

## Chapter Ag 80

## GRADE A MILK AND MILK PRODUCTS

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**History:** Chapter Ag 80 as it existed on August 31, 1967 was repealed, and a new chapter Ag 80 was created effective September 1, 1967.

Ag 80.01 Definitions. In addition to those definitions prescribed in section 97.01 and 97.24, Wis. Stats., the following shall apply in the interpretation and enforcement of this chapter:

(1) Department is the state of Wisconsin department of agriculture.

(2) Certifying agency is the state of Wisconsin department of health and social services.

(3) Milk and milk products are grade A milk and grade A milk products.

(4) Ungraded milk and milk products are those which do not meet the requirements prescribed in this chapter.

(5) (a) Sour cream is cream the acidity of which is more than 0.20% expressed as lactic acid, produced by natural bacterial action, the use of a lactic acid producing culture, and contains not less than 18% butterfat. Salt, lactose, harmless stabilizers and emulsifiers, nonfat dry milk solids, rennet, citric acid and a starter culture distillate may be added. Starter culture distillate is the condensate obtained by distillation of volatile fractions produced in milk by a lactic acid producing culture, and may be declared on the label as natural flavor.

(b) Cultured cream, or cultured sour cream conforms to the definition for sour cream except that it is produced only by means of a lactic acid producing culture and does not contain citric acid or a starter culture distillate.

(6) Whipping cream is cream which contains not less than 30% milk fat. Nonfat dry milk, lactose and harmless stabilizers and emulsifiers may be added.

(7) Half and half is a product consisting of milk or skim milk and cream which contains not less than 10.5% milk fat. Lactose, nonfat dry milk and harmless stabilizers and emulsifiers may be added.

(8) (a) Sour half and half conforms to the definition for sour cream under (5) (a) except it is manufactured from half and half rather than cream.

(b) Cultured half and half or cultured sour half and half conforms to the definition for cultured cream or cultured sour cream under (5)

(b) except it is manufactured from half and half rather than cream.

(9) Whipped cream is cream to which a harmless gas has been added to cause whipping of the product. It may contain sugar, non-fat dry milk, lactose, harmless flavoring and harmless stabilizers and emulsifiers.

(10) Concentrated milk is a fluid product, unsterilized and unsweetened, resulting from the removal of a considerable portion of the water from milk or from the addition of milk solids and milk fat to milk. When recombined with water in accordance with instructions printed on the container, the resulting product conforms with the standards for milk fat and solids not fat of milk.

(11) Concentrated milk products are homogenized concentrated milk, fortified milk, concentrated skim milk, concentrated flavored milk, concentrated flavored drink, and similar concentrated products made from concentrated milk or concentrated skim milk, as the case may be, and which, when recombined with water in accordance with instructions printed on the container conform with the definitions of the corresponding milk products.

(12) Cultured buttermilk is a product obtained by ripening pasteurized milk or pasteurized skim milk by means of lactic acid producing culture, or made from pasteurized reconstituted skim milk. It contains not less than 8.25% of milk solids not fat. Butterfat granules, sodium citrate, salt, nonfat dry milk, lactose and a harmless stabilizer may be added.

(13) (a) Cultured milk is a fluid or semifluid product resulting from the souring or treatment, by a lactic acid or other culture, of pasteurized milk, pasteurized reconstituted milk, or pasteurized concentrated milk. It contains not less than 8.25% milk solids not fat and not less than 3.3% milk fat. Lactose and a harmless stabilizer may be added.

(b) Cultured skim milk or cultured low fat milk is a fluid or semifluid product resulting from the souring or treatment by lactic acid or other culture of pasteurized skim milk or pasteurized low fat milk. It contains not less than 8.5% milk solids not fat. Flavoring, lactose, and harmless stabilizers and emulsifiers may be added.

(c) Yogurt or yoghurt is the product resulting from the souring or treatment by lactic acid or other culture of pasteurized milk, low fat milk, or skim milk. It contains not less than 8.5% milk solids not fat. Flavoring, lactose, and harmless stabilizers and emulsifiers may be added. If made with added fruit, the resulting product shall be labeled "Yogurt with———", the blank being filled in with the name of the fruit. Yogurt flavored with a flavoring material shall be labeled "———Flavored Yogurt", the blank being filled in with the name of the flavoring material. The coliform standards of Wis. Adm. Code section Ag 80.06 shall apply at the point of production prior to the addition of flavoring or fruit.

(14) Acidified milk and milk products are milk and milk products obtained by the addition of food grade acid to pasteurized cream, half and half, milk, or skim milk resulting in a product with acidity not less than 0.20% expressed as lactic acid. Acidified milk and milk products conform to the definitions of milk and milk products prescribed in this chapter except the name of the product shall be immediately preceded by the word acidified.

(15) Flavored milk is milk flavored with harmless food flavoring and may be sweetened. It may contain salt, nonfat dry milk, lactose,

food grade acids and harmless stabilizers and emulsifiers, and contains not less than 3.3% milk fat. The common or usual name of the flavoring used must immediately precede the product name.

(16) Flavored drink, flavored dairy drink or flavored skim milk is skim milk and may be sweetened and flavored with harmless food flavoring. It may contain added salt, nonfat dry milk, lactose, food grade acids, and a harmless stabilizer. The common or usual name of the flavoring used must immediately precede the product name.

(17) Egg nog shall contain a minimum of 6% butterfat and at least 1% total egg yolk solids. It may be sweetened and may also contain flavoring, spices, salt, nonfat dry milk, lactose, and a harmless stabilizer.

