

# Sensory analysis of sourdough bread type I enriched with kale juice (*Brassica oleracea*)

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This study aimed to conduct a sensory analysis of different sourdough bread formulations, investigating the effects of the addition of kale juice. Four variations of bread were prepared: a control group without kale juice, made with yeast; a second group with yeast and the addition of kale juice; a third group with sourdough starter without kale juice; and finally, a fourth group with sourdough starter and kale juice. The sensory analysis was conducted at the Laboratory of Technique and Dietetics in the Department of Nutrition, where each participant received 25g of each sample for tasting. The participation involved 50 assessors in a single test. The obtained results were subjected to statistical analysis (ANOVA) with a significance level of  $p < 0.05$ . The sensory analysis results indicated that both the appearance and taste of the bread were negatively influenced by the presence of kale juice, supporting the initial hypothesis ( $p < 0.05$ ). The average scores assigned by assessors to the different formulations were 7.08 for the standard version with yeast and 7.58 for the sourdough formulation, both indicating moderate acceptance. Based on the conclusions drawn from the sensory analysis, it can be asserted that the version of sourdough bread without the addition of kale juice was preferred by the participants. This suggests that the inclusion of kale juice in the formulation needs to be refined to meet the sensory preferences of the population. Furthermore, to create functional bread that is both flavorful and healthy, significant adjustments in the formulation will be necessary. This enhancement process may involve optimizing the quantities of kale juice and selecting preparation methods that preserve the desired sensory characteristics, providing a pleasant taste experience. Therefore, the results of this study indicate that there is room for improvement in the development of sourdough bread enriched with kale juice.

**Key words:** bread; yeast; Sensory Analysis.

## Análise sensorial de pão sourdough tipo I enriquecido com suco de couve-manteiga

Este estudo analisou as características sensoriais de diferentes formulações de pão *sourdough* enriquecidas com suco de couve-manteiga. Foram incluídas quatro variações, com e sem suco de couve, avaliadas por 50 participantes em uma única sessão de teste. A análise estatística indicou que o suco de couve teve um impacto negativo na aparência e no sabor dos pães. As pontuações médias para pães com fermento biológico e *sourdough* mostraram uma aceitação moderada. A maior preferência foi pelo pão *sourdough* sem suco de couve, sugerindo a necessidade de refinar a formulação para atender às preferências dos consumidores.

**Palavras-chave:** Pão; fermento biológico; análise sensorial.

Acknowledge: (optional) This work was developed having support from institution XYZ.