

CLASSIFICATION OF FOOD ADDITIVES AND BAKING IMPROVERS

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ABSTRACT

This article presents the results of a study of the chemical composition, organoleptic, physico-chemical properties and food safety of semi-finished products from rose hips, flax seeds and peanuts. A comparative analysis of the composition of the studied additives with the main indicators of the quality of varietal wheat flour was carried out in order to determine the possibility of reducing its amount in the recipe of bakery products.

Key words: improver, technology, flour, quality.

АННОТАЦИЯ

В данной статье приведены результаты исследования химического состава, органолептических, физико химических свойств и пищевой безопасности полуфабрикатов из плодов шиповника, семян льна и арахиса. Произведён сопоставительный анализ состава исследуемых добавок с основными показателями качества муки пшеничной сортовой с целью определения возможности снижения её количества в рецептуре хлебобулочных изделий.

Ключевые слова: улучшитель, технология, мука, качества.

Depending on the functional purpose and technological properties used food additives and baking improvers are classified into the following groups.

Food additives for the production of bakery products:

1. Improvers of oxidative action;
2. Improvers of restorative action;
3. Modified starches;

4. Enzyme preparations;
5. Surfactants (emulsifiers)Органические кислоты ;
6. mineral salts;
7. Preservatives;
8. Aromas and flavors.

Bakery improvers:

1. Dry wheat gluten and improvers based on it;
2. Complex baking improvers;
3. Dry starter cultures (acidifiers);

Special substances added to flour or dough in order to improve the quality of bread and regulate the technological process are called bread improvers. In modern baking, several dozens of different substances of both biological and chemical origin are used as improvers as improvers. They are used taking into account the baking properties of flour and the features of the technological regime adopted at the enterprise. The recipe of many bakery products includes salt, sugar, fat and other substances, which in some cases can be considered as bread quality improvers. Table salt is often used in phases to improve the quality of bread and stabilize acidity. The addition of sugar and fat to the dough reduces its viscosity and elasticity. Fat, especially in the form of an emulsion, increases the hydrolysis of gluten and, in connection with this, the gas-retaining ability of the dough. The dough becomes more plastic, which has a positive effect on its physical properties. The influence of various types of additional raw materials on the quality of bread is described above. For complex technological processes, complex multicomponent baking improvers, dry sourdoughs are used.

Dry wheat gluten (gluten) The main nutritional problem in the world is the lack of protein and its imbalance in the diet of people. Protein substances contained in the grain, forming a protein complex, determine the quality of the grain, since in the process of its processing into flour, and then into dough, the proteins form a single structural frame. The basis of this framework is the interaction, mainly, of two groups of proteins, gliadin and glutenin, the technological properties of flour, its ability to produce high-quality bread and pasta, does not determine the entire protein as a whole, but only those protein substances that do not dissolve in water and salt solutions and form a substance called gluten.

Complex baking improvers In recent years, complex improvers containing several additives of different nature and principle of action in optimal ratios have been used in the baking industry. The use of such complex improvers allows you to simultaneously affect the main components of flour, increase the effectiveness of each component of the improver due to the synergy of their action, and thereby reduce consumption and simplify the methods of their use. The total consumption of such complex additives is

from 0.01 to 3.5% by weight of flour. At the same time, the effectiveness of improvers is increased by introducing into their composition fillers of technological importance (dry gluten, soy flour, starches, sugars, etc.)

Oxidative improvers. Substances with an oxidizing action, compared with other chemical bread improvers, are more widely used. These include potassium bromate, potassium iodate, ammonium persulfate 2S 208, ascorbic acid, calcium peroxide and many other substances, potassium iodate and ammonium persulfate are not used in domestic baking.

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