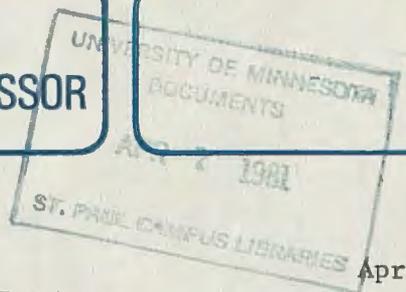


## AGRICULTURAL EXTENSION SERVICE • UNIVERSITY OF MINNESOTA

## MINNESOTA DAIRY PRODUCTS PROCESSOR



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The Federal Register of January 1981 carried the FDA's final rule for Standards of Identity for several dairy products. Included were acidified and cultured milk, lowfat milk, and skim milk. Also included were yogurt, lowfat yogurt, nonfat yogurt, and eggnog. Allowance for objections to the rules closed on March 2, 1981. Some changes may yet occur, but doubtless only minor ones. Thus, a coverage of the major provisions appears worthwhile.

#### ACIDIFIED MILK, LOWFAT MILK, AND SKIM MILK

Standards of Identity for acidified products allow their manufacture with or without addition of bacterial cultures. All products, whether milk, lowfat, or skim, must contain at least 8.25 percent solids-not-fat (SNF). Acidified milk must carry not less than 3.25 percent fat. The lowfat product may vary in fat content from 0.5 to 2.0 percent, but it must be labeled to the nearest 0.5 percent fat. Acidified skim milk need only contain less than 0.5 percent fat.

In all these products, the minimum titratable acidity is not less than 0.5 percent, calculated as lactic acid. Citric acid (or equivalent sodium citrate) cannot exceed 0.15 percent by weight of the milk product.

Vitamins A and D can be added on an optional basis. If added, vitamin A must be present to a level of 2000 International Units per quart, vitamin D to a level of 400 International Units per quart.

A number of acidifying agents are allowed. These include adipic acid, citric acid, fumaric acid, glucono-delta-lactone, hydrochloric acid, lactic acid, malic acid, phosphoric acid, succinic acid, and tartaric acid.

Provisions are made for the addition of flavoring compounds, stabilizers, and nutritive sweeteners. Coloring, too, may be added if it does not impart the color of milkfat.

A number of optional ingredients are allowed, such as concentrated skim milk, buttermilk, whey, lactose, lactalbumin, lactoglobulins, etc. However, use of such optional ingredients must not lower the Protein Efficiency Ratio (PER) or the ratio of protein to total nonfat solids.

The food name is Acidified Milk (Lowfat Milk, Skim Milk) if no characterizing microbial cultures are added. With added cultures, the name may specify such, for example, Acidified Kefir Milk or Acidified Acidophilus Milk. When appropriate flavor and aroma cultures are added, the food may be called Acidified (Milk, Lowfat, Skim Milk/Nonfat) Buttermilk. The above products are either pasteurized or ultra-pasteurized.

### CULTURED MILK, LOWFAT MILK, SKIM MILK

All the above standards apply to cultured products except that the acidity must be developed entirely by addition and growth of suitable microbial cultures. Addition of optional ingredients must be made prior to culturing so that all major ingredients undergo this process. The name of the food then becomes Cultured (Milk, Lowfat Milk, Skim Milk/Nonfat Milk). Characterizing cultures, such as kefir or acidophilus, also may be named when present.

### YOGURT PRODUCTS

Three classes of yogurt are recognized under the standards. These are yogurt, lowfat yogurt, and nonfat yogurt. Amount of milkfat marks the only difference among them. Respectively, these levels are 3.25, 0.5 - 2.0, and less than 0.5 percent, the same as their acidified or cultured product counterparts. In addition, bulky flavors are allowed. When used, however, it is only necessary that the milkfat standards be met prior to addition of the bulky flavors. NOTE: FDA will sample and analyze the base mix at the plant, and therefore, not the finished, bulky flavored product.

To be classified as yogurt, the products must be cultured with Lactobacillus bulgaricus and Streptococcus thermophilus. The products may or may not be heat-treated after culturing. But when such heating is rendered to increase shelf life, a parenthetical expression stating "heat-treated after culturing" must follow the food name.

Similar to acidified and cultured milk products, yogurt products are allowed presence of a number of optional dairy or dairy-derived ingredients. In the same way, use of such ingredients must not lower either the PER or ratio of protein to SNF.

Not less than 0.9 percent titratable acidity (calculated as lactic acid) is allowed in yogurt products. No provision is made for addition of vitamins A and D. However, yogurt products are permitted to contain nutritive carbohydrate sweeteners, flavoring ingredients, color additives, and stabilizers. The name of the foods are Yogurt, Lowfat Yogurt (with declaration to the nearest 0.5 percent of the amount of milkfat), and Nonfat Yogurt.

### EGGNOG

Standard of Identity of Eggnog requires a minimum of 6 percent milkfat, 8.25 percent SNF, and not less than one percent of egg yolk solids by weight of finished product. The food may be homogenized and must either be given pasteurization or ultra-pasteurization treatment.

A number of optional dairy and dairy-derived ingredients are allowed, but with no reduction in PER or ratio of protein to SNF. Salt, flavoring, color additives, and stabilizers may be added: The food name is "Eggnog." Label declaration states use of either pasteurization or ultra-pasteurization treatment and also application of homogenization.

Product:	FAT (%)	SNF (%)	Not less than		Citric acid/ Citrate	Vitamins A and D	Flavoring	Color Additives (1)	Stabilizers	Sweeten <del>er</del> s
			Titratable Acidity	Maximum						
Acidified Milk	3.25	8.25	0.5	0.15	Opt.	yes	yes	yes	yes	
Cultured Milk	3.25	8.25	0.5	0.15	Opt.	yes	yes	yes	yes	
Acidified Lowfat Milk	0.5-2.0	8.25	0.5	0.15	Opt.	yes	yes	yes	yes	
Cultured Lowfat Milk	0.5-2.0	8.25	0.5	0.15	Opt.	yes	yes	yes	yes	
Acidified Skim Milk	<0.5	8.25	0.5	0.15	Opt.	yes	yes	yes	yes	
Cultured Skim Milk	<0.5	8.25	0.5	0.15	Opt.	yes	yes	yes	yes	
Yogurt	3.25	8.25	0.9	-	N P <sup>(2)</sup>	yes	yes	yes	yes	
Lowfat Yogurt	0.5-2.0	8.25	0.9	-	N P <sup>(2)</sup>	yes	yes	yes	yes	
Nonfat Yogurt	<0.5	8.25	0.9	-	N P <sup>(2)</sup>	yes	yes	yes	yes	
Eggnog	6	8.25 <sup>(3)</sup>	-	-	N P <sup>(2)</sup>	yes	yes	yes	yes	

(1) Color additives are allowed in all products listed, but not that which imparts the color of milkfat or, in the case of eggnog, yolk solids.

(2) NP = No provisions.

(3) In addition, eggnog must contain not less than one percent of egg yolk solids by weight of finished product.

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