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ENRICHMENT OF BREAD PRODUCTS ON THE BASIS OF MILK WHEY

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ANNOTATION

This article discusses the composition of dairy products and its benefits, the use of whey in the enrichment of bakery products. Dairy products contain many active and necessary substances for the human body, which is why Milk is important in the preparation of bakery products. In addition, we can get yogurt, sour cream and other products from dairy products. information about the main ingredients and benefits of dairy products.

Key words: milk, dairy products, whey, bakery products, baking technology, protein, calcium, fat, yogurt, lactose, milk composition, cow's milk, milk powder, skim milk.

Annotatsiya:
ushbu maqolada sut zardobining tarkibi va uning afzalliklari, non mahsulotlarini boyitishda zardobdan foydalanish muhokama qilinadi. Sut mahsulotlarida inson tanasi uchun ko'plab faol va zarur moddalar mavjud, shuning uchun sut non mahsulotlarini tayyorlashda muhim ahamiyatga ega. Bundan tashqari, sut mahsulotlaridan yogurt, smetana va boshqa mahsulotlarni olishimiz mumkin. Sut mahsulotlarining asosiy tarkibiy qismlari va afzalliklari haqida ma'lumot keltirilgan.

Аннотация: В данной статье рассматривается состав молочной сыворотки и ее преимущества, применение сыворотки при обогащении хлебобулочных изделий. В молочных продуктах содержится много активных и необходимых для организма человека веществ, поэтому молоко важно при приготовлении хлебобулочных изделий. Кроме того, мы можем получить йогурт, сметану и другие продукты из молочных продуктов. Представлена информация об основных компонентах и преимуществах молочных продуктов.

INTRODUCTION

Containing milk and cream has all the necessary substances and favorable conditions for the growth of microorganisms.Therefore, they are perishable products. Preservation of milk and cream they are canned to extend their shelf life. Canned milk is mostly condensed and dry divided into cream products. Properties and good storage of milk envelopes, their use in direct feeding, bread, in the preparation of confectionery and pasta, as well as remote locations and allows expeditions to supply dairy products. Condensed milk - milk at a temperature of 60-45 °

C and below under vacuum and is obtained by evaporating excess water from the cream. Add sugar to condensed milk condensed natural milk, condensed skim milk with added sugar, condensed without sugar such as natural milk and condensed form of sour cream.Dry substances in concentrated pasteurized and normalized milk and creamThe increase in the concentration affects the vital activity of microorganisms and the effect of enzymes not enough osmotic pressure is generated to stop it. So thicken the milk and cream sugar syrup with a concentration of 70-75% is added to it. Sugar preservative performs the function. Condensed milk is sterilized without the addition of sugar.condensed milk is homogenized before packaging and sterilization in jars. Milky when sterilizing jars the temperature is constantly raised to a temperature of 117° C and that stored at room temperature for 15 minutes. Large confectioneries can also produce condensed milk.Condensed milk with added sugar with a moisture content of not more than 26.5%, less than 43.5% non-sugar, not less than 28.5% milk dry matter, including 8.5% milk should have fat. The amount of dry matter in unsweetened condensed natural milk is less than 25.5% should not be.The moisture content of sour cream with added sugar should not exceed 26%.The color of condensed milk and cream is white-yellow, the taste and smell are sweet, clean, foreign without taste and odor, the taste of the pasteurized product should be clearly noticeable. Consistency is homogeneous throughout the product, viscous, lactose crystals imperceptible should be. Sweetened condensed milk without sugar tastes like hot milk, sweet has a salty taste. The consistency is liquid, without protein lumps and large lumps, slightly sedimentation is allowed.Canned condensed milk at a temperature of 0-10 ° C, sterilized condensed milk 0-20.At a temperature of ° C the relative humidity is maintained at no more than 75%. Temperature change and an increase in air humidity can cause the jars to rust. In hermetic containers.Guaranteed shelf life of packaged condensed milk - one year.Dry dairy products. Dry milk and cream in two ways, thinly filmed and sprayed method. By the amount of fat and dry matter in the milk and cream before drying normalized, pasteurized, until the dry matter concentration is 40-48% condensed until. In some cases it is easier to spray dry with oxygen the concentrated mixture is homogenized to reduce the amount of free fat that can be oxidized. Concentrated milk in film drying is two that move in opposite directions the drums are poured on an outer smooth surface with a temperature of 105-120 ° C. The drum is full During the non-circulating cycle, free moisture is released from the milk. The resulting dry thin layer metal blades are removed from the surface of the drum, ground and sieved. In this way the temperature of dry milk can rise to 110 ° C.

Content	Skim milk	Ardabo
Water	90.7-91.4	90.6-91.3
Dry matter	8.7-9.3	88.8-94
Fat	0.02-0.08	0.2-0.5
Protein	3.4-3.55	3.3-3.5
Milk sugar	4.6-4.9	4.6-4.9
Minerals	0.70-0.72	0.70-0.75

