**Castanet almond (*Terminalia catappa l.*) applied in artisanal bread: Viability, analysis of fermentation in a practical experiment.**

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ABSTRACT

*Castanhola (Terminalia catappa lL*) is a species belonging to the *Combreteceae* plant family. This one has an oilseed almond, which is commonly used for recreational food. This can be considered an Unconventional Food Plant (UFP), which is nutritious and can be an alternative to hunger. Factors such as chaos, wars, power struggles, pandemics, etc., can raise the unemployment rate, causing the growth of hunger around the world and making people more susceptible to diseases. This category of food is recommended in the fight against disease and famine. The addition to bread can be an example. Therefore, the objective was to verify the influence of the addition of castanets almond flour, in the fermentation process of bread, and its organoleptic characteristics. Base Bread (BB) containing wheat flour (100%), butter (10%), salt (2.5%), instant dry yeast (2.5%), and water (60%) was used as control. For *Castanhola* Bread (CB) only 40% of the wheat flour was replaced by almonds. Two kilos of *castanhola* were obtained, which yielded only 31g of almonds. Cleaning, pulp extraction, drying, roasting, endocarp breakage, and almond extraction were carried out in these. This was processed into flour. The dry ingredients were placed in a bowl and involved, adding water until uniform, and finally the butter, kneading until the developed of gluten. All samples followed the same process. These were weighed, divided into four equal parts, and placed in translucent cups. The fermentation process lasted two hours, with an initial verification and every 30 minutes. Aroma, volume, and weight were evaluated. In the end, balls of approximately 50g were modeled and accommodated in a greased form with soybean oil. The cooking took 30 minutes at 210°C. Means and standard deviation were analyzed in the excel program (2016). A mild, citrusy, and sweet yeast aroma was identified. However, the CB presented an almond roasting aroma. BB and CB reached the maximum fermentation point between 30 and 60 minutes, followed by a reduction. Both showed a loss of 1g. BB had a golden external color and white crumb, while CB had a grayish color, with a slightly golden crust. It is suggested to replace the water with cow's milk, to enhance the caramel color. Both had small alveoli. Using fresh yeast could have a more honeycomb feature. BB had a neutral flavor, with a predominance of salty taste. CB showed a more neutral taste of salt, with a lightly roasted almond flavor. The CB flavor differed due to the roasting and addition of the almond. The increase in almonds can enhance the flavor. Compared to BB, the *castanhola* almond proved to be viable and did not interfere with the CB fermentation process. In addition, positively affects the organoleptic characteristics. The aromas found among the samples differ from the perspective of the addition of roasted almonds, which resulted in the roasting aroma for the CB. Future studies are suggested to the observation of the alveoli by alveology analysis, the use of fresh yeast, cow's milk, and greater addition of castanets flour. Special thanks to the *Instituto Federal de Educação, Ciências e Tecnologia do Ceará, campus Limoeiro do Norte*.

Key words: Gastronomy, bakery, chestnut, unconventional food plants, food.