Chapter Ag 80

GRADE A MILK AND MILK PRODUCTS

History: Chapter Ag 80 as it existed on August 31, 1967 was repealed, and a new chapter Ag 80 was created effective September 1, 1967.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. As used in this chapter, unless the context requires otherwise:

(1) "Department" means the state of Wisconsin department of agriculture, trade and consumer protection.

(2) "Bulk milk hauler" means any person who transports bulk milk from a dairy farm to a dairy plant or other processing or distribution locations.

(3) "Bulk milk tank truck" means a vehicle used by a milk hauler to transport bulk raw milk from a dairy farm to a dairy plant, and includes the truck, tank, and those appurtenances necessary for the tank's use.

(4) "Certifying agency" means the state of Wisconsin department of health and social services.

(5) "Cleaned-in-place or C-I-P circuit" means food handling and processing equipment in which pipelines and other product contact surfaces are so designed, constructed and permanently installed as to be cleaned-in-place.

(6) "Dairy farm" means any place or premises where one or more cows or goats are kept for the production of milk for sale.

(7) "Dairy plant" or "grade A dairy plant" means a grade A dairy plant as defined in s. 97.20 (1) (d), Stats.

(8) "Distributor" means a milk distributor as defined in s. 97.22, Stats.

(9) "Milk" or "grade A milk" means milk as defined in s. 97.24 (1) (a), Stats., and includes goats' milk.

(10) "Person" means an individual, partnership, firm, association, corporation or any other business unit or entity.

(11) "Producer" means milk producer as defined under s. 97.24 (1) (c), Stats., and includes any person who owns, controls, oper-

ates or is otherwise responsible for the operation of a dairy farm and sells milk produced on the farm from cows or goats.

(12) "Products", "milk products", or "grade A milk products" means grade A milk products as defined in s. 97.24 (1) (b), Stats., and includes any commodity which has milk or a derivative of milk as a principal constituent or ingredient and which is sold or represented as a grade A milk product.

(13) "Sanitize" means to destroy pathogens or other organisms, insofar as practicable, by the application of a sanitizing substance or process to product contact surfaces of dairy equipment or utensils which are otherwise clean. The sanitizing treatment or process shall not adversely affect the equipment or utensils, or the quality of the milk or milk product coming in contact with the equipment or utensils, and shall be acceptable to the department.

(14) "Ungraded milk" and "ungraded milk products" means milk and milk products other than grade A milk and grade A milk products.

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; r. (5) to (23), Register, July, 1975, No. 235, eff. 8-1-75; r. and recr. (intro.), r. (3), (4), (24), (25), am. (1), renum. (2) to be (4) and am., cr. (2), (3) and (5) to (14), Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.02 Certification. (1) Surveys for the certification of compliance ratings shall be made by the certifying agency at least every 2 years, and on notice or request of the department under sub. (2). Compliance ratings shall be made in accordance with "Methods of Making Sanitation Ratings of Milk Supplies", 1978 edition, published by the U.S. department of health and human services, U.S. public health service, food and drug administration, copies of which are on file at the offices of the department, the secretary of state and the revisor of statutes. Copies may be obtained from the superintendent of documents, U.S. government printing office, Washington, D.C. 20402.

(2) A 90% compliance rating for each dairy plant, its producer dairy farms and other producers of raw milk for pasteurization, and a 90% enforcement rating is required to comply with grade A standards under this chapter. Before issuance of a grade A dairy plant license or farm permit, the department shall determine whether the applicant meets licensing or permit standards or requirements under this chapter. The department shall promptly notify the certifying agency of the issuance of original dairy plant licenses and permits for a group of farms constituting a separate milk supply unit, and request that a survey be made. The department may further request that resurveys be made in connection with enforcement actions taken by the department. Field surveys shall be completed by the certifying agency within 20 working days after receipt of written notice or request from the department.

