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Аннотация: эффективность процесса замеса теста из пшеничной муки на линии производства хлеба в основном зависит от конструктивных особенностей месильного органа месильной машины, физико-химических показателей полуфабриката, особенностей рецептуры, а также от частоты вращения разминающего органа.

Ключевые слова: ранжирование факторов, оценка, процесс замеса теста, месильная машина, влажность теста.

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PREPARATION OF THE CHICKEN SOUFFLE

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Abstract: The article contains the technology for preparing chicken soufflé with the addition of dill, walnuts, coconut milk, and determining the organoleptic and nutritional properties of the new meat product.

Key words: chicken soufflé, nutritional value, energy value, dietary product.

The invention relates to the food industry, and just to the production of chicken soufflé. And it has the potential to be used in gluten-free, that is, in dietary products. The method involves preparing minced chicken with the addition of chicken egg yolks and coconut milk. As well as the quantitative ratio of the components of chicken souffle.

It ensures the creation of a product containing essential nutrients that help maintain health, reducing the calorie content of the product through the use of polysaccharides, enhancing the antioxidant effect, as well as an extension content of dietary fiber and expanding the range of functional and gluten-free products [1].

In the interview "In Kazakhstan, 84% of children consume fast food and almost 20% of minors are overweight", it is said about the occurrence of overweight or obesity [2]. The main ones include: a shift in the diet, increasing the consumption of high-

calorie foods with the highest content of fats and sugars and low content of vitamins, minerals necessary trace elements; sedentary lifestyle; spending a long time watching TV, at the computer or playing on smartphones/gadgets. Psychological factors are: depression, low self-esteem, anxiety, troubles or strong emotions in many cases become "eaten".

And that's why dietary meals, like soufflés, will help you feel great.

Many scientists are conducting research to create new products with increased nutritional value or reduced energy content. Some scientists use the base for products made from cutlet mass, for example, cutlets, meatballs, meatballs, meatballs, rolls. The techno task was to improve the method, obtain minced meat free from these defects, low-waste technology, increase the properties and extend the shelf life of the finished product. The technical result is an improvement in the organoleptic properties of minced chicken and an increase in its shelf life [3].

Choosing dietary meat is a complex process. And there are many different types in stores, and not all of them are dietary. For example, pork and lamb cannot be called low-calorie foods due to their fat content. Beef is less fatty, but choosing the right cut is also very difficult: it is better to take veal. According to experts, turkey and rabbit meat are the healthiest meats for humans and at the same time low in calories. You can also add chicken breast to the list of dietary poultry meats.

The discovery [4] relates to the meat industry and has the It makes it possible to use it in the production of dietary meat products. The purpose of the claimed invention is to prepare a meat souffle (in other words, "mousse") of enhanced nutritional and biological value. Balanced in the ratio of proteins and fats in accordance with the requirements for dietary meat products. We have developed a new meat product. To prepare, ingredients must be at room temperature. We pass the chicken fillet through a meat grinder with a fine mesh. Add medium-thick coconut milk to the mixture, beat well with a blender, then add the yolks and whites whipped into a thick foam. Then add dill and walnuts. Knead lightly from bottom to top and place on a greased baking sheet in a 3 cm layer. Bake until done in the oven for 20 minutes at 220 – 250°C or steam for 25 – 30 minutes. Readiness was determined by compaction of the mass, when the mass separates from the walls of the mold or baking sheet.

Souffles are prepared from different types of meat:

- Chicken:
- Beef;
- Liver:
- Turkey;
- Duck:
- Hazel grouse.

As additional ingredients you can use herbs, cabbage, rice, nuts, vegetables, cottage cheese, processed cheese, zucchini. They can also be prepared at home, in the oven, or in the microwave. As a result, they turn out nourishing and tasty. The method for preparing meat soufflé involves preparing minced turkey meat with the addition of quail eggs or regular food eggs, salt, vegetable components, parsley, broth, cream sauce and semolina, taken in a 1:1 ratio. The broth obtained after cooking the turkey is used. The resulting meat souffle has the necessary properties, both antibacterial and

antitumor, in addition, it normalizes fat metabolism and blood pressure.

Table 1 Energy value of some types of meat

Types of meat, 100g per	Calorie content, kkal	
Chicken	111	
Beef	143.8	
Turkey	212.9	
Duck	295	

Organoleptic quality indicators are product characteristics that can be assessed using various human senses. This safety indicator is especially often checked during voluntary certification and when declaring food products [5]. The organoleptic characteristics of our product are shown in Table 2.

As we have already discussed, souffle is a dietary dish characterized by high protein content and low fat levels. In our recipe, we decided to replace regular pasteurized milk with coconut milk because it has a rich nutrient content. Coconut milk contains a number of vitamins, including groups B, C, A and PP, as well as useful minerals such as potassium, magnesium, manganese, phosphorus, zinc, sodium, selenium and iron; healthy dietary fiber. Chicken soufflé is baked in the oven, while preserving the natural taste of the dish.

