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IMPROVEMENT OF FERMENTED MILK DESSERTS USING SECONDARY DAIRY RAW MATERIALS

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Abstract: The need to create functional dessert products with the introduction of secondary resources is relevant. First, the original formulations for dairy desserts are rarely used. The production of non-traditional types of desserts, such as multi-component dessert products, has no analogs on the market yet. Second, the use of whey as a raw material is relevant due to the current shortage of milk worldwide.

Whey is a by-product in the production of protein dairy products. The main component of whey is lactose, about 70 % by weight of all solids. Whey contains a significant amount of biologically valuable whey proteins, free amino acids, and minerals. The content of whey proteins in whey reaches 0.5…1.5 %. The main ones are β-lactoglobulin (7…12 % of the total amount of milk proteins), α-lactalbumin (2…5 %), whey albumin, immunoglobulins, and components of the protease-peptone fraction.

Whey proteins (albumins and globulins) have valuable biological properties that contain the optimal set of vital amino acids. There is a small amount of fat in whey (0.05…0.4 %) but its value is that it is dispersed into balls with a diameter of less than 2 μm.

The main macronutrients of whey are calcium, phosphorus, magnesium, potassium, sodium, chlorine, and sulfur (found in proteins). Whey proteins contain the following trace elements: iron, copper, zinc, manganese, aluminum, selenium, iodine, and others.

Therefore, the development and improvement of sour milk desserts using secondary milk raw materials is a promising area of research.

Key words: *whey, desserts, secondary resources, food products, waste-free technologies*