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РОЗДІЛ 1

**АКТУАЛЬНІ ПИТАННЯ ЗБЕРІГАННЯ
ТА ТЕХНОЛОГІЇ ПЕРЕРОБКИ ЗЕРНА,
ОВОЧІВ ТА ФРУКТІВ**

DEVELOPMENT OF TECHNOLOGY FOR PRODUCTION OF BAKERY PRODUCTS A LONG SHELF LIFE FLOUR FROM DIFFERENT TYPES

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Bakeries take an special place in the food ration of a man. Recently a customer has preferred fresh batch in the baker's and cafes, that's why bakery production to the traditional technology is being cut down [1]. Perspective is the technology of postponed baking that will allow great companies to produce frozen a underbaked semi finished bakery and cafes it to the place of realization. His technology is consideren to be energetically saving up as a result of partial baking. His advantage of the bakery produced according to the technology of postponed baking is a long term of safe keeping and getting fresh bakery at any woment of the day.

The aim of the investigation was to define mass contents and influence of different kinds of meal on the quality of ready-made bakery of a long term of realization [2]. The laboratory baking of bread was carried out in a leavened-doughless way. The kneading of dough was conducted on a Brabender's pharinograph during ten minutes, then the dough was leavening for 60 minutes after the rising the dough was put in moulds and sent to be held out in the thermostat TS-80 during 40 minutes. The dough half-finished products were baked in the laboratory oven RZHLP at the temperature 220-230 °C during 70 % of the total time of baking. The products were cooled in the laboratory condition and then were sent to a deep-freeze with the temperature of 18 degrees below zero. The period of freezing takes about 120 minutes. In such conditions the products were keep during 3 days. The stage of defrost was conducted in the thermostat TS-80 at the temperature of 29-32 °C degrees centigrade. The products were backed to the and during the left 30 % of the total time of baking.

For control we took the products made according to the traditional technology according to the results of carrying out of theoretical and experimental investigations we can come to the onclusion that the bread made after the technology of partial baking does not have significarot differencies in organoleptici and in physico-chemical indicators comparing with the bread made according to traditional technology. What should be also mentioned is the improvement of organoleptici and structure-mechanical indices of readymade products while adding of buckwheat corn meal and wheat chaff. It is stipulated by the presence of treacle and by a greater quantity of yeast in the recipe [3].

Buckwheat maize flour and wheat chaff are used in the technology of bakery of a long term of realization for improving the chemical structure of bread. Maize flour contains more lipids, sugars, gemicellulose. It is rich in macro- and microelements (Calcium, Magnesium, Phosphor, Ferrum and Nickel), vitamins E, B₁, B₂, B₆, PP. Buckwheat flour contains Zinc, Magnesium, kalium and Ferrum, vitamins of B, E groups, antioxidant and rutin [4]. Well-known that wheat chaff in the source of food fibres, that are necessary components of nutrition. Because of the availability of buckwheat, maize flour and wheat chaff in the receipt the bakery can be considered to have functional activity.

Based on the investigations we can make a conclusion that it is reasonable to apply buckwheat, maize flour and wheat chaff into the recipe of the bakery of a long – term realization. Opplying treacle make it possibly to continue the safe-keeping term and to improve the rheological characteristics of ready production. Using the technology of postponed baking is an innovative way of increasing of the production efficiency.

Scientific supervisor – PhD Solonytska I.

References

1. Solonitska I.V. Using deferred baking bread in technology Therapeutic and prophylactic /I.V. Solonitska, G.F. Pshenishnyuk, O.E. Pisanetska // Food science and technology.– 2012. – № 1. – P. 11-14.
2. Manufacture of frozen dough / K. Kulp and K. Lorenz. J. Brummer (ed); per. from English. Under the total. Ed. IV Matveeva. – Spb .: Occupation. – 2005. – 288 p., Ill.
3. Drobot V.I. Technology bakery production [Text] / V.I. Drobot. – By: Logos, 2002. – 365 p.
4. Alferov A., (2009). Market of bread and bakery products: realities, prospects and development trends Bread products (№ 2) 60.

NEW KINDS OF WHEAT WITH INCREASED BIOLOGICAL VALUE

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Products of grain processing and bread products all over the world are traditional foodstuff and constitute a significant part of the food ration for people. One of the main grain crops, which are cultivated by the people, along with corn and rice, is wheat. The volume of wheat production make about 700 million t., it is about 30 % of world grain production.

Wheat is member to the cereals family. Cereals form inflorescences, which have difficult spike including individual spikelet. Inside each ear of wheat is the fruit (seed) called «wheat kernel». With good nitrogen nutrition in the ear is usually 35-40 seeds, which are coated with hulls. Wheat kernel of majority of plants, which are belong to the cereals family (more than 6000 species) fall to the ground with hulls, because they are firmly related to the surface of the seed. This occurs in oats, barley, some wild grains and hulled wheat. Hulls, remaining with wheat kernel, serve a protective function, as well as contribute to a better spread of seeds, because of increasing windage ability.

The genus of wheat contains about 30 species, that are well distinguishable by morphological and biological characteristics and the prevalence of a culture. Wheat depending on the number of chromosomes couples, are: di-, tetra-, hexa- and oktaploid. Most species of wheat are cultural, but wild-growing species also meet. Practically all cultural species of wheat are naked, which don't have hulls during trashing. However, there are also hulled species, their culm is very brittle, easily broke during threshing, therefore, ear is also easily separated from the culm, so grains, which are strong fitted by films, are great difficulty separated from them.

Mankind cultivates only two species of all wheat today (under 99 %) such as: durum (tetraploid) and common wheat, are also divided in the grain market. May be noted that in Ukraine «тверда пшениця» in World wheat classification is «durum» wheat and ukrainian «м'яка пшениця» in World named «hard» wheat. Because of the fact that in Ukraine, until now, only been grown bread wheat, while in the USA, Canada, France, Australia are grown soft wheat of biscuit or pastry application.

So, if we consider chronology of wheat cultivation, we can see that for 9 thousand years humanity has moved from the hulled wheat to the naked (hulless) wheat. Because of the fact that the hulless wheat have better technological processability: have a higher bulk density, i.e. so have more cheaper cost of their transportation and storage; no need to install the processing equipment for their threshing or dehulling; less energy cost of processing them.

СУЧАСНА ПЕРЕРОБКА САДОВО-ГОРОДНЬОЇ СИРОВИНИ У ФРЕШ-БАРАХ СУЧАСНИХ ФУД-КОРТІВ	
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