(18) Milk products include cream, whipping cream, whipped cream, sour cream, cultured sour cream, half and half, sour half-and-half, cultured half-and-half, concentrated milk, concentrated milk products, skim milk, skimmed milk, fortified milk and milk products, vitamin D milk and milk products, homogenized milk, flavored milk or milk products, buttermilk, cultured buttermilk, cultured milk, cultured whole milk buttermilk, egg nog and acidified milk and milk products. This definition does not include such products as sterilized milk and milk products hermetically sealed in a container and so processed, either before or after sealing, as to prevent microbial spoilage, or evaporated milk, condensed milk, ice cream and other frozen deserts, butter, dry milk products (except as defined herein), or cheese except when they are combined with other substances to produce any pasteurized milk or milk product defined herein.

(19) Homogenized milk is milk which has been treated to insure breakup of the fat globules to such an extent that, after 48 hours of quiescent storage at 45° F., no visible cream separation occurs on the milk, and the fat percentage of the top 100 milliliters of milk in a quart, or of proportionate volumes in containers of other sizes, does not differ by more than 10% from the fat percentage of the remaining milk as determined after thorough mixing. The word "milk" shall be interpreted to include homogenized milk.

(20) "Pasteurization", "pasteurized", and similar terms. (a) Batch pasteurization shall mean the process of heating every particle of milk or milk product to at least 145° F. and holding it continuously at or above this temperature for at least 30 minutes in equipment which is properly operated and approved by the department: *Provided* That milk products which have a higher milk fat content than milk or contain added sweeteners shall be heated to at least 150° F. and held continuously at or above this temperature for at least 30 minutes.

(b) Pasteurization—High-temperature short-time continuous flow. High-temperature short-time pasteurization shall mean the process of heating every particle of milk or milk product to at least 161° F. and holding it continuously at or above this temperature for at least 15 seconds in equipment which is properly operated and approved by the department: *Provided* That milk products which have a higher milk fat content than milk or contain added sweeteners shall be heated to at least 166° F. and held continuously at or above this temperature for at least 15 seconds.

(c) This definition shall not prohibit any other process which has been demonstrated to be equally efficient and which is approved by the department.

(21) Raw milk and raw milk products are grade A milk and milk products which have not been pasteurized or otherwise heat treated.

(22) Skim milk or skimmed milk is milk from which a sufficient portion of milk fat has been removed to reduce its milk fat content to less than 0.5%. It shall contain at least 8.5% milk solids not fat. Milk solids or lactose may be added.

(23) Low fat milk is milk from which a sufficient portion of milk fat has been removed to reduce its milk fat content to not less than 0.5% and not more than 2.0%. It shall contain not less than 8.5% milk solids not fat. Milk solids or lactose may be added. Low fat milk shall be clearly labeled to indicate the percentage of butterfat contained therein.

(24) A Grade A transfer station is any building in which Grade A milk or milk products are transferred directly from the farm bulk pick-up tank into an over-the-road transport tank.

(25) Grade A dry milk products are milk products which have been processed for use in grade A pasteurized milk products and which have been manufactured under the provisions of the Wis. Adm. Code Chapter Ag 86.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; renum. (13) to be (13) (a); cr. 13 (b) and (c); renum. (22) and (23) to be (24) and (25); cr. (22) and (23), Register, May, 1970, No. 173, eff. 6-1-70; am. (6), (7), (9), (15); r. and recr. (24), Register, December, 1971, No. 192, eff. 1-1-72; am. intro. par., (1) and (2), Register, July, 1973, No. 211, eff. 8-1-73.

**Ag 80.02 Certification.** Survey for certification of compliance rating shall be made by the certifying agency at least every 2 years. Determination of compliance shall be made in accordance with the methods of the U. S. Public Health Service for making milk shed ratings. A rating of 90% for each dairy plant, 90% for its dairy farms, and a 90% enforcement rating shall be required. Prior to the issuance of a license the department shall determine whether the applicant meets the requirements for a 90% rating of its dairy plant and a 90% rating for its dairy farms. When a licensee rates below 90%, but not below 85%, the department may grant a probationary period of 90 days to increase his rating; provided that one additional extension can be made. When a rating is below 85%, a hearing shall be held and license may be suspended or revoked.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.03 Fortified milk and milk products.** Milk and milk products shall be labeled "fortified" only if fortified with vitamins and/or minerals as provided in Wis. Adm. Code chapter Ag 71. Lactose, nonfat dry milk and concentrated skim milk may be added ingredients. Each container of milk or milk product which has been fortified with vitamins and/or minerals shall be plainly labeled to show the number of units or milligrams of vitamins and/or minerals per quart and shall also be labeled to show the addition of any lactose, any nonfat dry milk or concentrated skim milk.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. Register, December, 1971, No. 192, eff. 1-1-72.

**Ag 80.04 Inspection.** (1) Prior to the issuance of a license the department shall cause to be inspected dairy farms and plants. Following the issuance of a license or permit, each dairy farm and transfer station shall be inspected at least once every 6 months and

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each milk plant and receiving station shall be inspected at least once every 3 months. When a violation of any requirement is found a second inspection shall be made, but not before the lapse of 3 days. The second inspection shall determine compliance. Any violation of the same requirement on such reinspection shall be cause for immediate suspension of license or permit.

(2) Every milk producer, hauler, distributor, or plant operator shall, upon the request of the department, permit access to all parts of the establishment or facilities. Transfer station operators, distributors, and plant operators shall furnish, upon request, for official use only, a true statement of the actual quantities of milk and milk products purchased and sold, together with a list of sources of milk and milk products, records of inspections and required tests, and recording thermometer charts.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.05 Examination of milk and milk products.** (1) During any consecutive 6-month period at least 4 samples of milk from each milk producer and 4 samples of raw milk for pasteurization shall be taken from each milk plant after receipt of the milk by the milk plant and prior to pasteurization. In addition, during any consecutive 6-month period, at least 4 samples of pasteurized milk and at least 4 samples of each milk product shall be taken from each milk plant. Samples of milk and milk products shall be taken while in the possession of the producer or distributor any time prior to final delivery, such samples to be examined by the department; provided, the department may accept the results of non-official laboratories which have been accredited by the certifying agency. Samples of milk and milk products from stores, restaurants and other places where milk or milk products are sold shall be examined as often as the department may require. Proprietors of such places shall furnish the department, upon request, with the names of all dairy plants or distributors from whom their milk and milk products are obtained.