MAIN PART

When drying by spraying method, pre-spray in the dome of the spray dryers the prepared milk is sprayed in the form of small drops and hot air is given from the opposite side.The milk droplets dry quickly and the milk particles in the dry spherical state are deposited on the bottom of the apparatus falls and is continuously taken from there. During drying, milk proteins partially lose their natural properties, ie denaturation, swelling and melting properties in water are reduced. Heating in spray dryers changes in protein content compared to the film method due to low temperatures less, the higher the solubility of milk.Chilled milk powder in multilayer paper bags, plywood barrels and so on placed in small airtight containers, tin cans, paper boxes with cellophane bags.Dry dairy products include natural and skimmed cow's milk, sour cream and others apply.raw in the bakery and confectionery industry whey and various products made from it are used as raw materials.Recipes for various bread and confectionery products made using whey and technological guidelines have been developed for their production.Whey is a secondary product of cottage cheese and cheese production. She is a green liquid with a distinctive sour taste and odor. Whey contains about 5% dry matter, of which 3.5-4% is milk sugar (lactose), 1% proteins, 0.3% acids, minerals and other substances. Milk is fast because it contains 95% water and many microorganisms is a perishable product. That is why it is often used instead of natural whey prepared products are used.The following types of whey for use in the bakery and confectionery industries Produces: "Dry whey", "Condensed milk whey", "Sugar" Condensed milk whey »,« Baked condensed milk whey »,« Dried milk whey ».

Whey with increased dry matter. This whey is divided into the following types: dry cheese and cottage cheese whey with a content of 13, 20, 30%. Its quality is as follows Requirements: taste and smell are pure lactic acid, slightly salty, homogeneous color, green light yellow, fluid consistency. The amount of dry matter and acidity in whey standardized.Condensed milk whey. This whey is produced in four types: condensed cheese and milk whey, condensed cottage cheese whey, condensed cottage cheese with whey, with sugar condensed whey. All these types of sugar-free whey are dry The content of substances is 40 and 60%, and in whey concentrated with sugar - 75% does. The consistency of whey with a dry matter content of 40% is fluid, 60% of whey, which is thick, and of whey condensed with sugar, which is elongated mass. Dry whey. This whey is divided into two types depending on the type of raw material used: dry cheese whey and dry cottage cheese whey. Dry cheese produces whey Depending on the type of equipment used for production, there are two types: spray and film method dried. Dry cottage cheese whey is produced only by spray drying.The following requirements are set for the quality of powdered whey. Smell and taste - sweet and salty,slightly sour, without foreign odors and tastes. Color from white to yellow. Spray dried consistency of whey - fine dry powder, and film-dried whey -dry powder consisting of crushed sands. Part of the dry matter in the dried whey and lactose content, acidity and solubility.Glucose is a galactose syrup. The main part is from different amounts of glucose and galactose is a mixture of The biological value of such a mixture is in confectionery higher than the traditional sugars used. It contains a mineral other than lactose substances, acids, and certain amounts of nitrogen. From pure milk whey acidic or enzymatically hydrolyzed to prepare syrup used. From the looks of it, glucose-galactose syrup is a viscous, homogeneous, transparent liquid allowing glucose crystals to precipitate. The jam tastes sweet, a little solodsimon. Foreign odors and tastes are not allowed. Color from yellow to

brown.The amount of dry matter is not less than 65%, including glucose 25%. From this extra density, part of the ash mass, nitrogenous substances, and acidity are also regulated.Syrup is stored at a temperature of 10–25 ° C.

The bread is flour, water, salt, sugar, fat1 milk and other products yeast and yeast prepared with (or without) addition food obtained by baking dough product. Mainly wheat and rye flour for baking used. Sometimes supplemented with corn, barley, peas, soy or white corn flour is used.High nutritional value, excellent taste, unsatisfactory, good digestion, ease of preparation, storage conditions.The bread of the people of the earth with its simplicity and stability staple food, and in some countries in the diet is the first product.

CONCLUSION

Milk in terms of nutritional value can replace product, but no product can replace milk. That is why milk is called a wonderful food created by nature. Such a high price is in milk not only with the presence of all the nutrients the body needs, but also their also due to the favorable location of the quantitative ratios. Milk and dairy products are human light and almost completely digested by the body.Humans consume the milk of various animals, but cow's milk is widespread among them scattered.Cow's milk contains 85-89% water, 2.8-5.0% fat, 2.-3.8% protein, 4.4-5.1% milk sugar, 0.6-0.85% minerals, enzymes, vitamins, hormones, pigments, gases there is.Properties of milk fat, especially at melting (27-34 ° C) and melting (17-21 ° C) temperatures low is due to the properties of its fatty acids. Milk fat is present in the form of fat bubbles in milk. Protein on the surface of each fat bubble covered with a protective layer. This will prevent them from sticking together. that is why milk is in the state of fat suspension at low temperatures and fat emulsion state at high temperatures will be Free as a result of damage to the protective coating during milk processing or storage fats appear.

You can see the milk envelope in this picture

Milk fat has a pleasant aroma and taste.Milk protein is made up of complete amino acids. Proteins in milk.There are the following types: casein in the amount of 2-4%, globulin in the amount of 0.1% and in the amount of 0.1% other proteins. Minerals of milk include calcium, magnesium, sodium, potassium, iron, copper, iodine, chlorine, phosphorus, sulfur and others.

Milk contains almost all the vitamins necessary for the development of the human body there is. The color of milk and milk fat is yellow with the presence of a pigment - carotene depends on Of the carbohydrates, milk contains mainly milk sugar - lactose. Lactose is glucose and galactose molecules. The sweetness of lactose is 5-6 times that of sucrose less and poorly soluble in water. Milk sugar proteins when milk is heated to a temperature above 95 ° C and interacts with free amino acids and substances that have a dark caramel taste produces melanoidins. Lactose lactic acid bacteria, yeasts and others by microorganisms.

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