INTERNAL PREFERENCE MAPPING OF CASHEW APPLE NECTAR SWEETENED WITH DIFFERENT SWEETENING AGENTS

Aline Gurgel Fernandes, Paulo Henrique Machado de Sousa, Raimundo Wilane de Figueiredo, Maria Mozarina Beserra de Almeida, Geraldo Arraes Maia, Giovana Matias do Prado, Maria de Fátima Gomes da Silva. Department of Food Technology, Federal University of Ceará – UFC, Av. Mister Hull 2977, 60356-000 Fortaleza, Ceará, Brazil

Some people who need to replace sucrose with non-caloric sweeteners are looking for products that are endowed with taste and characteristics similar to those of sucrose. There has been an increase in reduced calorie products. This study aimed to evaluate the overall impression of cashew apple sweetened nectar with different sweeteners by Internal Preference Mapping (IPM). Cashew apple pulp, water, sucrose and different sweeteners were used: a mixture of cyclamate/saccharin in the ratio 2:1, aspartame, acesulfame-K, stevia and sucralose. Nectars containing 20% pulp, the control with 10% sucrose and other treatments had sweeteners added to them at equivalent concentrations of 10% sucrose, 0.054% of aspartame, 0.053% of acesulfame-K, 0.036% of cyclamate/saccharin, 0.016% of sucralose and 0.06% of stevia. The sensory evaluation was carried out with 100 untrained tasters in laboratory tests, through delineation of balanced complete blocks. Aiming at the evaluation of the individual answers of each taster, the sensorial answers were evaluated through IPM methodology, employing the technique of main component analysis. The internal preference mapping of attribute overall impression explained in conjunction 55.33% of sample variations (first component, 37.61%, and second, 17.72%). There were a large number of panelists located in the center of the chart, which formed three distinct groups of consumers, formed by the first samples sweetened with sucrose and sucralose, aspartame formed by the second and third formed by cyclamate/saccharin, acesulfame-k and stevia. Samples sweetened with sucrose, sucralose and aspartame were preferred by the panelists, as those sweetened with cyclamate/saccharin, acesulfame-k and stevia were less acceptable to the judges.