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Research Article

THE REQUIREMENTS FOR THE QUALITY AND SAFETY OF FLOUR CONFECTIONERY PRODUCTS

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ABSTRACT

Currently, confectionery production enterprises, like all branches of industry, are undergoing rapid changes. In this article, the requirements for the quality and safety of flour confectionery products are presented in the example of cookies and pancakes.

KEYWORDS

Cookies, galette, GOST, crackers, gingerbread, starch molasses, micro toxins, pesticides, food additives, defects.

INTRODUCTION

The safety of food products is such a factor that determines whether the product is healthy and safe for the human body and the next generation. Requirements for the quality and safety of products are defined in the following regulatory documents:

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- Standard requirements for the product (state standards - GOST and international standards);
- Technical documents (technical conditions, recipes, technological instructions), control standards (sampling, quality indicators);

The purpose of the specified regulatory documents is to:

- protection of human health;
- ensuring the safety of food products;
- ensuring the safety of food additives, flavourings and technological auxiliary materials;
- ensuring the safety of packaging materials.

Identification is carried out when checking that a product belongs to this product according to its name and indicators. Organizational standards, technical conditions, unified recipes, packaging information, and documents describing this product are used to determine the naming and quality characteristics of confectionery products [1-7].

Requirements for the quality of flour confectionery products

The quality of cookies, crackers and galettes is determined based on organoleptic and physicochemical indicators, like the quality of other confectionery products. Organoleptic indicators of cookies include indicators such as shape, surface, colour, taste and smell, and state of the cross-section when broken. The shape of cookies can be square, rectangular, circular, ring-shaped, and in various shapes. In all cases, the shape of the cookies should be correct, not broken, whole, or typical of this product [8-13]. The surface of the cookies is not the same different cookies. The surface of the sugar cookies should be smooth, and free of lumps, lumps, and pits. Decorations on the surface of cookies must be visible. It is allowed to have small bubbles and holes on the surface of galettes and crackers. The colour of the cookies should be the same everywhere, from pale yellow to golden. Cookies should be well baked when broken, with uniform pores, no voids, and not well-mixed dough pieces. Galettes and crackers are allowed to be layered when broken, with uneven pores. The taste and smell of cookies should be pleasant, clearly noticeable, and suitable for this type of product, there should be no extraneous taste and smell [14-22]. Sugar from the physicochemical indicators of cookies, galettes, and crackers, fat, water content, alkalinity, degree of turbidity and the amount of ash insoluble in 10 per cent hydrochloric acid is determined. For example, in sugar cookies, moisture should be 3-10 per cent, and in cookies made from elastic dough, it should be 5-9.5 per cent. The total amount of sugar and fat in cookies varies depending on their type and recipe. The alkalinity of cookies and crackers should not exceed 20, and that of galettes should not exceed 1.50. All confectionery products should not contain more than 0.1% ash insoluble in 10% hydrochloric acid [23-31]. As in other products, safety indicators are considered one of the important features of flour confectionery products. Therefore, during the quality examination of cookies, their safety indicators are determined. Information on the number of toxic

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elements, mycotoxins, pesticides and radionuclides that can be allowed in the following cookies is provided [32-39].

Requirements for the quality of gingerbread

Gingerbread is a confectionery product made from wheat or wheat-rye flour with the addition of sugar, chemical leavening agents and various spices, with a sweet, spicy taste. They differ from cookies in that they contain a large amount of sugar (up to 45%), water (12-14%) and various spices. In addition to sugar, some gingerbread can be made with additional raw materials such as honey, starch molasses (molasses), butter, eggs, and nuts. To give cookies a special smell and taste, spices - nutmeg, cardamom, fennel, cumin, ginger, coriander, vanillin, etc. are added to the dough. The organoleptic indicators of gingerbreads include such indicators as shape, surface condition, colour, the appearance of the broken place, taste and smell. The shape of gingerbread is unique, whole, not curved, in most cases it is convex. The surface should be flat, not cracked, and not burnt. The surface of glazed gingerbread should be smooth and not sticky. The colour is the same in all parts, typical of this species [40-47]. Unglazed gingerbread is light brown in colour, and glazed gingerbread is pale yellow in colour. Gingerbreads can be darker on the bottom than on the top. Gingerbreads should be well-ripened when broken, with even, well-developed pores, not well-mixed or compacted dough parts, and no voids. The taste and smell of gingerbreads should be pleasant, and the aroma of added spices should be noticeable, without extraneous tastes and smells. From the physicochemical indicators of gingerbread, moisture, total sugar, fat content, and alkalinity are strictly determined according to the standard. The moisture content of gingerbreads should not be more than 16%, and that of cookies should not be more than 24%. The total sugar content (based on the dry matter) is from 30% to 61%, depending on their value. The contribution of fat mass should correspond to the approved recipe, but should not be more than 27 per cent.

The alkalinity of gingerbread should not be more than 20. Gingerbreads with a foreign smell and taste, deformed, burnt, undercooked, sticky, unmixed and dense dough parts should not be allowed to be sold.

Defects in gingerbread

One of the most common defects that occur during the storage of gingerbreads is their drying and hardening. In this case, gingerbreads lose a certain amount of water and their structure becomes hard. Boiled gingerbreads harden more slowly than regular gingerbreads because they contain honey and starch molasses (molasses) which slow down the hardening process. If gingerbread is stored in conditions of high relative humidity, its surface will become wet. This causes them to quickly mold. In addition, gingerbreads may encounter defects related to production technology. Defects related to such production technology include the emergence of unmixed flour when the gingerbreads are broken, as well as the splitting of unglazed areas on the surface of the gingerbread.

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CONCLUSION

Currently, confectionery production enterprises, like all branches of industry, are undergoing rapid changes. The main ones are: changing the production capacity means changing the capacity of existing, practically outdated enterprises with the help of repair work and technical support, application of modern technologies, mechanization and automation of production, expansion and increase of the assortment of all types of products.

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