

FACTORS CAUSING DEFECTS AND DISEASES IN BREAD PRODUCTS

Utanova Nazirakhan Makhmudjonovna

Graduate student of Fergana Polytechnic Institute

E-mail: utanovanazira5@gmail.com

Abstract: The article discusses the causes of the main diseases and defects found in bread and their prevention measures, and due to the presence of a large amount of water and other substances in bread, some diseases may be caused by microorganisms.

Key words: Potato disease, Rhizopus, Aspergillus, Mucor, Fusarium, mold fungus, functional bread.

Annotatsiya: Maqolada nonda uchraydigan asosiy kasallik va nuqsonlarning kelib chiqishi sabablari va ularning oldini olish choralari haqida so‘z boradi va non tarkibida ko‘p miqdorda suv va boshqa moddalar borligi tufayli mikroorganizmlar ta’sirida ba’zi bir kasalliklar kelib chiqishi yoritilgan

Kalit so‘zlar: Kartoshka kasalligi, Rhizopus, Aspergillus, Mucor, Fusarium, mog‘or zamburug‘i, funksional non.

Bread products are an important part of a diet. Bread products are a good source of nutrients, such as macronutrients and vitamins, which are essential for human health. The most common bakery products in the territory of our republic: bread, patir, buns, cakes, cookies, etc. These products are subject to fungal spoilage due to incorrect handling and storage conditions. Due to improper processing, its economic importance and commercial value is lost. Violation of these can cause a health hazard in the food of bakery products, and can lead to a mild form of foodborne illness.

The presence of vitamins in bread mainly depends on the type of flour. Wallpaper bread has more vitamins. Bread is also important as a source of minerals.

Bread contains potassium, phosphorus, sulfur, magnesium; in a slightly smaller amount - chlorine, calcium, sodium, silicon and other elements in small amounts. These substances play an important role in the formation of muscle and bone tissues, in the functioning of the cardiovascular system, in the normalization of the chemical composition of blood, and in other processes. Bread made with lower flours has more minerals.

Fungal spore counts are higher in the summer than in the winter because warmer weather holds more air pollution and more moisture.

The most common fungi found in bakery products are *Rhizopus*, *Aspergillus*, *Mucor*, *Fusarium* and others.

Diseases and defects in bread

It is known that due to the presence of a large amount of water and other substances in the bread, some diseases may occur due to the influence of microorganisms. The main diseases that occur in bread are potato disease and mold.

Potato disease.

This disease is mainly caused by potato bacillus bacteria. The rods of this bacterium can be in one or another amount in the air, in it and in other raw materials. If the spores of these bacteria do not die when baking bread, they develop and cause disease when favorable conditions are created. A sticky, slimy liquid appears in the core of bread infected with this disease, which gives the bread an unpleasant taste and smell.

The sourness of bread has a certain influence on the occurrence and development of these diseases. Breads with high acidity do not suffer from sourness. For example, this disease does not occur in sour rye bread. This disease occurs only in wheat bread. A temperature of 35-40 °C is favorable for the development of potato sticks. For this reason, this disease occurs more often in bread during the summer. Bread infected with this disease is considered unfit for consumption.

Mold.

This disease is also common in bread. The difference between the bacteria that cause mold and the causative agents of potato disease is that the spores of molds are completely killed during baking. Therefore, this disease is caused by microorganisms that appear in bread during their storage. Various spots appear on the surface of bread infected with mold bacteria.

Smooth bread crusts protect bread from mold to some extent. The appearance of cracks on the surface of the bread accelerates the mold process. The main factor affecting bread mold is the air temperature, relative humidity and sanitary conditions in these rooms. Ensuring high sanitary conditions and cleanliness in places where bread is stored in trade networks prevents bread from becoming moldy. Defects in bread.

Defects in bread can include defects in core, smell, and taste as a result of non-compliance of basic and additional raw materials with full standard requirements, as well as violations of technological processes in bread production.

Defects in appearance. Defects in the external appearance of bread include distortion of the shape of the bread, lack of whiteness of the surface of the bread crust, formation of excessive brown-black color, appearance of large cracks on the surface of the bread, separation of the crust from the core of the bread. remaining, the formation of a thicker crust specified in the bread standard, etc. can be included.

Defects in appearance: the wrong shape of the products (spreadable bread, small round shape, deformation) can be due to the following reasons: low-quality flour and sprouted grain.

Defects in the core of bread. Defects in the core of bread include the presence of unmixed flour in the core of bread, the presence of foreign impurities, the presence of uncooked dough, the uneven distribution of porosity, excessive darkening of the core of bread from the bran, etc. These defects also occur due to defects in the raw materials used for bread production and as a result of the violation of the technological process.

Defects in taste and smell. Defects in the taste and smell of breads include crunching of bread core when chewing bread, bitter taste, high or low salt content, sour taste and odors and other foreign tastes. m and include the presence of odors. These defects are mainly caused by the use of raw materials of substandard quality. For example, the crackling of the bread core when chewing bread indicates the presence of foreign mineral compounds and sand in the flour used to prepare the dough.

Defects in taste and smell: sour taste in fermented bread, unfermented in unfermented bread; over-salted or under-salted - the result of an incorrect dose of salt. It can be debilitated by ingesting weeds with a strong taste and smell.

The reason for the bitter taste in bread is the higher than normal amount of weed seeds that give it a bitter taste in the grain. In general, it is necessary to try not to have the above defects in baking bread.

Safety indicators - the content of toxic elements, mycotoxins, pesticides, radionuclides - should not exceed the permissible level specified by SanPiN. A list of specific indicators includes: foreign inclusions, compaction from mineral inclusions, disease and mold symptoms, pests of grain stocks.

Defects in bread products occur due to the use of low-quality raw materials, violation of production processes, transportation and storage of bread products.

Bread products occupy the main place in human nutrition, especially in the conditions of our country. Therefore, the demand for bakery products is high. It is important for public health to include components in the recipe of bakery products, to give them preventive and therapeutic properties, to solve the problem of lack of nutrients necessary for the body.

In such conditions, it is urgent to create new technologies and expand the types of functional bakery products enriched with natural food ingredients, as well as technologies for processing and using non-traditional raw materials for these purposes.

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