(2) Bacterial plate counts, coliform determinations, phosphatase tests, and other laboratory tests shall conform to the procedures in "Standard Methods for the Examination of Dairy Products", Twelfth Edition (1967), copies of which are on file at the offices of the department of agriculture, secretary of state and revisor of statutes, and which may be obtained from American Public Health Association, Inc., 1790 Broadway, New York, N. Y. 10019, and in "Official Methods of Analysis of the Association of Official Analytical Chemists", Eleventh Edition (1970), copies of which are on file at the offices of the department of agriculture, secretary of state and revisor of statutes, and which may be obtained from Association of Official Analytical Chemists, Inc., Box 540, Benjamin Franklin Station, Washington, D. C. 20044. Examinations may include such other chemical and physical determinations as the department may deem necessary for the detection of adulteration. Bioassays and analyses of the vitamin and mineral content of fortified milk and milk products shall be made when required by the department, in a laboratory approved by the department for such examination.

(3) Whenever 2 of the last 4 consecutive bacteria counts, coliform determinations, or cooling temperatures, taken on separate days, exceed the limit of the standard for the milk or milk product herein

prescribed, the department shall send written notice thereof to the licensee or permittee. This notice shall be in effect so long as 2 of the last 4 consecutive samples exceed the limit of the standard. An additional sample shall be taken within 14 days of the sending of such notice, but not before the lapse of 3 days. Violation of the standard by 3 of the last 5 bacteria counts, coliform determinations, or cooling temperatures shall be cause for immediate suspension of the license or permit.

(4) In case of violation of the pasteurization requirements as evidenced by the phosphatase test, the cause of underpasteurization shall be determined and corrected before milk or milk products from the dairy plant can again be sold as pasteurized milk or milk products.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. (2), Register, December, 1971, No. 192, eff. 1-1-72.

**Ag 80.06 Milk standards.** (1) Milk shall be produced upon dairy farms conforming with the standards in section Ag 80.07. The bacterial plate count of milk received from the farm shall not exceed 100,000 per milliliter. At no time prior to pasteurization shall milk or milk products exceed 300,000 per milliliter.

(2) Milk and milk products shall be pasteurized, cooled and placed in the final container in a dairy plant conforming with the standards in section Ag 80.08. Efficient pasteurization shall be evidenced by satisfactory phosphatase tests. After pasteurization, the bacterial plate count, except for cultured milk products, shall not exceed 20,000 per milliliter. The coliform count of milk and milk products shall not exceed 10 per milliliter.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.07 Farm standards.** (1) **ABNORMAL MILK.** (a) Cows which show evidence of the secretion of abnormal milk in one or more quarters based upon bacteriological, chemical, or physical examination, shall be milked last or with separate equipment.

(b) Abnormal milk shall be discarded or shall be disposed of in a sanitary manner which will prevent the possibility of infection.

(c) Cows treated with, or cows which have consumed chemical, medicinal, or radioactive agents which are capable of being secreted in the milk and which, in the judgment of the department may be deleterious to human health, shall be milked last or with separate equipment, and the milk disposed of as the department may direct.

(d) Screening tests for mastitis infection prescribed by the department shall be conducted on each producer's milk at least 4 times during each 6-month period. Such tests shall be supervised by the inspecting agency.

(e) Milk from a herd infected with mastitis as provided for in Wis. Adm. Code chapter Ag 10, is insanitary and adulterated and is abnormal milk.

(2) **MILKING BARN, STABLE, OR PARLOR—CONSTRUCTION.** (a) A milking barn, stable, or parlor shall be provided on all dairy farms in which the milking herd shall be housed during milking time operations. Floors and gutters shall be constructed of concrete or equally impervious and easily cleaned material, shall be constructed to drain properly, and shall be in good repair.

(b) Walls and ceilings shall be smooth, painted, or finished in an approved manner, shall be in good repair, with ceiling dust-tight.

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(c) If horses, dry cows, calves, or bulls are stabled therein, they shall be confined in stalls, stanchions, or pens.

(d) Adequate natural or artificial light, or both, well distributed for day or night milking shall be provided.

(e) Dust-tight covered boxes or bins, or separate storage facilities for ground, chopped, or concentrated feed are required.

(f) Airspace and air circulation shall be sufficient to prevent condensation and excessive odors. Overcrowding shall be avoided.

(3) **MILKING BARN, STABLE, OR PARLOR—CLEANLINESS.** (a) The interior shall be kept clean. Floors and gutters, pens, stalls, walls, ceilings, pipelines, and equipment shall be clean and free of litter or filth.

(b) No swine, sheep, goats, or fowl shall be housed or permitted in the milking stable or parlor.

(4) **COWYARD.** (a) The cowyard shall be graded, drained, and shall have no standing pools of water or accumulations of organic wastes.

(b) In loafing or pen type stables, manure droppings shall be removed or clean bedding added at sufficiently frequent intervals to prevent the accumulation of manure on cows' udders and flanks and the breeding of flies.

(c) Swine, sheep and goats shall be kept out of the cowyard.

(d) Manure shall be removed and stored or disposed of in such manner as best to prevent the breeding of flies therein and the access of cows to piles thereof.

