The influence of the content of fruit and vegetable paste (apple – 60%; pumpkin – 20%; beetroot – 20%) in the zefir recipe was determined to identify the regulating and predictive component regarding nutritional value and consistency. Provided it is applied in the range of 25%, 50%, 75% and 100% with the replacement of apple puree. The dynamic viscosity $\eta_{ef}$ of marshmallow specimens with replacement of apple puree was confirmed: 25% – 695 Pas, 50% – 743 Pas, 75% – 782 Pas and 100% – 967 Pas, respectively, in comparison with control (391 Pas). The obtained results of structure formation, depending on the duration, are characterized by an increase in the minimum plastic strength $P_k$ in comparison with the control (47 kPa): with replacement: 25% – 48.3 kPa, 50% – 50.7 kPa, 75% – 54.2 kPa and 100% – 56.9 kPa, respectively. This confirms the previous conclusion regarding the increase of structure formation during the formation of zefir masses and reduction of their duration due to partial or complete replacement of apple puree with fruit and vegetable paste in the marshmallow recipe. It is found that the rational amount of blended paste is 75%. This percentage application of the paste into the marshmallow technology provides an increase in the effective viscosity and structure formation compared to the control, having the best original taste properties.

The main advantage of technological and engineering solution is the use of modern methods for the production of functional products based on fruitful raw materials. A significant role is played by a qualitative approach in the blending of pastes to ensure the original composition in terms of physico-chemical and structural-mechanical properties. Not only in the blended compositions received, but in the finished product as a whole.

The introduction of advanced technology for the production of marshmallows with the introduction of the developed fruit and vegetable paste in accordance with the obtained research results confirms the relevance of the research direction. The technological solution provides an expansion of the range of high-quality competitive functional products with original natural organoleptic properties and high content of physiologically functional ingredients.

**Keywords:** zefir, fruit and vegetable paste, structural-mechanical properties, physiologically functional ingredients, marshmallow masses, structure formation.