

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 at 46 FR 63203, Dec. 31, 1981, and 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 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 nonfat 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 should be prohibited. The containers shall be closed immediately 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.

(2) *Supplies.* All supplies shall be placed on dunnage or pallets and arranged in an orderly manner for accessibility and cleaning of the room. It is preferable that supplies be stored in an

area separate from that used for storing the dry products. Supplies shall be kept enclosed in their original wrapping material until used. After removal of supplies from their original containers, they shall be kept in an enclosed metal cabinet, bins or on shelving and if not enclosed shall be protected from powder, and dust or other contamination. The room should be vacuumed as often as necessary and kept clean and orderly.

**§ 58.242 Product adulteration.**

All necessary precautions shall be taken throughout the entire operation to prevent the adulteration of one product with another. The commingling of one type of liquid or dry product with another shall be considered as an adulteration of that product. This does not prohibit the normal standardization of like products in accordance with good commercial practices or the production of specific products for special uses, provided applicable labeling requirements are met.

**§ 58.243 Checking quality.**

All milk, milk products and dry milk products shall be subject to inspection and analysis by the dairy plant for quality and condition throughout each processing operation. Periodically samples of product and environmental material shall be tested for salmonella. Test results shall be negative when samples are tested for salmonella. Line samples should be taken periodically as an aid to quality control in addition to the regular routine analysis made on the finished products.

**§ 58.244 Number of samples.**

As many samples shall be taken from each dryer production lot as is necessary to assure proper composition and quality control. A sufficient number of representative samples from the lot shall be taken to assure compliance with the stated net weight on the container.

**§ 58.245 Method of official sample analysis.**

Samples shall be tested according to the applicable methods of laboratory analysis contained in DA Instruction 918-103, 918-109-1 and 918-109-3 as issued