(5) **MILKHOUSE OR ROOM—CONSTRUCTION AND FACILITIES.** (a) *Facilities.* A milkhouse or room of sufficient size shall be provided in which cooling, handling, and storing of milk and the washing, sanitizing and storing of milk containers, utensils, and equipment other than that which is cleaned in place shall be done.

(b) *Floors.* 1. The milkhouse shall be provided with a smooth floor constructed of concrete or equally impervious material and shall be maintained in good repair:

2. The milkhouse floor shall be graded to drain properly.

3. All floor drains shall be accessible and shall be trapped if connected to a sanitary sewer system.

(c) *Walls and ceilings.* 1. The walls and ceilings shall be constructed of smooth material, well painted, or finished in an equally suitable manner.

2. The walls, ceilings, windows, doors, and hose port shall be maintained in good repair.

(d) *Lighting and ventilation.* 1. The milkhouse or room shall have adequate natural or artificial light, or both, properly distributed.

2. Sufficient ventilation shall be provided to prevent condensation and excessive odors.

3. Doors and windows shall be kept closed during dusty weather.

(e) *Miscellaneous requirements.* 1. The milkhouse shall be used for no other purpose than milkhouse operations.

2. It shall not open directly into a stable or any room used for domestic purposes except as may be approved by the department. A direct opening between the milkhouse and milking barn, stable or

parlor may be approved when a tight-fitting, self-closing, solid door hinged to be single or double-acting is provided.

3. Liquid wastes shall be disposed of in a sanitary manner.

(f) *Cleaning facilities.* 1. The milkhouse shall be equipped with a two-compartment wash vat. Cleaning and other operations shall be located and conducted so as to prevent any contamination of the milk or of cleaned equipment.

2. It shall have adequate facilities for heating water and for cleaning.

3. Water under pressure shall be piped into the milkhouse.

(6) **MILKHOUSE OR ROOM—CLEANLINESS.** (a) The floors, walls, ceilings, windows, and equipment of the milkhouse or room shall be kept clean. Means necessary for the control of flies, other insects, and rodents shall be used.

(b) Only articles directly related to milkroom activities shall be permitted in the milkroom. Animals and fowl shall be excluded.

(c) Pesticides or medicinals shall not be stored in the milkhouse.

(7) **TOILET.** (a) Every dairy farm shall have one or more sanitary toilets conveniently located.

(b) Toilets shall be constructed and maintained so that the waste is inaccessible to flies and does not pollute the ground surface or contaminate any water supply.

(8) **WATER SUPPLY.** (a) Water for milkhouse and milking operations shall be from a supply properly located, protected, and operated, and shall be easily accessible and adequate in quantity.

(b) Water shall be of a safe sanitary quality.

(c) There shall be no connection between safe and unsafe supplies; and there shall be no submerged inlets.

(d) Samples of farm water supplies shall be analyzed biennially. Dairy plants shall maintain records of all water quality test results for grade A farms from which milk is received.

(9) **UTENSILS AND EQUIPMENT; CONSTRUCTION.** (a) All multi-use containers, equipment and utensils used in the handling, storage, or transportation of milk shall be made of smooth, non-absorbent, non-corrodible, non-toxic material, and shall be so constructed as to be easily cleaned. Joints and seams shall be smooth and flush. All milk pails used for hand milking and stripping shall be seamless and of the hooded type. All milk and milk handling equipment shall comply with subsection (22).

(b) All containers, utensils, and equipment shall be in good repair and shall be easily accessible for inspection.

(c) Single-service articles shall have been manufactured, packaged, transported, stored and handled in a sanitary manner. Articles intended for single-service use shall not be reused.

(d) Multiple-use woven material shall not be used for straining milk.

(e) Dairy equipment intended to be cleaned-in-place shall be of approved construction. All milking and milk handling equipment and the installation thereof shall comply with subsection (22).

(10) **UTENSILS AND EQUIPMENT—CLEANING.** The product-contact surfaces of all multi-use containers, equipment (including that which is cleaned-in-place) and other utensils used in the handling, storage, or transportation of milk shall be cleaned after each usage.



(11) **BACTERICIDAL TREATMENT.** The product-contact surfaces of all multi-use containers, equipment (including that which is cleaned-in-place) and utensils used in the handling, storage, or transportation of milk shall be sanitized before each usage.

(12) **UTENSILS AND EQUIPMENT—STORAGE.** (a) All containers, utensils and equipment used in the handling, storage or transportation of milk, unless stored in sanitizing solutions, shall be stored to assure complete drainage, and shall be protected from contamination prior to use.

(b) Single-service articles shall be stored in the original container in a manner to protect them from contamination prior to use.

(13) **UTENSILS AND EQUIPMENT—HANDLING.** After bactericidal treatment, all containers and equipment shall be handled in such a manner as to prevent contamination of any product-contact surface.

(14) **MILKING—FLANKS, UDDERS, AND TEATS.** (a) Brushing shall be completed before milking begins.

(b) The flanks, udders, bellies and tails of all milking cows shall be free from visible dirt at the time of milking and shall be clipped as often as necessary.

(c) The udders and teats of all milking cows shall be cleaned and treated with sanitizing solution just prior to the time of milking and shall be relatively dry before milking.

(d) Wet hand milking is prohibited.

(15) **MILKING—SURCINGLES, MILK STOOLS, AND ANTI-KICKERS.** (a) Milk stools, surcingles, and anti-kickers shall be kept clean and stored above the floor.

(b) Milk stools shall be of easily cleanable construction and shall not be padded.

(16) **MILKING—TRANSFER AND PROTECTION OF MILK.** (a) Each pail or can of milk shall be removed immediately from the milking barn, stable, or parlor to the milkhouse.

