

## Секція 1. ІННОВАЦІЙНІ ТЕХНОЛОГІЇ ХАРЧОВОЇ ПРОДУКЦІЇ РЕСТОРАННОЇ ІНДУСТРІЇ

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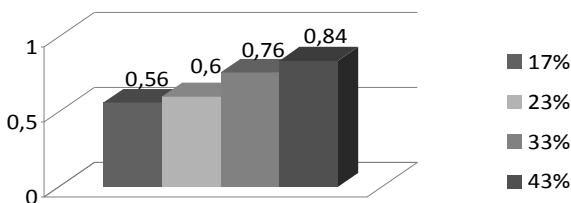
### DEVELOPMENT OF MOUSSE TECHNOLOGY USING BEANS (*PHASEOLUS VULGARIS*) (РОЗРОБКА ТЕХНОЛОГІЇ МУСУ З ВИКОРИСТАННЯМ КВАСОЛІ (*PHASEOLUS VULGARIS*))

Nutrition of the population is increasingly characterized by a lack of protein, dietary fiber, minerals and vitamins, which can lead to an increased risk of a number of diseases. Actual is the study of the possibility of using in the diet products with increased nutritional value. As a prescription ingredient that can increase the nutritional value of dessert products, such as mousse, leguminous crops, in particular beans, can be used. Mousses are now very popular as a dish, and as a semi-finished product in the preparation of flour confectionery.

Beans are a valuable food crop. All kinds of beans have a high protein content (20–25%), dietary fiber and B vitamins, especially folic acid.

In the course of the research, a technology for the preparation of whipped dessert was developed, the main ingredients of which are boiled white beans, stabilizer, sugar and liquid fraction. As the liquid fraction can be used solutions of coffee, cocoa, juices, etc.

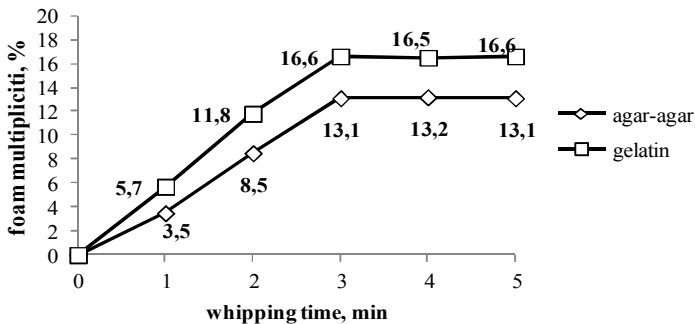
To determine the optimum formula, puree from beans was introduced in a different ratio to the total mass of the product: from 17% to 43%. The high concentration of puree was undesirable due to the complexity of the process of further whipping. The density of the resulting mousses increased from 0.56 to 0.84 g/cm<sup>3</sup> (Fig. 1). The density of ingredients not subjected to whipping was 0.96 g/cm<sup>3</sup>.



**Fig. 1.** Density of mousses with different content of beans

The organoleptic evaluation of the obtained mousses was carried out according to the descriptors forming the perception of the product and characterizing the consumers' expectations: taste, color, appearance, odor, uniformity, fine poresiness, lack of taste of beans. The results showed that the sample, with a bean content of 43%, received the highest scores, since the taste of this sample was more saturated, the structure was finely porous and homogeneous.

To determine the optimal whipping time and the effect of the structure former on the foaming capacity, the foam multiplicity of the selected sample was measured (Fig. 2).



**Fig. 2. Curve of the relative change in foam volume during whipping**

The results of the experiment showed that when using gelatin, the foaming capacity is higher by 3.5% of this index using agar-agar. The whipping time is at least 3 minutes. With further storage, the product retained the resulting volume.

It was also found that during the whipping process, the mousse is clarified to the point of maximum foam multiplicity, after which no discoloration occurs.

Thus, the resulting mousse with the addition of white beans and gelatin had a high sensory evaluation, had high foaming and structuring properties. Introduction to the composition of the bean mousse allowed to enrich it with proteins, food fibers, macro- and micronutrients.