

Proceeding Paper

Characterization of Fruit Sorbet Matrices with Added Value from *Zizyphus Jujuba* and *Stevia Rebaudiana* [†]

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Abstract: Plant-based diets are gaining popularity and vegan and vegetarian frozen desserts are trending. Sorbets fit well in this concept, and can be seen as healthy ice cream alternatives. This study aims at evaluating the sorbet recipe alteration with the inclusion of different percentages of *Zizyphus jujuba* powder, and *Stevia rebaudiana* as a possible sugar substituent, resulting in a control sample and five variations. Three sorbet matrices contained jujube powder in different concentrations (5, 10, 10%), while in the other two, sugar was substituted with stevia and jujube, respectively. Peaches from the “Laskava” (native Bulgarian) variety were utilized as the primary ingredient.

The new sorbet matrices were characterized based on their moisture and ash content, overrun, melting behavior, melting rate, water holding capacity, pH, nutritional data, soluble solids content, titratable acidity, vitamin C content, total phenolic content and antioxidant activity. The microbial load and CIELAB color of the sorbet alternatives was also evaluated. A sensory evaluation revealed the most preferred variant in terms of its appearance (n=6), aroma (n=5), flavor (n=5), mouthfeel (n=7), and aftertaste (n=5).

The soluble solids content was in the range from 17.50 to 33.03%, while the ash and moisture contents varied from 0.36 to 5.21%, and 63.77 to 80.21%, respectively. The calculated overrun of the studied samples fluctuated from 8.11 to 12.32%. The melting rate was well related to the melting behavior of the sorbet variations. There was a resemblance in the color of all studied samples with lightness ranging from 42.13±3.18 to 57.91±4.27. The calculated energy was established to vary between 68.60 and 158.39 kcal with carbohydrates being the most abundant (8.98–33.30 g/100g). Not all sorbet variations were well accepted by the consumer panel. However, results uncovered a potential for the development of peach sorbet matrices with added value and a reasonable consumer acceptability. Further research can perfect the recipe and deliver a source for comparison with other frozen desserts.