



Sensory Evaluation of Chickpea Aquafaba as an Egg Substitute in Vegan Cupcake Formulation **

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Abstract

This study aimed to investigate the use of aquafaba, a plant-based ingredient, as an alternative to eggs in cupcake production. Two formulations, traditional and vegan, were prepared and their sensory properties were comparatively evaluated. Sensory analysis was carried out with 30 semi-trained panelists in two replicates, using difference-from-control, scoring, and hedonic scale tests. In the difference-from-control test, the vegan cupcake was perceived as moderately different from the control. According to the scoring test, statistically significant differences were found in appearance attributes, as the vegan cupcake was rated with a darker crust color and a less uniform crumb structure, while no significant differences were observed in aroma, texture, or flavor attributes. In the hedonic scale test, both samples received high overall liking scores, with the vegan cupcake receiving slightly higher ratings than the traditional one. Overall, these findings suggest that aquafaba presents a favorable sensory profile and holds potential as a viable egg substitute in cupcake formulations.

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