

I. KINDS OF MILK

Today, a variety of milks is available to meet the taste, nutrition, health, and convenience demands of consumers. Milks of varied fat content, of low- or reduced-lactose content, or fortified with nutrients such as vitamins A, D, and calcium are available. Listed below are brief descriptions of various types of milks.

Standards of composition for milk and milk products in the U.S. have generally been established by state and local governments. Federal standards of identity are established for some milks (e.g., whole milk) shipped in interstate commerce. These federal standards define the composition, the kind and quantity of optional ingredients permitted, and the labeling requirements for the particular product. Standards of identity for milk and many other dairy foods can be found in the Code of Federal Regulations. Lower fat and nonfat milks do not have a standard of identity. These milks are subject to the requirements of the Food and Drug Administration's "general standard," which permits foods to be named by use of a defined nutrient content claim (e.g., "reduced fat" or "lowfat") and a standardized term (e.g., "milk"). Nutrient content descriptions for dairy foods in the U.S. (e.g., free, low, high, good source, etc.) can be found in Table 9. International standards for milks are outlined in the Food and Agriculture Organization/World Health Organization Codex Alimentarius Program. This program, developed by representatives of member countries, protects the consumer and promotes uniform minimum standards of identity for milk and other foods on both national and international levels. Codex standards apply only to milk and other dairy foods (e.g., cheese) marketed internationally. A change in Codex standards does not automatically trigger changes in U.S. standards for domestic products.

MILKS

- **Fluid Whole Milk.** Whole milk contains not less than 3.25% milk fat and 8.25% solids-not-fat. The addition of vitamins A and D is optional. If vitamin A is added, it must be present at a level of not less than 2,000 International Units (IU) per quart. If vitamin D is added, it must be present at a level of 400 IU/quart. Characterizing flavor ingredients may also be added.
- **Reduced Fat/Lowfat Milk.** These milks contain 0.5, 1.5, or 2% milk fat and not less than 8.25% solids-not-fat. 2% Reduced Fat milk (formerly called 2% lowfat milk) contains 2% milk fat. See Table 12 for milks' names. 1% Lowfat milk, also called Light milk, contains 1% milk fat. Reduced fat/lowfat milks must contain 2,000 IU vitamin A/quart. The addition of vitamin D is optional. If added, vitamin D must be present at a level of 400 IU/quart. Characterizing flavoring ingredients may be added.
- **Fat-Free Milk.** This milk, also called skim or nonfat milk, contains less than 0.5% milk fat and not less than 8.25% solids-not-fat. Vitamin A must be added at a level of 2,000 IU/quart. The addition of vitamin D is optional, but must be present at a level of 400 IU/quart if added. Characterizing flavoring ingredients may be added.
- **Flavored Milk.** Characterizing flavors (e.g., chocolate, strawberry, vanilla, peanut butter and chocolate, etc.), with or without coloring and nutritive sweeteners, may be added to specific milks.

SPECIALTY MILKS

- **Reduced Lactose Milk.** Commercially prepared milks in which the lactose (milk sugar) content has been reduced are widely available. These milks are prepared at a processing plant by adding the liquid enzyme lactase to pasteurized milk and storing it for 24 hours. When the appropriate level of reduction has been reached, usually 70%, the milk is pasteurized again to stop lactose hydrolysis. Milk that has 99.9% of its lactose hydrolyzed, labeled "lactose free," is available on the market. A milk labeled "lactose-reduced" must contain at least 70% less lactose than regular milk. In addition to lactose-reduced milks (2% fat, 1% fat, and nonfat), other lactose-reduced dairy products are on the market. In general, reduced lactose milks taste sweeter than traditional milks.
- **Imitation and Substitute Milks.** The U.S. Food and Drug Administration defines an imitation food, including imitation milk, as one not meeting nutritional equivalency requirements for the natural, non-imitation food. When meeting or exceeding its nutritional equivalency, an

imitation food can be labeled alternate, substitute, or simulated instead of imitation. The dairy industry administers a program for identification of real dairy foods. A "REAL" seal on a carton or package of milk or other dairy food assures consumers that the food is not an imitation or a substitute.

- **Certified Milk.** Certified milk is raw or pasteurized milk produced and handled by dairies that operate according to the rules and sanitary regulations stated in the manual *Methods and Standards for the Production of Certified Milk*. This publication is issued and revised periodically by the American Association of Medical Milk Commissions, Inc. (AAMMC). Certified milk is available in only a few locations and demand is low. Its production, conducted under the auspices of a Medical Milk Commission, involves the veterinary examination of cows, the sanitary inspection of the dairy farm and equipment, and the medical examination of employees who handle the milk. Individual states may authorize the intrastate distribution of raw milk, but health authorities do not advocate its consumption.
- **Organic Milk.** A variety of organic milks (and other dairy products) have entered the marketplace despite lack of federal standards

defining "organic." Organic milks are claimed to come from cows fed and raised without the use of pesticides, synthetic fertilizers, antibiotics, and hormones. USDA has recently proposed standards for "organic" agricultural products. The proposed standards focus on the methods, practices, and substances that can be used in producing and handling livestock, certification procedures, labeling guidelines, and compliance testing of organic products including milk and other milk products.

REFERENCES

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