THE DEVELOPMENT OF COMPOSITIONS FOR CONCENTRATED FOOD PRODUCTION USING PARSNIP

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The concentrated products from vegetable raw materials are represented in a small range on the market of Ukraine. The range of recipes of new compositions for concentrated food production using parsnip was developed. Using parsnip roots provides nutrient-enriched sweet products with improved organoleptic characteristics as they have vitamins, minerals, dietary fibers, and essential oils in their composition. The parsnip flavor and aromatic properties formed during processing derive from the significant changes in the raw material composition. The idea of the research consists in proving the feasibility of using parsnip in the production of concentrated sweet products, namely confiture, and finding the optimal parsnip-based formula. Parsnip contains dietary fibers, namely fiber and pectin. Dietary fibers promote intestinal and gastric peristalsis and induce the bile flow and cholesterol removal.

The agar as a gelling agent for confiture compositions was experimentally chosen. The agar does not require special conditions for gelling such as acidity, sugar concentration and does not affect the flavor and taste of the final product. An important stage in the process simulation is a system analysis of the studied technological system. To reduce the number of experiments and obtain reliable information multivariate methods of experiment planning and uniform-selected composite rotatable second-order plan were used. The optimum ratio of the recipe composition components for the production of parsnip-based healthy foods with cinnamon, citric acid and orange peel were established. The main ingredient of the proposed new product formula is prepared parsnip roots. The other two components (agar and cinnamon, agar and citric acid, agar and orange peel) have provided the three above-mentioned products with new organoleptic characteristics. It is necessary to determine the ratios of these components using the experimental evaluation of the created compositions. In addition to the main components of each composition, fixed amounts of the following ingredients were added: apples – 25%, black chokeberry – 10%, sugar – 35%. Their ratio was established experimentally. The analysis sequence for individual organoleptic characteristics of the product quality met the natural sequence. First, the appearance, color, and body were considered, followed by aroma, and then the taste and overall impression. They were estimated using a 5-point scale with due regard for the weight index of each indicator. The high quality of confitures was confirmed by the results.
of the taste evaluation of experimental samples.

**Keywords:** parsnip, agar, apples, cinnamon, black chokeberry, confiture, organoleptic characteristics.