EVALUATION OF THE SENSORY CHARACTERISTICS OF ICE CREAM WITH SEA BUCKTHORN EXTRACT

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Introduction. The valorization of by-products generated during fruit processing represents a promising direction for the development of value-added foods. Sea buckthorn pomace is a potential source of bioactive compounds and can be used in the form of a water-soluble extract for food product formulation [1]. The aim of this study was to evaluate the influence of a water-soluble sea buckthorn pomace extract on the sensory characteristics of ice cream.

Materials and Methods. Seven ice cream samples, including a control sample, were investigated, with the addition of a water-soluble sea buckthorn pomace extract at concentrations of 0.5, 1.0, and 1.5%. Sensory evaluation was performed using the scoring method on a 9-point scale, with a panel of 10 trained assessors. Five sensory characteristics were evaluated: external appearance, color, consistency, odor, and taste.

Results and Discussion. The samples containing the extract demonstrated good sensory acceptability. External appearance and odor received the maximum score of 9.0 points, indicating product uniformity and the absence of undesirable sensory changes. Color also received maximum scores, with its modification being associated with the presence of natural pigments from sea buckthorn, particularly carotenoids. Regarding consistency, samples P2 and P3 obtained scores of 8.6 and 8.7 points, respectively, demonstrating the maintenance of an appropriate texture. Taste was rated at 8.6 points for P2 and 8.5 points for P3, indicating good sensory acceptability and the expression of the characteristic sea buckthorn flavor. At higher extract concentrations, an intensification of the characteristic sea buckthorn profile was observed, possibly associated with a slight astringent sensation.

Conclusions. The addition of a water-soluble sea buckthorn pomace extract allows the production of ice cream with favorable sensory characteristics, without significantly affecting its appearance, color, consistency, or odor. Moderate extract concentrations provide a favorable sensory balance, highlighting the potential of using this by-product as a value-added ingredient in the development of food products.

Keywords: *acceptability, aroma, flavor, trained assessors, texture, taste*

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