herbs and / or fruits, generating fermented beverages of the most varied colorations and flavors. The objective of this study was to evaluate the fermentative process of the mead and its alcoholic yield through the yeasts *Saccharomyces cerevisiae, Saccharomyces bayanus* and wild yeast (own honey). Mead was produced through honey (*Apis melífera*) which was purchased in the city of Bambuí-MG from a single producer and the yeast in specialized trade in which three different types were tested: *Saccharomyces cerevisiae*, *Saccharomyces bayanus* and wild yeast (giving three treatments - T1, T2 and T3). The soluble solids content was measured in a refractometer for ° Brix detection, estimating the sugar content. The pH was monitored through a millivoltmeter electrode with a scale that converts the potential value of the electrode into pH units in an apparatus called pH-meter. The alcohol content was assessed by distillation. The behavior of the fermentative process occurred in a different way. At the end of the fermentation process among the two yeasts that were added to the must, the lowest pH for the mead was obtained by *Saccharomyces bayanus*, co-factor related to the lowest ° Brix observed. The mead with wild yeast presented low fermentation process and more acidic pH. In relation to ethanol yield, the strain *Saccharomyces bayanus* was distinguished from the others, with yielding 11,3% (v / v) and alcoholic content of 15,75% (v / v).

Keywords: honey, mead, yeast, alcoholic fermentation

Development agency: CAPES; CNPQ; FAPEMIG; UFLA.