(3) If a licensee or permit holder rates below 90%, but not below 85% on a compliance survey, the department may continue the license or permit on a probationary basis, subject to notice and right of hearing if requested. If a survey rating is below 85%, the license or permit may be

suspended, revoked or placed on probation after hearing under s. 93.18 and ch. 227, Stats.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.04 Inspection. (1) Before the issuance of an original grade A dairy plant license or farm permit, the department shall inspect the plant or dairy farm to determine compliance with the requirements of this chapter. After the issuance of a license or permit, each dairy farm and transfer station shall be inspected at least once every 6 months. Grade A dairy plants other than transfer stations shall be inspected at least once every 3 months. If a violation of any requirement is found to exist on an inspection a second inspection may be made as necessary, but not before 3 days to determine compliance. Any violation of the same requirement on reinspection shall constitute grounds for the immediate suspension of the license or permit, with right of hearing before the department if requested in writing within 10 days. Hearings, if requested, shall be conducted as expeditiously as possible.

(2) Each bulk milk tank truck and milk hauler's weighing and sampling procedures shall be inspected at least every 12 months by the department to determine compliance with the requirements of this chapter.

(3) Every milk producer, hauler, distributor or dairy plant operator shall, upon the request of the department, permit access to all parts of any establishment or facilities used in the production or distribution of milk and dairy products. Refusal to permit access for inspection and sampling during reasonable hours shall constitute grounds for the summary suspension of the license or permit. Dairy plant operators and distributors shall furnish, upon request, for official use only, true and accurate statements of the actual quantities of milk and milk products purchased and sold, lists of sources of milk and milk products, records of inspections, test results, and recording thermometer charts.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. (1), renum. (2) to be (3) and am., cr. (2), Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.05 Examination of milk and milk products. (1) Dairy plants shall, at least once each month, submit for testing a representative sample of raw milk from each grade A producer to a certified laboratory approved by the department. A standard plate count or plate loop count, antibiotic test, and an abnormal milk screening test shall be conducted by the laboratory on each milk sample. In place of the monthly testing of milk from individual producers for antibiotics, daily laboratory tests for antibiotics may be made on samples of each individual load of milk received at the dairy plant.

(a) Antibiotic tests on milk samples of individual producers may be conducted by any recognized test method. Daily load samples may be tested for antibiotics only by the Sarcina lutea cylinder plate method or other test method approved by the department. If a positive load sample is found, individual producer samples of milk making up the load shall be tested.

(b) Abnormal milk screening tests shall be conducted on samples of milk from each producer by the Wisconsin mastitis test (WMT), direct microscopic somatic cell count (DMSCC), or electronic somatic cell

count (ESCC). If the WMT is used and the test value exceeds 21, a confirmatory test of the same milk sample shall be conducted either by the DMSCC or ESCC test method. If a DMSCC or ESCC test indicates the presence of 1,000,000 or more somatic cells per milliliter, the test results shall be submitted to the producer in writing within 48 hours after completion of the test.

(c) Temperature determinations shall be made and sediment tests conducted by persons designated by the dairy plant. Sediment tests may be conducted on the dairy farm.

(2) During any consecutive 6 month period at least 4 samples of pasteurized milk, 4 samples of raw commingled milk, and 4 samples of each milk product shall be taken by the department from each dairy plant. Samples of pasteurized milk and milk products shall be taken while the pasteurized milk and milk products are in the possession of the dairy plant or distributor, and before final sale or delivery. Samples of pasteurized milk and pasteurized milk products shall be tested for standard plate counts, coliform determinations, phosphatase tests, and antibiotics. Samples of commingled raw milk shall be tested for bacterial counts and antibiotics. Temperature determinations of commingled raw milk, pasteurized milk, and milk products shall be made at the time samples are taken. Other tests may be made as considered necessary by the department.

(3) Samples of milk and milk products from stores, restaurants and other places where milk and milk products are sold shall be examined as often as the department considers necessary. Operators of these business establishments shall furnish to the department, on request, the names of all dairy plants or distributors from whom milk and milk products are obtained.

