Keywords: *Hippophae rhamnoides L.*; bioactive compounds; carotenoids, polyphenols, whey protein isolate, carboxymethylcellulose, chitosan

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Development and optimization of new beverages based on different fruits or berries and white wine vinegar

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Abstract

White wine vinegar is characterized by various uses in household and cooking, but also has significant health benefits due to its acetic acid content, including blood sugar control, appetite control, weight management, reduced cholesterol and antimicrobial properties etc.

Despite all the usefulness of vinegar, it is seldom used in the food industry. Although there is a current trend in the food and beverage market to diversify vinegar categories, to obtain new products with increased prophylactic properties that will be able to prevent diseases and better sensory characteristics compared to conventional products and beverages. The aim of this study is to develop a new soft drink technology based on local fruits and white wine vinegar. The process includes the use of natural ingredients in the following ratio of components, in % mass: fruits or berries: 20%, sugar: 20%, white wine vinegar: 5...10%, herbs: 1% or spices: 0.2 %. The method of obtaining the drink includes the following steps: washing fruits / berries and herbs, adding caster sugar, maturation for 5 hours at T = +2 ... 4± 1 °C, adding vinegar at T = +50±1 °C, homogenization, maturation for 3 days at T = +2...4±1 °C, filtration, dissolution and packaging. As a result, a unique drink is obtained that maintains all the organoleptic properties of natural ingredients, as well as all the beneficial nutritional qualities, free of artificial additives (dyes, preservatives, sweeteners). This gives us the possibility to expand the range of natural drinks and to expand the consumers circle. This research is extremely useful not only by expanding the range of soft drinks produced, but also by using local agricultural resources.

Keywords: beverages, vinegar, fruit, berries.