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METHODS OF CONTROL OF DAIRY PRODUCTS

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Abstract
This article provides ideas on dairy products and their types, as well as the determination of the fak content of milk

Keywords: Dayr products, fat contents of animak milk

Milk is a product of normal or physiological secretion in the mammary glands of an enzyme animal, which was obtained during one or more milkings of one or more animals during the lactation period, without adding any additives to this product or removing any substances from it; Dairy products - milk processing products, including milk products, milk mixtures, products containing milk, milk processing products; Dairy product - a food product that is prepared from milk and (or) its components without using non-dairy fat and protein and contains components necessary for processing milk; Milk mixed composition - a food product made from milk and (or) milk products without additives or products added to milk processing and non-milk components to replace parts of milk. This finished product should contain more than 50% milk components, and more than 40% in ice cream and sweet products of milk processing;

Milk-containing product - food with a mass fraction of milk solids made from milk and (or) milk products and (or) processing of milk and non-dairy components, including non-dairy fats and (or) proteins product. Product at least 20%; Secondary raw milk - a dairy product with partially lost identification features or consumption features intended for use after processing (including those withdrawn during the shelf life, but meeting the safety requirements of food raw materials); Milk processing - a by-product obtained during the production of milk processing products;

A dairy drink is a dairy product made from concentrated or condensed milk or whole milk powder or skimmed milk powder and water. Depending on the level and type of processing, the following types of milk and milk products are distinguished.

-drink milk and cream;

-dairy products;
-cow fat (butter and ghee);
-cheeses (sweet and sour milk);
-canned milk (condensed) and dry milk products;
-Ice cream

When developing this or that type of milk, first of all, the taste characteristics of the multi-ethnic population of our country, the dietary value of the product and the efficiency of its production are taken into account. In accordance with the technical regulation of milk and milk products and current standards, the following basic conditions have been adopted for milk and milk products:

Raw milk - milk that has not been heat-treated or processed at a temperature above 40 ° C, as a result of which its components are changed; drinking milk - milk containing not more than 9% fat, made from raw milk and (or) dairy products and intended for heat treatment or other processing in order to regulate its components (full milk powder, non-skimmed milk powder); whole milk - milk without regulation of its components; normalized milk - milk whose mass percentage of fat or protein or food safety meets the norms specified in regulatory or technical documents; reconstituted milk - a milk drink prepared by adding drinking water to the product of processing concentrated, condensed or dry milk in order to achieve the appropriate organoleptic and physicochemical characteristics of the concentrated, condensed or non-dried product.

The classification of milk by types of heat treatment provides the following division: cooked milk - milk that has been heat-treated at a temperature of 85 to 99 ° C for at least 3 hours to achieve certain organoleptic properties; pasteurized, sterilized, UVT-treated milk - heat treatment in accordance with the requirements for microbiological safety indicators of drinking milk; skimmed milk - milk that has undergone recovery at a temperature of 60-68 ° C, storage time is up to 30 seconds. Such processing is carried out at the beginning or at the end of the milk production process.

Depending on the mass percentage of fat in milk, it is divided into fat-free, low-fat, low-fat, classic and high-fat. The fat content of animal milk is determined as follows Pour ml of sulfuric acid into a special flask (molly jiramer) and add ml of cow's milk measured in a pipette (1077) from the flask, then add 1 ml of isomyl alcohol to make 1-2 ml of sulfuric acid to the size of a flask. add it again and clean and close the mouth of the flask using a special rubber stopper, then shake well until the mixture turns red, then put the stopper into the flask (malochny jiramer) and close it with another rubber stopper it is necessary to have a hermetic hold, then we put the mixture flask

(malochny jaramre) in a centrifuge and centrifuge it for 5 minutes. After turning over the prepared mixture, tighten the rubber stopper more tightly, and on the rjlbabibg side, you will see the fat content of the milk in the juice. The lower limit of cow's milk fat index is 2.5 and the highest is up to 4.