(4) Bacterial plate counts, coliform determinations, phosphatase tests, antibiotic tests, abnormal milk screening tests, and other laboratory tests shall conform to the procedures in "Standard Methods for the Examination of Dairy Products," 14th Edition (1978), and in "Official Methods of Analysis of the Association of Official Analytical Chemists," 12th Edition (1975), copies of which are on file at the offices of the department, the secretary of state and revisor of statutes. Copies of "Standard Methods for the Examination of Dairy Products" may be obtained from the American Public Health Association, Inc., 1790 Broadway, New York, N.Y. 10019. Copies of "Official Methods of Analysis" may be obtained from the 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 consider necessary for the detection of adulteration.

(5) If 2 of the last 4 consecutive bacteria counts, coliform determinations, cooling temperatures, DMSCC's and ESCC's taken on separate days exceed the limit of the standard for the milk or milk products prescribed in this chapter, the department shall send written notice of this fact to the licensee or permittee. This notice shall continue in effect as long as 2 of the last 4 consecutive samples exceed the limit of the standard. An additional sample shall be taken within 21 but not before 3 days after sending of the notice. Violation of the standard by 3 of the last 5 bacteria counts, coliform determinations, cooling temperatures,

DMSCC's or ESCC's, shall constitute grounds for the immediate suspension of the license or permit.

(6) 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.

(7) Dairy plants, on reasonable notice, shall collect and furnish to the department fresh milk samples of milk received from individual producers. Samples may be requested once every 4 months or more often as the department considers necessary for animal health and milk quality testing and examination. All samples shall be identified with the patron number and date of collection, and shall be kept under refrigeration or ice at a temperature at or below 40° F. until they are transferred to department inspectors.

(8) Butterfat, water and milk quality tests shall be conducted only in laboratories approved by the department. All laboratories certified by the state of Wisconsin department of health and social services under s. 143.15, Stats., to conduct milk quality tests shall be approved by the department. Laboratories engaged in butterfat testing shall be approved only if equipped and staffed to conduct accurate butterfat tests as prescribed under ch. Ag 107, Wis. Adm. Code. Laboratories with equipment in compliance with ch. Ag 107 meet the requirements of this section. After notice and opportunity for hearing the department may withdraw approval of any laboratory, whether or not certified under s. 143.15, Stats., if tests are not conducted in accordance with prescribed laboratory test procedures, or test reports or results are false or inaccurate.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. (2) Register, December, 1971, No. 192, eff. 1-1-72; r. and recr. (1), renum. (2) to (4) to be (4) to (6) and am. (4) and (5), cr. (2), (3), (7) and (8), Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.06 Milk standards. (1) Milk shall be produced on dairy farms complying with the standards in s. Ag 80.07, Wis. Adm. Code. The bacterial plate count of milk received from individual producers shall not exceed 100,000 per milliliter. At no time before pasteurization shall milk or milk products exceed 300,000 per milliliter. Antibiotic tests shall show no detectable zone of inhibition of test organisms. The somatic cell count of milk received from the farm shall not exceed 1,000,000 cells per milliliter. Grade A raw milk for pasteurization shall be cooled to 45° F. (7° C.) or less within 2 hours after milking. The blend temperature during the second and subsequent milkings shall not exceed 50° F. (10° C.).

(2) Grade A pasteurized milk and milk products shall be pasteurized, cooled and placed in final containers in a dairy plant complying with the standards in s. Ag 80.08, Wis. Adm. Code. 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. No antibiotic or inhibitory substance shall be present in pasteurized milk and milk products. Grade A pasteurized milk and milk products shall be cooled to 45° F. (7° C.) or less and maintained below 45° F. after pasteurization.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. (1) and (2), Register, November, 1980, No. 299, eff. 12-1-80.

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) Bloody, stringy, off-colored milk, or milk that is abnormal to sight or odor, or abnormal in any other respect shall be discarded or disposed of in a sanitary manner to prevent the infection of other cows and the contamination of milk utensils and equipment.

(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) Equipment, utensils and containers used for the handling of abnormal milk shall not be used for the handling of milk to be sold or offered for sale unless they are first cleaned and effectively sanitized.

