

**§ 58.232 Milk.**

Raw milk shall meet the requirements as outlined in §§ 58.132 through 58.138 and, unless processed within two hours after being received, it shall be cooled to and held at a temperature of 45 °F. or lower until processed.

**§ 58.233 Skim milk.**

The skim milk shall be separated from whole milk meeting the requirements as outlined in §§ 58.132 through 58.138, and unless processed immediately, it shall be cooled to and maintained at a temperature of 45 °F. or lower from the time of separating until the time of processing.

**§ 58.234 Buttermilk.**

Buttermilk for drying as dry buttermilk or dry buttermilk product shall be fresh and derived from the churning of butter, with or without the addition of harmless lactic culture. No preservative, neutralizing agent or other chemical may be added. Fluid buttermilk, unless cultured, shall be held at 45 °F or lower unless processed within 2 hours.

[56 FR 33855, July 24, 1991]

**§ 58.235 Modified dry milk products.**

Dry milk products to which approved neutralizing agents or chemicals have been added or constituents removed to alter their original characteristics for processing or usage shall come from products meeting the requirements of §§ 58.232, 58.233, or 58.234. These products shall meet the applicable labeling requirements.

OPERATIONS AND OPERATING  
PROCEDURES

**§ 58.236 Pasteurization and heat treatment.**

All milk and buttermilk used in the manufacture of dry milk products and modified dry milk products shall be pasteurized at the plant where dried, except that acidified buttermilk containing 40 percent or more solids may be transported to another plant for drying without repasteurization. Provided the condensed product is handled according to sanitary conditions approved by the Administrator.

(a) *Pasteurization.* (1) All milk or skim milk to be used in the manufacture of nonfat dry milk shall be pasteurized prior to condensing at a minimum temperature of 161 °F. for at least 15 seconds or its equivalent in bacterial destruction. Condensed milk products made from pasteurized milk may be transported to a drying plant, provided that it shall be effectively repasteurized at the drying plant, prior to drying, at no less than 166 °F. for 15 seconds or its equivalent in bacterial destruction.

(2) All buttermilk to be used in the manufacture of dry buttermilk or dry buttermilk product shall be pasteurized prior to condensing at a temperature of 161 °F for 15 seconds or its equivalent in bacterial destruction.

(b) *Heat treatment*—(1) *High-heat.* The finished product shall not exceed 1.5 mg. undenatured whey protein nitrogen per gram of nonfat dry milk as classified in the U.S. Standards for Grades of Nonfat Dry Milk (Spray Process).

(2) *Medium-heat.* The finished product shall show undenatured whey protein nitrogen between the levels of “high-heat” and “low-heat” (1.51 to 5.99 mg.).

(3) *Low-heat.* The finished product shall show not less than 6.0 undenatured whey protein nitrogen per gram of non-fat dry milk as classified in the U.S. Standards for Grades of Nonfat Dry Milk (Spray Process).

[40 FR 47911, Oct. 10, 1975. Redesignated at 42 FR 32514, June 27, 1977, and further redesignated at 46 FR 63203, Dec. 31, 1981, as amended at 56 FR 33855, July 24, 1991]

**§ 58.237 Condensed surge supply.**

Surge tanks or balance tanks if used between the evaporators and dryer shall be used to hold only the minimum amount of condensed product necessary for a uniform flow to the dryers. Such tanks holding product at temperatures below 150 °F. shall be completely emptied and washed after each 4 hours of operation or less. Alternate tanks shall be provided to permit continuous operation during washing of tanks.

**§ 58.238 Condensed storage tanks.**

(a) Excess production of condensed product over that which the dryer will

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take continuously from the pans should be bypassed through a cooler into a storage tank at 50 °F. or lower and held at this temperature until used.

(b) Product cut-off points shall be made at least every 24 hours and the tank completely emptied, washed, and sanitized before reuse.

**§ 58.239 Drying.**

Each dryer should be operated to produce the highest quality dry product consistent with the most efficient operation. The dry products shall be removed from the drying chamber continuously during the drying process.

**§ 58.240 Cooling dry products.**

Prior to packaging and immediately following removal from the drying chamber the dry product shall be cooled to a temperature not exceeding 110 °F, however, if the product is to be held in a bulk bin the temperature should be reduced to approximately 90 °F but shall be not more than 110 °F.

**§ 58.241 Packaging, repackaging and storage.**

(a) *Containers.* Packages or containers used for the packaging of non-fat dry milk or other dry milk products shall be any clean, sound commercially accepted container or packaging material which will satisfactorily protect the contents through the regular channels of trade, without significant impairment of quality with respect to flavor, wholesomeness or moisture content under the normal conditions of handling. In no instance will containers which have previously been used for nonfood items, or food items which would be deleterious to the dairy product be allowed to be used for the bulk handling of dairy products.

(b) *Filling.* Empty containers shall be protected at all times from possible contamination and containers which are to be lined shall not be prepared more than one hour in advance of filling. Every precaution shall be taken during the filling operation to minimize product dust and spillage. When necessary a mechanical shaker shall be provided; the tapping or pounding of containers shall be prohibited. The containers shall be closed immediately

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after filling and the exteriors shall be vacuumed or brushed when necessary to render them practically free of residual product before being transferred from the filling room to the palleting or dry storage areas.

(c) *Repackaging.* The entire repackaging operation shall be conducted in a sanitary manner with all precautions taken to prevent contamination and to minimize dust. All exterior surfaces of individual containers shall be practically free of product before overwrapping or packing in shipping containers. The room shall be kept free of dust accumulation, waste, cartons, liners, or other refuse. Conveyors, packaging and carton making equipment shall be vacuumed frequently during the operating day to prevent the accumulation of dust. No bottles or glass materials of any kind shall be permitted in the repackaging or hopper room. The inlet openings of all hoppers and bins shall be of minimum size, screened and placed well above the floor level. The room and all packaging equipment shall be cleaned as often as necessary to maintain a sanitary operation. Close attention shall be given to cleaning equipment where residues of the dry product may accumulate. A thorough clean-up including windows, doors, walls, light fixtures and ledges, should be performed as frequently as is necessary to maintain a high standard of cleanliness and sanitation. All waste dry dairy products including dribble product at the fillers, shall be properly identified and disposed of as animal feed.

(d) *Storage—(1) Product.* The packaged dry milk product shall be stored or so arranged in aisles, rows, or sections and lots at least 18 inches from any wall and in such a manner as to be orderly, easily accessible for inspection or for cleaning of the room. All bags and small containers of products shall be placed on pallets elevated from the floor. Products in small containers may be stored by methods preventing direct contact with the floor when the condition of the container is satisfactorily maintained. The storage room shall be kept clean and dry and all openings protected against entrance of insects and rodents.