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Research Article

THE IMPORTANCE OF ENRICHMENT OF BAKERY PRODUCTS WITH VITAMINS AND MINERALS ON HUMAN HEALTH

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ABSTRACT

In this article we will talk about the importance of enriching bread products with micronutrients in human nutrition.

KEYWORDS

Bakery products, vitamins, mineral substances, calories, enrichment supplements, protein, to enrich, micronutrients, chemical composition.

Introduction

Food security is one of the most pressing challenges facing countries around the world. The

United Nations says it is time to change the way we grow and process food. In recent decades, the

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problem of micronutrient deficiencies in human nutrition has become important. verv Incorporating micronutrient bread into the diet is an economical and easy way to improve the health of the population [1].

Micronutrient bread meets 20% to 75% of a person's daily vitamin and mineral needs. Thanks to them, the immune system, cardiovascular, nervous system and others are strengthened [2].

Micronutrient-enriched foods help you store the number of nutrients and nutrients your body needs to function properly. Decree of the President of the Republic of Uzbekistan dated January 16, 2018 "On measures to further ensure food security of the country" and the current development of agricultural development of Uzbekistan for the 2020-2030 strategy is relevant in this context. Ensuring food security in our country has become one of the main ways to sustainably develop the socio-economic situation of society, improve the health and well-being of citizens, and maintain national security and independence of the country. In this direction, strategically targeted and consistent measures are being taken in the country to provide the population with quality food products, and to support agricultural producers and processors [3-7].

As the President said, "Strengthening the health of our people, deciding on a healthy lifestyle is a vital issue for us. I repeat, if we maintain peace and health, we will achieve everything else the goal of agricultural reform is to provide food security and increase the well-being of the people while

providing economic benefits. [8-13]. We must never forget that".

Currently, manufacturers face the following important challenges in fortifying food with micronutrients (vitamins and minerals):

- Selection of enriching micronutrients;
- Selection of products for enrichment;
- Guaranteed content of micronutrients in fortified foods:
- Study of the physicochemical properties of micronutrients:
- Calculate the number of micronutrients added:
- Evaluation of the fact that the product enriched with micronutrients is really effective and useful.

When fortifying products with micronutrients, the preparation of flour should take into account the number of natural vitamins and minerals in their raw materials, as well as their loss during production and storage [14]. At the same time, the number of micronutrients added for external enrichment should not exceed the established regulations during the shelf life of the product [15].

When adding micronutrients to food, the technologist should take into account the following:

- Enrichment additives should be evenly distributed throughout the product;
- The method of adding enrichment additives should be simple and technological;

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The supplementation phase should be such that there are no technological effects that could lead to the breakdown micronutrients.

Bread is not fully digested by the human body. The appearance of bread is also important. Bread made from it is completely digestible and contains 0.7-0.8% of protein, 0.95-0.98% of carbohydrates and 0.92-0.95% of fat [17-19].

Proteins play an important role in human activity. Bread is the main means of regenerating the human body. Proteins play a key role compared to other substances. Amino acids play a key role in the composition of proteins [20].

For human consumption, 1 kg of bread contains 70-80 g of protein, which satisfies 30% of the body's need for protein. The mineral value of bread consists of 70 different elements. The human body needs phosphorus, calcium, iron, potassium, and magnesium. Trace elements include enzymes, and hormone vitamins [21-24]. Phosphorus is a necessary substance for humans.

The total amount of minerals is 1-2 per cent. Minerals also vary depending on the type of bread. 500 g of bread is enough for the human body [25]. Vitamins play the role of coenzymes in the human body. The average daily requirement of essential vitamins: B1 - 1.75 g; B2-2,25g; B3-7,5g; B6-2,5g; B9-0.3 g; E-17.5 g; PP-20 g; Bread does not contain vitamins A, C and D. The higher the flour content, the higher the vitamin content [26].

Carbohydrates are the body's main source of energy. Certain carbohydrates have biological properties, for example, ascorbic acid, and vitamin C. Bread promotes blood flow in the arteries, while sugar (sugar) carbohydrates give the bread a sweet taste. For the human body to have carbohydrates, people need to eat bread regularly [27-31].

The main low carbohydrates are 5 per cent. Consumption of bread to some extent satisfies the body's need for sugar.