Walnuts are added for their high levels of "healthy" polyunsaturated fats (PUFAs) and alpha-linolenic acid (ALA, the plant form of omega-3). Nutritionists recommend eating five to seven halves of nuts per day, because such a serving contains almost two daily doses of omega-3.

Table 2
Organoleptic characteristics of chicken soufflé

Indicator name	Note	Actually	
Appearance	Fluffy souffle, without a crust on		
	the surface (steam) or a rough crust	Corresponds	
	(baked), poured with oil		
Color	Whitish-gray	Gray- yellowish	
Taste and smell	Boiled poultry, with a hint of milk	Corresponds	
Consistency	Delicate, porous	Corresponds	

To calculate the nutritional and energy value of chicken soufflé, we used an online calculator. Source of diet: http://frs24.ru/st/kalkulator-raciona-pitaniya/. The results are shown in Table 3.

Chicken souffle is rich in vitamins and minerals such as: vitamin A - 28.9%, vitamin B₁ - 32.3%, vitamin B₂ - 44.9%, choline - 64.5%, vitamin B₅ - 38.9%, vitamin B₆ - 40.4%, vitamin B12 - 38.7%, vitamin D - 23%, vitamin H - 40.4%, vitamin PP -

57.6%, potassium - 18%, phosphorus - 47.8%, iron - 18.7%, iodine - 13.3%, cobalt - 100%. Source of diet: https://health-diet.ru/table_calorie_users/2941098/

Nutritional value of chicken soufflé

Table 3

Name of raw	Proteins,	Fats,	Carbohydrates,	Energy value,
materials, 100 g per	g	g	g	Kkal
Minced chicken	17.40	8.10	0	143
Coconut milk	2.3	10	1.8	102
Walnut	15.20	65	7	654
Egg	12.70	10.90	0.70	157
Dill	2.50	0.50	6.30	38
Ground black pepper	10.40	3.30	38.70	251.00

Proteins play a very important role in human life. Thanks to proteins, muscles become stronger; protects bones; reduces blood pressure; promotes recovery. In addition, the protein obtained from eggs has the highest digestibility. It can help in the construction of body tissues. In addition, the testicles are rich in choline and vitamins B12 and D - preparations. Which are important for maintaining the joint value of energy and its preservation in the cells of the body. To summarize, meat souffle is a dietary meat product. It is concluded that the following components are used in the recipe:

- Eating walnuts improves metabolism. Thus, B vitamins prevent excess weight from remaining and maintain external beauty and health.
 - It has improved taste properties, thanks to coconut milk;
- The product allows you to expand the range of meat products prepared for global nutrition;
- It is used to feed preschool children, for example, as it comes from natural products, without complicating the technological process, without the additional use of food additives using components of preventive action;
 - Most importantly, an excellent source of easily digestible protein.

Bibliography

- 1. Makarova S. Yu. A method for obtaining a functional chicken souffle // Russian Patent $N \ge 2018139535$, 2019. -13 p.
- 2. In Kazakhstan, 84% of children consume fast food and almost 20% of minors are overweight, Interview. [Electronic resource] URL: https://www.kt.kz/rus/interview/v kazahstane 84 detey upotreblyayut fasfud i poc hti 20 1377885969.html. (дата обращения 01.12.2023).
- 3. Dolganova N.V. Method of production of minced chicken with additives // Patent of Russia №2272544, 2002. 4 p.
 - 4. Zhailaubaev J. D. Composition for cooking meat mousse "Tender" // Patent

of Kazakhstan №21289, 2009. – 2 p.

- 5. Chicken souffle, Technological map (TTK 3104) [Electronic resource] URL: https://tekhnolog.com/2018/09/11/sufle-iz-kur-ttk3104/. (Accessed 19.11.2023).
- 6. Совершенствование процесса затирания при производстве пива / В. А. Помозова, А. Н. Потапов, У. С. Потитина, М. В. Просин // Вестник КрасГАУ. 2012. № 12(75). С. 191-196

ПРИГОТОВЛЕНИЕ КУРИНОГО СУФЛЕ

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Аннотация: в статье представлена технология приготовления куриного суфле с добавлением укропа, грецких орехов, кокосового молока, а также определение органолептических и пищевых свойств нового мясного продукта.

Ключевые слова: куриное суфле, пищевая ценность, энергетическая ценность, диетический продукт.

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СПОСОБЫ ЭКСТРАГИРОВАНИЯ РАСТИТЕЛЬНОГО СЫРЬЯ

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Аннотация: в данной рассмотрены разные виды импульсов движущей силы экстрагирования (энергия вибрации, обработка испаренным экстрагентом, СВЧ-