(b) No milk shall be strained, poured, or transferred in the barn unless it is properly protected from contamination.

(17) **PERSONNEL—HAND-WASHING FACILITIES.** There shall be provided adequate hand-washing facilities, including running water, soap or detergent, and individual sanitary towels, in the milkhouse and in or convenient to the milking barn, stable, or parlor.

(18) **PERSONNEL—CLEANLINESS.** (a) Milkers' hands shall be washed clean and dried with an individual sanitary towel immediately before milking, before performing any milkhouse function, and following any interruption of the milking operation.

(b) Milkers and milk handlers shall wear clean outer garments while milking or handling milk, milk containers, utensils, or equipment.

(19) **COOLING.** Milk shall be cooled to 50°F. or less within 2 hours after milking and shall be maintained at that temperature until delivered.

(20) **VEHICLES.** (a) Vehicles used to transport milk from the dairy farm to to the milk plant or receiving station shall be kept clean inside and out.

(b) They shall be so constructed and operated as to protect their contents from sun, freezing, and contamination.

(e) No substance capable of contaminating milk shall be transported with milk.

(21) INSECT AND RODENT CONTROL. (a) Effective measures shall be taken to prevent the contamination of milk, containers, equipment, and utensils by insects and rodents and by chemicals used to control such vermin. Fly breeding shall be minimized by approved manure disposal methods.

(b) Manure packs shall be properly maintained.

(c) All milkhouse openings shall be effectively screened or otherwise protected; doors shall be tight-fitting and self-closing; screen doors shall open outward.

(d) Milkrooms shall be free from insects and rodents.

(e) Only registered pesticides are to be used, and in such manner as to minimize the possibility of contamination of milk.

(f) Equipment and utensils shall not be exposed to pesticide contamination.

(g) Surroundings shall be kept neat, clean, and free of conditions which might harbor or be conducive to the breeding of insects and rodents or to any other health nuisance.

(22) MILKING AND MILK HANDLING EQUIPMENT. (a) All milking and milk handling systems and equipment hereafter installed, reconstructed or extensively altered for use in the milking of cows and the transfer of the milk from the cow to containers, in which or from which the milk is removed from the dairy farm, shall conform to the following standards of construction and installation:

1. All product contact surfaces of permanently mounted pipelines shall be of stainless steel or heat resistant glass, except that rubber, rubber-like, or plastic materials may be used for sealing applications. Paper gaskets shall not be used.

2. All joints of permanently mounted pipelines, including solution lines, shall be welded or equipped with CIP (clean-in-place) fittings. Welded joints shall be smooth and free from pits, cracks or other defects. Demountable fittings shall be of such design as to form substantially flush interior joints. Appurtenances, such as milker claws, pumps or receiver jars with product contact surfaces, shall be readily cleanable, either when assembled or disassembled. Removable parts shall be readily demountable. Non-product contact surfaces shall have a smooth finish and be readily cleanable.

3. Permanently mounted pipelines shall be supported so that they remain in constant alignment and position. They shall be self-draining with a minimum slope of one inch per 10 feet. The support system shall be so designed as to preclude electrolytic action between supports and pipeline.

4. Transparent plastic tubing used in conjunction with transfer stations or systems shall be in one continuous length and be supported off the floor at all times. The opening through which tygon tubing enters the milk room shall be provided with a closure which is to be kept closed when the transfer unit is not in use. Equipment for mechanically air drying the tygon tubing shall be provided. The pouring station receptacle shall be of smooth stainless steel and be equipped with an overlapping self-closing cover. The receptacle shall be mounted off the floor on a readily cleanable stainless steel framework and be washed and stored in the milk room. Wire mesh or

materials which are not readily cleanable may not be used as a support for the filter medium.

5. The claw or milk cup shall be designed so that cleaning and sanitizing solutions will drain when the claw or milk cup is in the cleaning and sanitizing position.

6. A bucket type milking machine shall be provided with a check valve or other device which will prevent moisture or any contaminating substance from entering the milk from the vacuum system. The moveable portion of the check valve shall be of one piece construction or the parts shall be bonded together.

(b) Plans for the installation, construction, reconstruction or extensive alteration of milking and milk handling systems and equipment shall be submitted to the department for approval before work is begun, as required under section Ag 80.12. Upon completion of the work the installer shall furnish the purchaser with a signed written statement certifying that the system or equipment as installed is in full compliance with this subsection.

**Note:** Tanks which conform to the "3-A Sanitary Standards" and milking and milk handling equipment which conform to the "3-A Accepted Practices for the Design, Fabrication and Installation of Milking and Milk Handling Equipment", published by the International Association of Milk, Food and Environmental Sanitarians, Inc., in the Journal of Milk and Food Technology will meet the requirements of this section.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; cr. (8) (d); renun. (17) through (21) to be (18) through (22); cr. (17), Register, December, 1972, No. 204, eff. 1-1-73; am. (8) (d), (9) (a) and (e); renun. (17) to be (22), renun. (18) to (22) to be (17) to (21), Register, July, 1973, No. 211, eff. 8-1-73.

**Ag 80.08 Plant standards. (1) FLOORS.** The floors of all rooms in which milk or milk products are processed, handled, or stored, or in which milk utensils are washed, shall be constructed of concrete or other equally impervious and easily cleaned material and shall be smooth, properly drained, provided with trapped drains and kept clean and in good repair, except that (a) Cold-storage rooms used for storing milk and milk products need not be provided with floor drains when the floors are sloped to drain to one or more exits, and (b) Storage rooms for storing dry ingredients or packaging materials, or both, need not be provided with drains and the floors may be constructed of tightly joined wood.

