

THE IMPORTANCE OF THE QUALITY OF DAIRY PRODUCTS FOR THE NUTRITION OF PRESCHOOL CHILDREN

Makhkamov Dilmurod

researcher

Tashkent Chemical-Technological Institute

Abstract: the article provides information about milk and dairy products recommended for quality control in the region of Uzbekistan.

Key words: milk, dairy products, vitamins, food additives, SanPiN

Children's health is the basis of the nation's future. Nutrition for the youngest children is a matter of life and death, and for preschool and school-age children - health and ill health for the rest of their lives. Proper and complete nutrition is the foundation of health. A child "builds" his or her body from proteins, fats, minerals, and microelements, like a house from bricks. Food also provides energy for this. Milk is one of the main and incomparable products for children, prepared for them by nature itself. A preschool child retains a food dependence on milk and dairy products. Milk contains almost all the essential nutrients necessary for a child's growth and development in an optimal and balanced ratio.

This product is easily absorbed by a child's body. Its important component is proteins, which are necessary for growth, hematopoiesis, immunogenesis, and the functioning of many organs and systems. Milk proteins are easily absorbed and digested, and also contain 8 essential amino acids that are not formed in the body, but must be supplied with food. The main unique feature of milk is milk sugar (lactose). It is not found in any other food product. Lactose is easily absorbed and serves as the main source of energy, promotes better absorption of calcium. When digested in the intestines, lactose is an optimal environment for the development of beneficial intestinal microflora, which prevents the growth of pathogenic

microorganisms. Meanwhile, lactose takes part in the formation of nerve fibers, brain tissue, and the cornea of the eye. Milk is rightfully considered the main source of calcium, which is necessary for the growth and strengthening of bones. In terms of fat content, 2.5-3.5% milk is optimal for children. Milk fats contain essential polyunsaturated fatty acids necessary for the construction of cells of the nervous system, as well as various complex fat-like compounds involved in the regulation of many metabolic processes. The mineral component of milk is mainly represented by such compounds as calcium, phosphorus, sodium and magnesium, potassium. Calcium and phosphorus are necessary for young children during the period of growth, formation of bones and teeth. Milk contains almost all known vitamins, it is especially rich in vitamins A, group B, C, E, K, PP, folic and pantothenic acids. In addition to the listed substances, milk contains a number of enzymes that accelerate and regulate the biochemical processes of the body. This is lipase, which breaks down milk fat, as well as phosphatase, which regulates phosphorus metabolism. In accordance with SanPiN 2.4.1.3049-13 "Sanitary and Epidemiological Requirements for the Arrangement, Maintenance and Organization of the Operating Mode of Preschool Educational Organizations" clause 15.7- in a preschool educational organization, the sample menu should provide for the daily use of milk and other food products in the diet of children. In accordance with SanPiN 2.4.1.3049-13 "Sanitary and Epidemiological Requirements for the Arrangement, Maintenance and Organization of the Operating Mode of Preschool Educational Institutions", paragraph 14.25, in order to prevent the occurrence and spread of infectious and mass non-infectious diseases (poisoning), it is not allowed to use milk that has not undergone pasteurization, as well as milk from farms with unfavorable incidence of agricultural animals.

The following types of heat treatment are used in the production of milk and dairy products: pasteurization, sterilization and ultra-high-temperature treatment of milk (ultra-pasteurization).

Pasteurization is a heat treatment of milk at temperatures below its boiling point, carried out in order to render milk harmless in microbiological terms, as well as to extend its shelf life. Pasteurization is the most gentle heat treatment of milk. The nutritional value of products remains virtually unchanged during pasteurization, as the taste and valuable components (proteins, fats, carbohydrates, vitamins, microelements, enzymes) are preserved.

Ultra-pasteurization is a process of short-term heat treatment of milk at temperatures above its boiling point in order to extend the shelf life of the food product. In ultra-pasteurized milk, the preservation of vitamins B, C, and folic acid is lower than in pasteurized milk. Ultra-pasteurization slightly changes the organoleptic properties of the product, so the color, taste, and smell of ultra-pasteurized milk may differ slightly from the usual pasteurized milk.

Sterilization is a longer heat treatment of milk at a temperature above 100°C. In this case, all types of vegetative microorganisms, their spores are completely destroyed, enzymes are inactivated. During the boiling process, most pathogenic microorganisms and viruses die, but at the same time, protein is partially denatured, a number of vitamins and other biologically active substances contained in milk are destroyed.

