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Use of Non-Traditional Public Catering Production Technologies

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Abstract: The article investigates the possibilities and prospects of the use of alternative production technologies catering. The author substantiates the need for the adoption of innovative production technologies catering in bakery, meat, dairy products, food flavoring and including innovative technologies such as biscuit semis technologies, technology use in the production of sugar beet and catering technology combined products with multifunctional additives action.

Key words: Innovative Technology · Public Catering · Sponge Cake Mix · Sugar Beet · Addition of Multifunctional Action

INTRODUCTION

In modern society, in connection with the transformation of time in the most scarce and therefore valuable resource has become increasingly popular products catering "takeout". In other words, consumers prefer to consume products catering to the street on the go, not to spend time finding a catering establishment. Such a catering products, usually manufactured from inexpensive materials to provide a low cost and its cost accordingly and it is used for special packaging mostly of cellophane or plastic, which, as known, are the products of the decay period is extremely long.

To ensure mass production catering for its production in most cases products are used long-term storage and this quality is ensured by the synthetic nature of the ingredients in their composition, which is based on food additives, flavorings and GMOs. Such products can harm the human`s health.The result is that the bulk of catering products made ??from unsafe for the human food and packaged in environmentally unsafe packaging materials. Therefore the problem is to improve the quality of catering products.This requires innovative production technologies catering.

MATERIALS AND METHODS

During the research the author uses the experimental and theoretical methods of scientific research. On the basis of experimental and calculated data of the chemical composition of semi-finished biscuit author examines the influence of the traditional methods of heat treatment on the use of sugar in cooking technology and confectionery products.

Copyright developing and testing technology combined selection of culinary products based on ostrich meat and beef, functional additives of plant origin. Regression model was developed to calculate the nutritional value depending meat products catering to rate their preparation and storage and processing technology.

The paper makes the following design principles of balanced nutrition:

- Compliance rationally balanced nutrition formula;
- Balance of protein and amino acid composition of ingredients catering products;
- Reduction in products catering fat and acids;
- Maximum approximation to the desired ratio between the saturated, monounsaturated and polyunsaturated fatty acids in fat-containing ingredients;
- Desire to improve the energy value of catering products.

RESULTS

Products catering-this hot dishes, hot and cold snacks, "takeaway" and culinary products. The challenge of meeting the needs of the population in high-quality food is very important. It can be solved by the introduction of non-waste and resource-saving

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technologies, intensification of production processes, the expansion of the species composition of raw materials. In this context, the question arises about healthy eating. Today, in an ever-worsening environmental conditions play an important role proper nutrition, suggesting eating natural foods and foods rich in vitamins and minerals that enhance the protective function of the human body in relation to the environment (Nasser and Al-Mefarrej, 2011).

The problem of healthy food is on the agenda at the UN and other international organizations. Given the role of nutrition in the health of the nation, many countries have adopted national concept of public policy in the field of healthy nutrition. Adopted the concept of public policy in the field of healthy nutrition for the period up to 2005 in Russia and the Russian Federation Government Decree ¹ 917 of August 10, which should not only meet the physiological needs of the human body in nutrients and energy, but also to perform preventive and therapeutic function.

Within the framework of the concept of healthy eating author of this study developed the following innovative production technologies catering:

- Technology of new food products from raw materials of plant and animal origin products for catering;
- Technology using natural materials for packaging products catering and optimize storage conditions of products catering.

Consider certain technologies in more detail. Technology use of new food products from raw materials of plant and animal origin for products catering involves increased use of cereals in the preparation of catering products, because they contain soluble fiber (Rashidiand Keshavarzpour, 2011).

The technology also involves the use of prebiotics in the production of new functional foods that allows adding new range of milk fermented products catering. Alternative technology of bread with enhanced nutritional value involves the use of cereal varieties, rich functionally active substances (vitamins, resistant starch, etc.). These substances are contained in a large quantity of potatoes. So promising direction of development of innovations in catering is the production of useful potato bread by changing the amino acid composition and reduce the sugar content in potatoes during the heat treatment.

As a non-traditional production technology of wheat bread, ensuring a higher nutritional value and offers the use of such ingredients as oats, buckwheat flour, biologically activated grain, fermented whey, as well as coarse flour made ??from various grains.Alternative technology of production of useful products catering involves the use of rapeseed oil, basil, oregano and thyme as a natural flavoring, as well as the volatile phenolic compounds and herbs.

As a non-traditional production technology of meat products catering proposes the use of ostrich meat. The chemical composition of ostrich meat (pH, color, texture, microbiological parameters and microstructure), ostrich meat is similar to the composition of beef, but it is more useful.

As an innovative market segment production catering author of this study offers catering production of environmentally - friendly products. Of course, these products have a higher value. However, the demand for environmentally friendly products in Russia and the world is growing rapidly, indicating that consumers' willingness to purchase environmentally friendly products catering.

The study, conducted by the Institute of standard samples and measurements (IRMM) in 2010 found that in the process of making coffee acrylamide at high temperatures in the interaction with the sugar turns to poison, harmful to the human body. Therefore, alternative technology for the production of coffee catering involves minimizing sugar in coffee to reduce its harm to human body.

Unconventional production technology is catering technology biscuit semis. White flour has an effect on improvement of the qualitative characteristics of the main types of bakery products because of a protease, amylase composition which includes a complex white barley malt, starch, polysaccharides and proteins from the flour. Optimal adding white flour, barley malt, depending on the weight of flour is 5.0 % for a round biscuit and 7.5% for oil -heated biscuit.

