

Manufacture of Cream Cheese Involving the Use of Dry Skim Milk

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The cream cheese industry has received considerable attention in recent years, and this product should command popularity equal to that of cottage cheese. Sweet-cream cream cheese is a new product and new methods of manufacture have decidedly improved its qualities. With improved qualities, cream cheese should receive favorable consumer reception. The reduced cost of ingredients and manufacturing costs should establish this product in each of the several thousand milk distributing plants and whole milk or sweet cream creameries located in various parts of the United States.

Dry skim milk is an excellent source of solids-not-fat to be used in the manufacture of cream cheese. Because of its splendid keeping qualities in a dehydrated form and its availability to the cream cheese manufacturer at all seasons of the year, irrespective of his geographical location, it is logical to believe that large quantities of dry skim milk should be used in the manufacture of cream cheese.

Dry skim milk of extra high grade is indispensable in the manufacture of cream cheese. A medium grade of dry skim milk will not give satisfactory results and it is therefore necessary that the manufacturer obtain the highest quality dry skim milk available if he is to succeed in the manufacture of cream cheese.

Procedure for Manufacturing Cream Cheese When Dry Skim Milk Is Used

The method of manufacturing sweet cream cream cheese presented herewith is comparatively rapid, easy and simple. The utmost care should be given the cream cheese to prevent its contamination subsequent to preparation. Thorough sterilization of equipment prior to use is very essential.

High quality sweet cream is standardized in any regular mixing vat, batch pasteurizer, or a new ten-gallon milk can, with fresh skim milk to the desired butterfat content of the cheese. The desired amount of standardized cream is heated to 95 degrees Fahrenheit and at this temperature the dry skim milk and gelatin, after being thoroughly mixed, are added to the cream. The cream should be agitated quite vigorously to facilitate the dissolving of the dry skim milk and gelatin. The mix is heated to 145 degrees Fahrenheit and held for 30 minutes. The temperature of the mix is then reduced to 110 degrees Fahrenheit at which temperature the salt and starter are added and the mix homogenized at 3000 pounds pressure. As the cheese mix comes from the homogenizer, it may be received directly into the final containers in which the cheese is to be delivered to the consumer. A 6 or 12-ounce glass jar or paraffined cup may be used to advantage. After the cheese containers have been capped, they are placed in a cooler at approximately 40 degrees Fahrenheit to lower the temperature of the mix from 110 degrees Fahrenheit to approximately 72 degrees Fahrenheit as quickly as possible when it is then transferred to an incubator or ripening chamber and maintained at a constant temperature of 72 degrees Fahrenheit. The cheese is allowed to remain in the incubator for a period of approximately 20 hours to allow the lactic acid producing organisms to develop the desired mild acid flavor in the cheese. The cheese is now transferred back to the cooler where it is held until the cheese becomes firm which should not require more than one day. The finished cream cheese is now ready to be delivered to the consumer.

Composition of Mixes to Be Used in the Manufacture of Sweet Cream Cheese

The most desirable cream cheese that has been manufactured by this method contains from 15 to 18 per cent of dry skim milk and 20 per cent of butterfat in the final cheese mix.

The following mixes will make a very desirable cream cheese:

Mix I.

Butterfat, 20 per cent

Dry skim milk, 15 per cent

Gelatin, 0.4 of one per cent (250 Bloom test)

Salt, 0.75 of one per cent

Starter, 3 per cent (if cheese is for immediate consumption or one per cent if it is to be held in storage from 7 to 10 days prior to delivery to the consumer)

MIX II.

Butterfat, 20 per cent
Dry skim milk, 18 per cent
Gelatin, 0.4 of one per cent (250 Bloom test)
Salt, 0.75 of one per cent
Starter, 3 or 1 per cent as stated in Mix I.

MIX III.

Butterfat, 25 per cent
Dry skim milk, 15 per cent
Salt, 0.75 of one per cent
Gelatin, 0.4 of one per cent (250 Bloom test)
Starter, 3 or 1 per cent as stated in Mix I.

It requires 7 to 10 days for a desirable mild acid flavor to develop in the cream cheese when only 1 per cent of starter is used in the cheese mixes. However, 3 per cent of starter is sufficient to develop the desired acidity by the end of the second day, providing a high quality starter is used in the cheese. If the cheese is to be held in storage for a period of approximately 30 days, 1 per cent of starter or a fraction thereof will develop the desired flavor. All equipment should be thoroughly sterilized prior to use and all ingredients must be of high quality.

The most desirable cream cheese is obtained when using Mix II, however either Mix I or Mix III furnishes a very desirable cream cheese.

The addition of dry skim milk, starter, salt and gelatin reduces the butterfat content of the resultant mix and sufficient fat must be added to the mix to replace the decrease in butterfat content by the addition of these ingredients. The addition of 1 per cent of dry skim milk and other non-fat ingredients reduces the butterfat content of the finished cheese mix 0.26 of 1 per cent. Therefore, in preparing a mixture that will furnish a butterfat content of 20 per cent in the finished cheese when using 15 per cent of dry skim milk, the cream from which the cheese is to be made must test 23.9 per cent butterfat.

Uses of Cream Cheese

Sweet cream cream cheese can be used as a sandwich spread either alone or in a combination with other foods that may appeal to the housewife. The cheese may be served on a side dish or as a main constituent of the menu. There is an innumerable number of ways in which this very palatable, wholesome and nutritious food product may be used in every home, hotel, restaurant, dining car and cafe.

Advantages of Using Dry Skim Milk When Manufacturing a Quality Cream Cheese

1. A cream cheese containing a lower butterfat content can be manufactured by adding 10 per cent or more of dry skim milk.
2. A most desirable, palatable and less sticky cream cheese can be made by using a lower butterfat content and by the addition of dry skim milk.
3. A cream cheese containing a low percentage of butterfat possesses better keeping qualities than does a cheese containing a high percentage of fat.
4. The life of the cream cheese is prolonged by the addition of as much as 18 per cent of dry skim milk.
5. The addition of dry skim milk gives a closer and an improved texture, a more desirable rigidity, a smoother, more even spread and reduces the wheying off of the cream cheese.

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