(2) **WALLS AND CEILINGS.** Walls and ceilings of rooms in which milk or milk products are handled, processed, or stored, or in which milk containers, utensils, and equipment are washed, shall have a smooth, washable, light-colored surface and shall be kept clean and in good repair.

(3) **DOORS AND WINDOWS.** (a) Unless other effective means are provided to prevent the access of flies, openings to the outer air shall be effectively screened.

(b) All openings to the outside shall have solid doors or glazed windows. Such doors shall be self-closing. All doors and windows shall be kept closed during dusty weather. Screen doors, if used, must open outward and be self-closing.

(4) **LIGHTING AND VENTILATION.** (a) All rooms in which milk and milk products are handled, processed, or stored or in which milk containers, equipment, and utensils are washed shall be well lighted.

(b) They shall be well ventilated to preclude odors and condensation.

(5) **SEPARATE ROOMS.** (a) There shall be a separate room for pasteurizing, processing, cooling, and packaging and a separate room for cleaning of milk cans and bottles. Rooms shall be of adequate size. Cans of raw milk shall not be unloaded directly into the pasteurizing room. The dairy plant, milk containers, utensils, and equipment shall be used for no other purposes than the processing of milk and milk products and the operations incident thereto, except as may be approved by the department. The processing or handling of products other than milk and milk products in the pasteurization plant shall be performed to preclude the contamination of such milk and milk products. Plants receiving milk in bulk transport tanks shall provide for cleaning and sanitizing facilities.

(b) Rooms in which milk, milk products, cleaned utensils or containers are handled or stored shall not open directly into any stable or living quarters.

(c) Unless all milk and milk products are received in bulk transport tanks, a separate receiving room shall be required. Storage tanks are required to be properly vented.

(6) **TOILET FACILITIES.** (a) Every dairy plant shall be provided with toilet facilities conforming to the rules of the state board of health and of the industrial commission.

(b) Toilet rooms shall not open directly into any room in which milk or milk products are processed. Toilet rooms shall be completely enclosed and shall have tight-fitting, self-closing doors. A placard containing Wis. Adm. Code section Ag 80.13 and a sign directing employes to wash their hands before returning to work shall be posted in all toilet rooms used by employes.

(c) Dressing rooms, toilet rooms and fixtures shall be kept in a clean condition, in good repair, and shall be well ventilated and well lighted.

(d) Sewage and other liquid wastes shall be disposed of in a sanitary manner.

(7) **WATER SUPPLY.** (a) Water for milk plant purposes shall be from a supply properly located, protected, and operated and shall be easily accessible.

(b) There shall be no direct or indirect connection between safe and unsafe water.

(c) Condensing water and vacuum water must be of a potable quality.

(d) Water for milk plant purposes must be of a safe, sanitary quality.

(8) **HAND-WASHING FACILITIES.** Convenient hand-washing facilities shall be provided, including hot and cold or warm running water, soap, and sanitary towels. Hand-washing facilities shall be kept clean. The use of a common towel is prohibited. No employe shall resume work after using the toilet room without first washing his hands.

(9) **MILK PLANT CLEANLINESS.** All rooms in which milk and milk products are handled, processed, or stored, or in which containers, utensils, or equipment are washed or stored, shall be kept clean, neat, and free of evidence of insects and rodents. Only equipment directly

related to processing operations or to the handling of containers, utensils, and equipment shall be permitted in the pasteurizing, processing, cooling, packaging, and bulk milk storage rooms. Registered pesticides shall be safely used.

(10) **SANITARY PIPING.** (a) All sanitary piping, fittings, and connections which are exposed to milk and milk products, or from which liquids may drip, drain, or be drawn into milk or milk products shall consist of smooth, impervious, corrosion-resistant, non-toxic, easily cleanable material. All piping shall be in good repair and shall be accessible for inspection.

(b) Cleaned-in-place sanitary type pipe lines shall meet the approval of the department.

(c) Pasteurized milk and milk products shall be conducted from one piece of equipment to another only through sanitary piping.

(11) **CONSTRUCTION AND REPAIR OF CONTAINERS AND EQUIPMENT.** (a) All multi-use containers and equipment with which milk or milk products come into contact shall be of smooth, impervious, corrosion-resistant, non-toxic material; shall be constructed for ease of cleaning; and shall be kept in good repair.

(b) Such equipment shall be self-draining, and strainers shall be of approved design.

(c) All single-service containers, closures, gaskets, and other articles with which milk or milk products come in contact shall be non-toxic and shall have been manufactured, packaged, transported, and handled in a sanitary manner. Articles intended for single-service use shall not be reused.

(12) **CLEANING AND SANITIZING OF CONTAINERS AND EQUIPMENT.** (a) The product-contact surfaces of all multi-use containers, utensils, and equipment used in the transportation, processing, handling, and storage of milk and milk products shall be effectively cleaned.

(b) Mechanical cleaning of equipment shall meet requirements as specified by the department. Records of such cleaning process shall be complete.

(c) The product-contact surfaces of all multi-use containers, utensils, and equipment shall be sanitized for each use.

(13) **STORAGE OF CLEANED CONTAINERS AND EQUIPMENT.** Containers and other utensils used in the handling, storage, or transportation of milk or milk products shall, unless stored in bactericidal solution, be so stored as to drain dry and so as not to become contaminated before being used.

(14) **STORAGE OF SINGLE-SERVICE ARTICLES.** Single-service caps, cap stock, parchment paper, containers, gaskets, and other single-service articles for use in contact with milk and milk products shall be purchased and stored in sanitary tubes, wrapping, or cartons; shall be kept therein in a clean, dry place until used; and shall be handled in a sanitary manner.

(15) **PROTECTION FROM CONTAMINATION.** (a) Milk plant operations, equipment, and facilities shall be located and conducted to prevent any contamination of milk or milk products, ingredients, equipment, containers and utensils.