Table 1. Satisfaction of carbohydrates in bread by the human body

Table 1. Satisfaction of car sony an area in Steam Sy the number sony				
Nutrients	Average daily requirement, g.	Contains 500 g of bakery products g.	Satisfaction of human needs, percentage (%)	
Starch and dextrins	425	222,4	52,3	
Mono and disaccharides	75	14,3	19,1	
Ballast substances (hemicellulose and cellulose)	25	19,7	78,8	

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Consumption of 500 g of the above bread satisfies the body's need for starch and dextrin by 52.3%, mono and disaccharides by 19.1%, and ballast by 78.8%. The higher the consumption of dairy products, the greater the need for sugar [32-35].

Satisfaction of the needs of the human body for organic acids in bread products. Organic acids activate the digestive system, lower the pH of the environment and help to change the microflora in a way that is suitable for these organs. If a person consumes 500 grams of bread a day, his acid needs will be met by 54.2%. As you can see, bread is very important in this regard [36-39].

The fats in bread meet the needs of the human body. When fats (lipids) are oxidized in the body, they release the most energy from nutrients. They are part of tissues and cells, including nerve

tissue. Fats are solvents for vitamins A and D, which help digest them. Fats contain unsaturated fatty acids, phospholipids and other biologically active substances.

The average daily requirement of adult human fats, which are high in unsaturated fatty acids and phosphatides, is that the amount of these substances contained in the above-mentioned 500 g of bread products and the amount of these substances are not sufficient to meet human needs. are given in the data table [40-41].

By consuming 500 g of the above-mentioned bread varieties, the body: needs fats by 15.0%, vegetable oils by 60.0%, unsaturated fatty acids by 66.6%, and phosphatides while it satisfies 15.6 per cent.

Table 2. The fats in bread meet the needs of the human body

Nutrients	Average daily r <mark>eq</mark> ui <mark>rem</mark> ent, g		Satisfaction of human needs, percentage (%)
Oils	90	13,5	15,0
Vegetable oils	22,5	13,5	60,0
Highly unsaturated fatty acids	4	2,67	66,7
Phosphatides	5	0,78	15,6

The functions of minerals vary. Calcium, phosphate and magnesium maintain the normal state and function of the skeleton; fluoride helps ensure tooth enamel is resistant to caries; iron and copper act as oxygen carriers; sodium and potassium maintain normal a osmotic environment in blood cells; chlorine is involved in

the formation of gastric juices necessary for the digestion of food; cobalamin is a component of vitamin B12 Iodine deficiency in water and food leads to ringworm disease [42-44].

Important minerals include calcium, phosphorus, and magnesium, which enter the body through

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food and keep bones in good condition, while iron, which is part of haemoglobin, plays an important role in blood circulation. Insufficient intake of iron and deficiency of this substance in the body can lead to anaemia. Iron also plays an important role in the oxidative processes that provide energy to the body.

If a person does not get enough nutrition and is not supported by minerals, it will definitely affect his health and mood. Children, as well as pregnant women and women of childbearing age, need 3-5 times more iron than men [45-47].

We eat bread every day, and nothing else can replace it; we love obi bread, shirmov bread, sweet cakes, greasy patties or pancakes, snails, various pastries and sweets, pryaniks, biscuits. They decorate our table every day, enriching our bodies with many useful and necessary substances.

Why is flour enriched? The fact is that we eat bread every day and several times. This is because our body needs to get enough vitamins and iron every day [48].

In our country, great attention is paid to the enrichment of flour, bread with iron, medicinal folic acid, various trace elements, and, ultimately, to the protection of the entire population, or more precisely, all mothers and children from anaemia [44-49].

At present, the country pays constant attention to improving the quality of flour and bakery enriching them with additional products. micronutrients that are useful for humans. In

particular, in order to ensure the health of the population, prevent iron deficiency in children and women, as well as to prevent anaemia, the first-grade flour produced in the mills of the enterprises of the system is enriched with complete mineral-vitamin mixtures.

Today, basically, 1 ton is 120 gr. vitamin-mineral compounds are added. The mixture contains various trace elements and 4 types of vitamins. The mixture contains niacin, riboflavin, thiamine, folic acid, as well as trace elements of iron and zinc. This helps to replenish the vitamins lost during wheat processing.

There are many options for enriching bread products with micronutrients in the world market today, and it is important that each manufacturer offers its customers a tasty and healthy product, using the suggestions of foreign manufacturers.

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