Considering the importance and irreplaceability of milk in a child's daily diet, parents and food organizers in preschool institutions must ensure the proper quality of milk in a less modified form, taking into account the expiration dates and storage conditions of the product.

In recent years, there has been a trend towards an increase in the birth rate in Uzbekistan, which leads to an increase in the number of children who need to consume products with a balanced composition.

Today, the volume of the market for dairy products for baby food is the largest volume in the category of milk formulas, which is 80.7% of the total volume.

The unfavorable environmental situation in Uzbekistan, the widespread use of antibiotics and other factors contribute to the occurrence of various diseases and disorders in many children already in infancy.

The nutrition of children during the first year of life "programs" the metabolism in such a way that certain violations can increase the risk of occurrence and development of a number of diseases: allergic diseases, obesity, metabolic syndrome, osteoporosis, dysbacteriosis.

Therefore, baby food products should have therapeutic and preventive properties. Fermented milk products play a leading role in building the child's immunity. Due to the content of lactic acid and bifidobacteria in them, they maintain the balance of microflora in the intestine, protecting the body from infections and viruses. But children under 3 years old can only consume specialized baby milk nutrition that is adapted to the needs of their body. Fermented milk products for baby food are produced by domestic manufacturers in insufficient quantities, and these are the most popular products on the market. One of the reasons for this situation is the lack of technologies for the production of this group of dairy products for baby food with a long shelf life. Therefore, the development and implementation of new technologies for the production of fermented milk products for baby food with a long shelf life is relevant and requires a solution.

Reference.

1. Gorbatoва K.K., Gun'kova P.I. Fiziko-khimicheskie i biokhimicheskie osnovy proizvodstva molochnykh produktov [Physico-chemical and biochemical basis of milk production], St. Petersburg, 2010, 336 pp (Russian). 2. Didukh N.A., Chagarovs'kiy O.P., Lisogor T.A. Zakvashival'ni kompozitsii' dlya virobnitstva molochnikh produktiv funktsional'nogo priznachennya [Starter composition for the production of dairy products of a functional purpose], Odesa, 2008, 236 pp (Ukraine).

2. Romanchenko S., Didukh N.A. Kefir detskogo pitaniya s dlitel'nyim srokom khraneniya [Kefir Baby food with a long shelf life], Sovremennyye problemy tekhniki i tekhnologii pishchevykh proizvodstv, restorannogo biznesa i trgovli: materialy Vseukr. nauchno-prakticheskoy konferentsii0, Khar'kov, 2010, pp. 126-128 (Poland).

3. Romanchenko S.V., Didukh N.A., Stankevich G.N. Razrabotka rezhimov gomogenizatsii molochno-zhirovyykh smesey dlya napitkov kislomolochnykh detskogo pitaniya [Development modes homogenizing milk-fat mixtures for beverages fermented baby food], Universitetskaya nauka - regionu: materialy I Vserossiyskoy nauchnoprakticheskoy konferentsii s mezhdunarodnym uchastiem, sektsiya: innovatsionnye napravleniya v pishchevykh tekhnologiyakh, Pyatigorsk, 2013, pp. 203-210 (Russian).

4. Romanchenko, S.V. Obosnovanie parametrov fermentatsii obogashchennoy molochnoy osnovy s ispol'zovaniem razrabotannoy zakvasochnoy kompozitsii dlya proizvodstva napitka kislomolochnogo dlya detskogo pitaniya [Justification of parameters of fermentation-rich dairy base with a starter composition designed for the production of fermented milk drink for children's nutrition] Vestnik Kemerovskogo gosudarstvennogo universiteta, 2015, T 5, No 2 (62), pp. 20-27 (Russian).

5.Fozilovna A. O., Raximovna X. D. Antiphospholipid syndrome and mission of pregnancy //umuminsoniy va milliy qadriyatlar: til, ta'lim va madaniyat. – 2022. – T. 1. – C. 13-15.

6.Fozilovna A. O., Rahimovna K. D. TO DETERMINE THE INTERACTION OF MISCARRIAGE WITH ANTIPHOSPHOLIPIDS IN THE BLOOD //ResearchJet Journal of Analysis and Inventions. – 2022. – T. 3. – №. 4. – C. 1-3.

7.Akhtamova O. F. Comparisons of the Treatments of Endometriosis //Research Journal of Trauma and Disability Studies. – 2022. – T. 1. – №. 10. – C. 33-38.