MOLECULAR WATER MOBILITY IN THERMODURIC MILK-CONTAINING FILLING

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The technology of thermoduric milk-containing filling, in which low-etherified pectin and modified starch, widely spread in Ukrainian market as structure-forming agents, is developed. Their peculiarity is the ability to add defined functional and technological properties to the product and their usability. Effortless technological process of manufacturing, low cost price, increased competitiveness and high level of demand at the consumer market characterize thermoduric milk-containing filling. It can be used as a semi-finished product for the decoration of cakes, biscuits, confectionery and culinary products.

Molecular mobility of water in model systems is studied by means of a spin echo method of a nuclear magnetic resonance (NMR). The way the process of low-temperature processing influences the changes in hydrocolloids containing is clarified. The compatibility of using structure-forming agents – low-etherified and modified starch as a part of heat-proof milk-containing filling is substantiated. It will allow manage the process of structure-formation, and the possibility to receive top quality product with high sensory characteristics.

Keywords: hydrocolloids, thermoduric, gelation, synergism.