

THE USE OF SEA BUCKTHORN IN THE MANUFACTURE OF BERRY SAUCES

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One of the promising areas for the use of sea buckthorn berries is the production of purees and sauces. In the production of berry sauces, various technologies are used to prepare raw materials for extracting puree, including heat treatment, mechanical processing and fermentation, as well as various preservation methods, the most common of which are pasteurization and the use of preservatives. To improve the organoleptic characteristics, dyes and flavors are used, often of a synthetic nature or identical to natural ones. All of the above manipulations not only reduce the biological value of berry sauce, but also increase the risk of allergic reactions, thereby preventing this type of product from being included in a number of functional and beneficial for human health. We studied the possibility of obtaining sauces of three types based on local varieties of sea buckthorn. The biochemical composition of sea buckthorn berries was studied, the method of blanching berries and storage of the finished product was selected, allowing to preserve the entire range of biologically active substances, a product with increased biological value was obtained, and the quality indicators of sauces were studied. As a result of studies of the physicochemical and biochemical parameters of sea buckthorn berries, as the main raw material for sauces, it was found that the studied varieties contain (depending on the variety): 19-22 % solids, 25-100 mg/% ascorbic acid, 13-29 mg/% carotenoids. The increased content of sugars (6-13.0 %) and the content of acids from 1.6 to 3.2 % determine the specific balanced taste of the finished product. The high content of antioxidants in berries and the percentage of inhibition determined using the DPPH method, varying from 50 to 70 %, allows us to conclude that sea buckthorn has a high antioxidant activity. The resulting 3 types of sauces – sweet, sweet and sour and spicy have high quality indicators, have a pleasant, bright appearance and color, thick texture, balanced taste. Thanks to the gentle method of short-term blanching of berries, and the use of a new alternative method of preservation at low temperatures, it was possible to preserve vitamin C and carotenoids in the finished product. In the course of determining the microbiological characteristics of sauces during their storage for 3 months at a temperature of -20 °C in frozen form, it was found that the total maximum amount of QMAFAnM did not exceed $2 \cdot 10^3$ CFU/g, which, according to regulatory documents, is a good indicator of safety.

Keywords: berry sauce, sea buckthorn, quality, safety, antioxidant, bioactive compounds

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