Sensory evaluation of cake added with amaranth flakes through parallel factors

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The grain of amaranth has been considered a functional food because of its ability to reduce cholesterol levels in the blood, being incorporated in different preparations to improve the nutritional value and stimulate its consumption. With the internal preference map multidimensional, which results from the parallel factors analysis, it is possible to analyze simultaneously the interactions between consumer preferences, considering the different attributes evaluated for each product, which may facilitate the selection of the most accepted samples, thus, a useful tool for analysis of consumer acceptance tests. The aim of this study was to verify the acceptance of the cake added of concentrations of 0%, 5%, 10% and 15% of amaranth flakes. The concentrations were calculated based on 400g of commercial premix of cake. The cakes were submitted to acceptance testing using nine-point hedonic scale ranging from “like extremely” (9) to “dislike extremely” (1). The results were evaluated by parallel factors analysis, using the software Matlab (version 7.5) for simultaneous evaluation of the acceptance data regarding the attributes of appearance, flavor, texture, overall impression and buying intention. The optimization model was performed with two factors, analyzing the concordia. The PARAFAC model presented 61.19% of variance and concordia value of 84.45%, being preferred by the consumer formulations with the addition of 0% and 5% of flakes of amaranth.

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