(b) All milk or milk products or ingredients which have been spilled, overflowed, or leaked shall be discarded.

(c) Air and steam used to process products by direct introduction into the product shall be clean and of safe quality.

(16) PASTEURIZATION. All pasteurization equipment shall be so constructed so as to meet requirements set forth for such equipment by the department. Pasteurizers shall have temperature indicating and controlling instruments and milk flow stops as required to meet the criteria set forth by the department. Such equipment shall be operated so as to continually insure all product meets the heat treatment criteria set forth in Ag 80.01 (20).

(17) COOLING. (a) All raw milk and milk products shall be maintained at 50°F. or less until processed.

(b) All pasteurized milk and milk products except those to be cultured shall be cooled immediately in approved equipment to a temperature of 45°F. or less. All pasteurized milk and milk products shall be stored at a temperature of 45°F. or less. On delivery vehicles the temperature of milk and milk products shall not exceed 50°F.

(c) Every room or tank in which milk or milk products are stored shall be equipped with an accurate thermometer.

(d) Recirculated cooling water shall be from a safe source, shall be properly protected and shall be of safe bacteriological quality.

(18) BOTTLING AND PACKAGING. (a) Bottling and packaging of milk and milk products shall be done at the place of final pasteurization.

(b) Such packaging shall be performed in a sanitary manner in approved mechanical equipment.

(19) CAPPING. (a) Capping or closing of milk and milk product containers shall be done in a sanitary manner by approved mechanical capping or closing equipment.

(b) Hand capping is prohibited.

(c) The cap or closure shall protect the pouring lip to at least its largest diameter.

(20) PERSONNEL—CLEANLINESS. (a) Hands shall be thoroughly washed before commencing plant functions and as often as may be required to remove soil and contamination. No employe shall resume work after visiting the toilet room without thoroughly washing his hands.

(b) All persons engaged in the processing, pasteurization, handling, storage, or transportation of milk, milk products, containers, equipment, and utensils shall wear clean outer garments.

(c) The use of tobacco by any person while engaged in the processing of milk or milk products is prohibited.

(21) VEHICLES. (a) All vehicles used for transportation of pasteurized milk and milk products shall be kept clean and shall be so constructed and operated that the milk and milk products are maintained at 50°F. or less and are protected from sun, from freezing, and from contamination.

(b) No contaminating substances are to be transported in a vehicle used for the transportation of milk and milk products.

(22) SURROUNDINGS. Milk plant surroundings shall be kept neat,

clean, and free from conditions which might attract or harbor flies, other insects, and rodents or which otherwise constitute a nuisance.

(23) **GRADE A TRANSFER STATION REQUIREMENTS.** Grade A transfer stations shall meet all applicable items of compliance as set forth in this section except those that apply to processing and storage of milk and milk products. All vehicles engaged in the transfer of milk and milk products shall be within the confines of the transfer station during the time of transfer. Existing installations not meeting requirements of this subsection shall be brought into compliance by July 1, 1972.

(24) **GRADE A DAIRY PLANT REQUIREMENTS.** Grade A dairy plants, including receiving stations, shall meet the following physical requirements:

(a) Grade A dairy plants and receiving stations shall maintain a bulk unloading room in which milk shall be unloaded.

(b) Satisfactory milk storage facilities shall be provided either in connection with the bulk unloading room or in a completely separate room.

(c) Separate facilities for pumping and storage of Grade A milk shall be provided as required by section Ag 80.08.

(d) Existing installations not meeting requirements of paragraph (a) shall be brought into compliance by January 1, 1975.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; cr. (23), (24), Register, December, 1971, No. 192, eff. 1-1-72.

**Ag 80.09 Animal health.** All milk shall be from herds which comply with the provisions of chapter 95, Wis. Stats., and Wis. Adm. Code chapter Ag 10.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.10 Facilities for ungraded products.** (1) No Grade A dairy plant shall receive any milk or milk products which have been in contact with equipment with which ungraded milk or milk products have been in contact unless such equipment has been first thoroughly cleaned and subjected to an effective bactericidal treatment.

(2) No Grade A dairy plant shall process any ungraded milk or milk products other than those intended for frozen desserts or other products unless approved in writing by the department. When ungraded products are permitted, the following separate facilities and equipment shall be maintained and identified:

(a) A separate pump and unloading line in the bulk unloading room to receive ungraded milk or milk products.

(b) A separate line between the bulk unloading room and storage tank used for the storage of ungraded milk or milk products prior to processing.

(3) Holding tanks and storage facilities in which ungraded milk and milk products are held prior to processing shall be identified as to the product and grade of product being held therein.

(4) All bulk unloading rooms used for the receipt of Grade A and ungraded products shall have the unloading pump and pipelines clearly labeled in a permanent fashion so that they may be readily identified.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; r. and recr. (1) and (2); cr. (4), Register, December, 1971, No. 192, eff. 1-1-72.

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**Ag 80.11 Transferring or dipping milk; delivery containers.** (1) The sale of dipped milk is prohibited. No milk shall be transferred from a bulk container to a consumer container except at a Grade A dairy plant licensed for that purpose.

(2) The delivery of any such milk or milk products to and the collection of containers for any such milk or milk products from residences in which cases of communicable disease transmissible through milk supplies exist shall be subject to special requirements of the department and the local health officer.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. (1), Register, December, 1971, No. 192, eff. 1-1-72.

