THE EFFECT OF CHIA SEEDS ON QUALITATIVE CHARACTERISTICS AND CHEMICAL COMPOSITION OF CREAM-WHIPPED CANDIES

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The diet of a modern human is sufficient to compensate for his energy consumption, but is not able to ensure the intake of essential nutrients that will be compliant with physiologically normal states. Despite this, one of the crucial tasks of the modern food industry is the elimination of (poly) deficiency states in diets, which is possible due to the use of physiologically valuable ingredients during the manufacturing of the most commonly used food products.

An important place among food industry products is occupied by confectionery products, particularly chocolates, which makes them prospective target for enrichment with useful substances. Non-conventional raw materials can be used as a source of such substances. During the past decade, there has been an increasing interest in unconventional types of oil seeds, particularly chia seeds (Salvia hispanica), as a product that has certain useful properties. Chia seeds are characterized by a high content of proteins, dietary fiber, polyunsaturated fatty acids, vitamins, minerals, and phenolic compounds.

The effect of chia seeds on the qualitative characteristics and chemical composition of cream-whipped candies was investigated in the submissions. The additive was used in the whole and crushed state. The whole seed was introduced after prehydration at the stage of whipping of protein mass in the amount of 30, 40, 50% of the mass of dry albumin. Crushed chia seeds were introduced at the stage of obtaining an emulsion semi-finished product in the amount of 30, 40, 50% of the mass of fat. The recipe dosing of the protein and fat component was reduced by an appropriate amount. It has been established that the use of chia seeds in the technology of cream-whipped candies, contributes to reducing their density, increases strength and provides peculiar organoleptic properties. The recommended dosing of whole chia seeds is 40% of mass of dry albumin, and the dosing of crushed chia seeds is 40% of mass of fat.

It has been established that the use of chia seeds in the technology of cream-whipped candies at the recommended concentrations provides their enrichment with protein (by 1.5 times), dietary fibers (by 3.7 times), polyunsaturated fatty acids (by 5 times), some minerals (e.g. potassium, calcium, magnesium, phosphorus, zinc) and vitamins (C, E, group B).

Thus, the use of chia seeds in the technology of cream-whipped candies makes it possible to obtain products with high organoleptic properties, improved chemical composition and stable structural characteristics.

Keywords: cream-whipped candies, chia seeds, density, strength, quality, organoleptic properties, chemical composition.