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MACERATION AS A KEY FACTOR INFLUENCING THE QUALITY AND ACCEPTANCE OF JABUTICABA WINES

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Pôster

Resumo

Jabuticaba (*Plinia* sp.) is a native fruit from the Atlantic Forest. Studies have shown that Jabuticaba skin is rich in phenolic compounds with nutraceutical properties, making this fruit a promising raw material for the food industry in developing juices, jams, and alcoholic beverages with distinctive nutraceutical and sensory characteristics. However, the winemaking process for Jabuticaba wine still lacks technological standardization, particularly regarding the maceration process, a key step for extracting color pigments and bioactive compounds. This study aimed to evaluate the effect of maceration type and period on the contents of bioactive compounds, antioxidant activity, physicochemical properties, sensory attributes, and consumer acceptability of Jabuticaba wine. Four maceration treatments were tested in triplicate: cold maceration for three days at 8°C, cold maceration for three days followed by maceration during alcoholic fermentation for four days (22°C), and maceration during alcoholic fermentation for four or seven days. Alcoholic fermentation was conducted with *Saccharomyces cerevisiae* and sugar addition (chaptalization) in 20 L vessels with airlock valves. Physicochemical analyses (pH, total and volatile acidity, alcohol, dry extract, and color), chromatographic determinations (HPLC-DAD and UPLC-ESI-MS/MS for phenolic compounds), and in vitro antioxidant capacity (DPPH, ABTS, FRAP, TPC) were performed. Sensory evaluations were conducted with 80 consumers using a hybrid hedonic scale for overall acceptability and the Rate-All-That-Apply (RATA) technique to describe the sensory profile of Jabuticaba wines. Results showed that maceration during alcoholic fermentation for seven days

promoted higher extraction of phenolic acids (caffeic, syringic, ferulic, chlorogenic), flavan-3-ols (catechin, epicatechin gallate, procyanidins A2 and B1), and stilbenes (cis- and trans-resveratrol, ϵ -viniferin), resulting in higher color intensity and antioxidant capacity. Nevertheless, all Jabuticaba wines were well accepted by consumers, with scores around six on the hedonic scale (“slightly liked”), without significant differences ($p \leq 0.05$) among treatments. The sensory profile of Jabuticaba wines was characterized for the first time by the following attributes: amber color, purplish color, clarity, intense aroma, alcoholic aroma, jabuticaba aroma, floral aroma, vinegary aroma, sugarcane molasses aroma, woody aroma, dried fruits aroma, nutty aroma, sweetness, sourness, bitterness, saltiness, apple vinegar flavor, jabuticaba flavor, and astringency. Therefore, applying the same procedure used in the vinification of young red wines represents a viable and promising strategy for the technological standardization and valorization of Jabuticaba wine production, a beverage capable of adding value to family farming and Brazilian biodiversity.