**Ag 80.12 Future dairy plants and dairy farms.** Dairy plants and facilities on dairy farms hereafter constructed, reconstructed or extensively altered shall conform in their construction to the requirements of this chapter. Plans for dairy plants and dairy farm facilities hereafter constructed, reconstructed, or extensively altered shall be submitted to the department and its approval obtained before work is begun.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.13 Personnel, health.** No person who is affected with any disease in a communicable form or is a carrier of such disease shall work for any milk producer or dairy plant operator in any capacity which brings him in contact with the production, handling, storage or transportation of milk, milk products, containers or equipment; and no milk producer or dairy plant operator shall employ in any such capacity any such person or any person suspected of being affected with any disease in a communicable form or of being a carrier of such disease. Any producer or plant operator upon whose farm or in whose plant any communicable disease occurs, or who suspects that any employe has contracted any disease in a communicable form or has become a carrier of such disease, shall notify the local health officer and the department immediately.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.14 Procedure when infection suspected.** When suspicion arises as to the possibility of transmission of infection from any person concerned with the handling of milk or milk products, the department may require any or all of the following measures:

(1) The immediate exclusion of that person from milk handling.

(2) The immediate exclusion of the milk supply concerned from distribution and use.

(3) Adequate medical and bacteriological examination of the person, of his associates, and of his and their body discharges.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.15 Single-service containers.** All paper, plastics, foil and other components of containers used in the packaging of grade A dairy products shall be periodically inspected by representatives of the department. Such inspection and any bacteriological testing as deemed necessary shall be done to determine the sanitary quality of the single-service articles expected to be in contact with milk and milk products.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67.

**Ag 80.16 Labeling of containers.** All bottles, containers and packages of Grade A milk and Grade A milk products shall be labeled

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or marked with the name of the contents; the grade of contents; the word "pasteurized" if the contents are pasteurized; vitamin and mineral fortification as required in Wis. Adm. Code section Ag 71.04; the percentage by weight of nonfat milk solids added and/or the percentage by weight of lactose added; and the common name of stabilizers, emulsifiers, distillates and other permitted optional ingredients.

**History:** Cr. Register, May, 1970, No. 173, eff. 6-1-70.

**Ag 80.17 Enforcement interpretation.** (1) This chapter shall apply only to persons who are subject to the grade A milk law, section 97.24, Wis. Stats. It shall be enforced in accordance with like provisions in the Grade "A" Pasteurized Milk Ordinance—1965 Recommendations of the United States Public Health Service, U. S. Department of Health, Education, and Welfare.

(2) The inspection of dairy farms and plants, and the examination of milk and milk products, provided for in this chapter will not be performed by the department with respect to milk and milk products which are produced and processed under the inspection of another governmental unit and are entitled to reciprocal recognition as provided in section 97.24 (6) (b), Wis. Stats.

(3) The grade A license or permit issued by the department may be temporarily suspended whenever an imminent health hazard exists or upon violation by the holder of any of the provisions of this regulation, or for interference with the department in the performance of its duties. Upon repeated or serious violations, the department may revoke such permit following reasonable notice to the permit holder and an opportunity for a hearing.

(4) Any licensee or permittee whose license or permit has been suspended may at any time make application for its reinstatement.

(5) Upon receipt of an application for reinstatement based on correction of a violation of any bacteriological or cooling temperature standard, the department shall take 2 samples within one week and reinstatement will be approved upon compliance with such standards; provided, if samples are not available because of suspension of permit to operate, or for other reasons, the department may issue a temporary permit upon satisfying itself by inspection of the facilities and the operating methods that the conditions responsible for the violation have been corrected, with final reinstatement of license or permit conditional upon subsequent bacteriological or temperature findings.

(6) In case the license or permit suspension was due to a violation of an item other than bacteriological standards or cooling temperature, the application for reinstatement must be accompanied by a statement signed by the applicant to the effect that the violated item of the specifications has been conformed with. Within one week of the receipt of such an application and statement, the department shall make a reinspection of the applicant's establishment and thereafter as many additional reinspections as it may deem necessary to assure that the applicant is again complying with the requirements, and, in case the findings justify, the license or permit will be reinstated.

(7) The exemption in subsection 97.24 (2) (c), Wis. Stats., for "incidental sales" of ungraded milk and cream to consumers at farms and dairy plants shall not include any sales which are regularly made in the course of business or are preceded by any advertising thereof, or offer to or solicitation of members of the public, but shall include any sales to employes or to persons shipping milk to the dairy plant.

**Note:** Equipment which conforms to the "3-A Sanitary Standards" published by the International Association of Milk, Food and Environmental Sanitarians, Inc., in the Journal of Milk and Food Technology will meet the requirements of this regulation.

**History:** Cr. Register, August, 1967, No. 140, eff. 9-1-67; renum. from Ag 80.16 to be Ag 80.17, Register, May, 1970, No. 173, eff. 6-1-70; am. (1), (2) and (7), Register, July, 1973, No. 211, eff. 8-1-73.

**Ag 80.18 Retail sale of milk.** (1) All vehicles, coolers, cabinets, storage areas and other facilities used in the retail sale of Grade A milk and milk products shall at all times be maintained in a state of good repair and in a clean and sanitary condition free of objectionable odors, dirt, litter and product residue.

(2) Grade A milk and milk products shall be held at temperatures of 45° F. or less in retail storage areas and display cases. A thermometer, accurate within  $\pm 2^\circ$  F., shall be located in the warmest zone of all units.

(3) Grade A milk and milk products shall be packaged in containers which are not damaged or leaking. All damaged containers or leakers shall be removed from inventory held for sale. All inventory held for sale in storage areas or retail display cases shall be placed on a first-in first-out rotational basis to assure freshness and wholesomeness of product.

(4) All retail establishments other than restaurants licensed and inspected under chapter 160, Wis. Stats., shall be subject to department inspection to assure compliance with this section.

**History:** Cr. Register, March, 1973, No. 207, eff. 4-1-73.