a) Organoleptic assessment. According to organolpetic indicators, milk should be white or more yellowish in color, have the same consistency, without sediment, have a unique clean taste and smell, and be free of foreign tastes and odors. In sterilized milk, the smell and taste of heated milk is noticeable and the color may be slightly browner. Accumulation of cream on the surface of pasteurized milk is also one of the negative indicators. Accumulation of cream on the surface is allowed only in milk that has not been homogenized or has been stored for a long time. In the organoleptic assessment of milk, attention is paid to: weight, packaging, appearance, consistency, taste, smell and color.

b) Measurement verification methods. Determination of density. The density of milk is determined in a hydrometer - lactodensimeter, at a temperature of 10-250C. Depending on the composition of milk, the density changes. An increase in fat-free, dry matter increases the density, on the contrary, an increase in the fat content of milk decreases the density. When milk is diluted with water, its density indicates that 10% water has been added for about every 0.003.

If the density of milk is lower than 27 degrees on the lactodensimeter indicator, it indicates that the milk has been diluted with water. The main physico-chemical properties of milk include density, viscosity, osmotic pressure, freezing and boiling points, electrical conductivity, total acidity, and pH values. The density of milk is a quantity measured by the ratio of the mass of a certain volume of milk at a temperature of 200C to the mass of water of the same volume at a temperature of 40C.

The density of milk depends on its dry matter content. When water is added to milk, its density decreases, and when milk is skimmed, its density increases. The density of cow's milk ranges from 1.027 to 1.032 g/cm3, with an average of 1.029-1.030 g/cm3. By determining the density of milk, it is possible to conclude whether water has been added to it or not.

The viscosity of milk at a temperature of 200C is 1.75.10-3 Pa.S on average, and this indicator mainly depends on the amount and state of proteins. The viscosity of milk decreases when heated to a temperature of 60-650C, and when heated to a higher temperature, its viscosity increases.

The osmotic pressure of milk does not differ from the osmotic pressure of blood. The osmotic pressure of milk is mainly influenced by milk sugar and mineral salts, its

amount is 0.66 MPa. An increase in the osmotic pressure of milk leads to a decrease in the freezing temperature. The average freezing temperature of cow's milk is 0.550C. Since milk contains sugar and salts, its boiling temperature is slightly higher than the boiling temperature of pure water, which is 100, 200C.

According to the requirements of the standard, the physico-chemical parameters of milk are checked for fat content, fat-free dry matter content, sourness, purity level and temperature. The amount of fat in milk is from 2.5% to 6%, depending on its type, the amount of dry matter without fat is not less than 7.8-8.1%, the acidity is more than 210 T in pasteurized milk packed in small bottles, and more than 200 T in sterilized milk it is required not to be. All types of milk sold to the public should not be less than 1st level of purity. Thus, it is concluded about the naturalness of milk according to its density.

When choosing natural dairy products, you should pay attention to the storage temperature. For optimal storage of natural dairy products, a temperature of +2 to +4 degrees is recommended. An important aspect of the naturalness of dairy products is its shelf life. The term for milk, fresh cheese and cottage cheese is, for example, 5 days.

It can be stored for a longer period only in two cases: if preservatives are added to the product or deep thermal processing is carried out. There are two technologies for milk: sterilization and pasteurization. They are held at a temperature of 110 and 60 degrees, respectively. A higher degree of processing increases the shelf life, but reduces the amount of useful substances.

The word "normalized milk" in the product label means that the milk has been reduced to a single indicator of fat content. "Consolidated milk" is a mixture of dry milk and water.

When choosing dairy products, attention should be paid to additives. A dairy producer probably doesn't grow the pistachios they add to their cheese, or the jam in their yogurt. Additives are universal and do not give naturalness to the product.

Correctly reading the composition of dairy products is the main rule. The fewer the words, the better. If you see a long list of ingredients in the product, it means that the product is not completely natural. Also, the ingredients are listed in descending order of content.

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