Adding white flour and barley malt in heated butter cookies,biscuits improves the structural and mechanical properties of the dough. Density pastry reduced with the addition of white flour, barley malt is almost 2 times.As a result, the liver characterized by semi- balanced amino acid composition of proteins (Keshavarzpour, 2011a).

Another non-traditional production technology catering technology is the use of sugar beet production in catering. The chemical composition of the sugar beets has shown that it is a source of valuable nutrients. It was found that it contains a large amount of carbohydrates, mono-and disaccharides. Win fiber is about 20 % solids, of which half is pectin. Also high content of biologically active substances such as saponins and betaine studied qualitative and quantitative composition of vitamins.

Investigation of the influence of traditional methods of heat treatment (steaming, baking) sugar beet showed that they are not suitable for the production of additives with high organoleptic properties due to the formation of dark colored compounds impair the appearance of appearance and taste of the final product.

The most suitable method is the heat treatment of the sugar beet processing in the microwave. Application of microwave heating helps to preserve nutrients, reduce the cooking time of the product 3-4 times. It is desirable to use a paste with sugar as a stabilizer for foods high in eggs. It is also possible to prepare the cookie instead of sugar beets eggs.

Other non-traditional production technology catering technology is creating combination products using additives multifunctional action. Most relevant systems for the production of composite foods are systems that combine dispersed raw materials as a result of technological influences homogeneous system with harmonious organoleptic and directionally shaped composition. A comprehensive study of chemical, physical-chemical, biochemical and microbiological properties showed the possibility and expediency of stabilizing additives that significantly affect the nucleation combined minced altering its rheological and lipophilic properties, which increase the shelf life of meat and in some cases and increase the nutritional value of the product (Keshavarzpour, 2011b).

Knowing the nature of the effect on the stuffing inputted thereto additives, the product may be obtained with predefined properties depending on its further use. It was established experimentally that aqueous artichoke melanoidin forming part of a rheological resistance to sunlight, changes in the particle size range of from 0.7 to 4.2 nm and can be attributed to polukolloidnym systems that are simultaneously ions, molecules and various complexes micelles varying dispersion.

Adjustment is possible by the Maillard reaction temperature and duration of heat treatment of foodstuffs, which allows precise control of manufacturing processes and obtain the desired foods organoleptic and physiological properties. Possible to obtain balanced meals based on fish (catfish spotted), meat (chicken) meat and plants (Jerusalem artichoke, corn grits, oatmeal and potato flakes), with full enzyme and aqueous composition combining meat.

During the study found that the rheological properties of the investigated compounds obey the Herschel-Bulkley as a result of the influence of cooking and technological parameters on the rheological properties of hydrodynamics and mixing of the combined systems.

Comprehensive analysis of the chemical, physico-chemical and microbiological properties of biochemical developed food systems showed that the increase in mass fraction Alno plant components leads to loss of the ability of proteins to retain moisture, therefore, the Air Force and the MAS reduced. The optimum content of dietary supplements in fish- meat rheological systems is 20% of the total weight (Keshavarzpour, 2011c).

Innovative technologies using natural materials for packaging products catering and optimize storage conditions of products catering active use of bio-degradable materials for packaging and storage of food catering. Author of this study proposes to use environmentally friendly biodegradable plasticized poligidrobutirat that allows maintain the quality of food for a long time storage.

To increase the shelf life of fresh fruits author of this study suggests using modified atmosphere packaging to provide for their almost complete air seal. It is also proposed to use the technology of the high-frozen prepared foods catering, as well as the technology of their subsequent heat treatment for quick cooking.

To store fresh fruits are encouraged to use innovative technology to the retail packaging on the basis of a protective gas mixture and a chemical protective layer. To improve shelf life provides the use of packaging with high color intensity, high starch content, vitamin C and carotene. Also proposes the introduction of technological processing of unconventional raw materials of animal origin in order to reduce the cost of catering products and increase its shelf life.

DISCUSSION

Using non-traditional production technologies catering involves the use of new technologies in the production of bakery products, meat, dairy products, flavorings and other food service products to improve their nutritional value, increase their shelf life and increase the proportion of nutrients in their composition. In particular, the use of semi-finished biscuit catering products as functionality improves the nutritional value of the enrichment of dietary fiber, as well as to reduce caloriesto 6 % compared with biscuits cooked to a traditional recipe.

The positive effect of sugar beet pasta is retardation of staling rye biscuit semis. Scientifically justified and developed technology of novel multifunctional combined culinary products that will get the range of products with the required nutritional value for certain populations. In this paper, it turned out that using the proposed technology can be obtained highly stable protein foods

a wide range, which objectively contribute to the formation of diet aimed at reducing the potential adverse effects on the human body from the food as one of the global environmental factors. Therefore, the work described in the interests of improving the quality of life, as an individual and of human society as a whole.

CONCLUSION

The study found that the use of non-traditional production technologies presented catering products consistent with the concept of healthy eating, improving the nation's health guarantees and meets the needs of the population of Russia and other countries. Concern about the health-a sign of the development of society, a healthy diet today is the prerogative of countries with the highest well-being of the population. Proposed innovative production technology allows us to extend the catering healthy food among the mass consumer not only developed but also developing countries.

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