(e) Milk from a herd infected with mastitis and found to be insanitary and adulterated as provided under s. Ag 10.35 (3), Wis. Adm. Code, is abnormal milk, and shall be discarded or disposed of in a sanitary manner as provided under par. (b).

(2) MILKING BARN, STABLE, OR PARLOR — CONSTRUCTION. (a) A milking barn, stable or parlor in which the milking herd shall be housed during milking time operations shall be provided on all dairy farms.

(b) Floors and gutters shall be constructed of concrete or equally impervious and easily cleanable material, graded to drain properly, and kept in good repair. Floors constructed after January 1, 1979 shall be sloped to a minimum of one inch per 10 feet to ensure reasonable drainage.

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

(d) If horses, dry cows, calves, or bulls are stabled in the milking barn or stable they shall be confined in separate stalls, stanchions or pens.

(e) Adequate natural or artificial light, or both, well distributed, shall be provided for day or night milking. Lighting shall be equivalent to at least 10 foot candles in all working areas in which milking is done.

(f) Dust-tight covered boxes or bins, or separate storage facilities for ground, chopped, or concentrated feed are required. Feed may be stored in the milking portion of the barn only in a manner that does not increase the dust content of the air, attract flies or interfere with the cleaning of the floor. Open feed dollies or carts may be used for distributing, but not the storage of feed in the milking barn.

(g) Airspace and air circulation shall be sufficient to prevent condensation and excessive odors.

(h) Areas used for milking purposes shall not be overcrowded. The presence of calves, cows or other barnyard animals in the walks or feed alleys is evidence of overcrowding.

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

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

(c) No leftover feed which is wet or soggy shall be permitted in feed mangers.

(d) Bedding material, if used, shall not contain more manure than has accumulated since the previous milking.

(4) COW OR GOAT YARD. (a) The cow or goat yard shall be graded and drained, and have no standing pools of water or accumulations of manure or feed wastes.

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

(c) Swine and sheep shall be kept out of the cow or goat yard.

(d) Manure shall be removed and stored or disposed of in a manner which will prevent the breeding of flies. No milking animals shall have access to manure piles or manure storage areas.

(e) Stationary type feeders shall be provided with a platform on all sides of the feeder from which cows or goats feed. Platforms shall be constructed of impervious material and extend at least 12 feet from the feeder except for those sides of a feeder where the intervening space between the feeder and a building or permanent structure may be insufficient to allow for a 12-foot platform, in which event the width of the platform may be limited to the space available. Platforms of impervious material installed prior to January 1, 1979 and extending a minimum of 8 feet from the feeder, except for those sides which may be closer than 8 feet to a building or permanent structure, shall be considered as being in compliance with the requirements of this paragraph.

(f) Stock watering devices and portable type feeders shall be located in an area which will provide good drainage and reasonably firm footing for animals using these facilities.

(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.* The milkhouse or room shall be provided with a smooth floor constructed of concrete or equally impervious material, graded for proper drainage through a floor drain, and maintained in good repair. All floor drains shall be accessible and trapped if connected to a sanitary sewer system.

(c) *Walls and ceilings.* 1.Walls and ceilings shall be constructed of smooth, readily cleanable material, be well painted or finished with an easily washable surface, and be kept clean and in good repair.

2. A bulk tank hose port shall be located in an outside wall of the milkhouse or room at least 6 inches above the floor. The port shall be equipped with a tight-fitting door which shall be kept closed except when the hose port is in use. The entire assembly shall be kept clean and in good repair.

(d) *Lighting and ventilation.* 1. The milkhouse or room shall have adequate natural or artificial light for day or nighttime operations, equivalent to a minimum of 20 foot candles of light in all working areas. Protective shields shall be provided for all artificial light fixtures located over bulk tank openings to protect milk from contamination from broken glass.

2. Sufficient ventilation shall be provided to prevent condensation and excessive odors. Vents, if installed, shall be located and maintained to preclude the contamination of bulk milk tanks or clean utensil storage areas.

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

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

2. It shall not open directly into a stable used for the housing of nonmilking animals or any room used for domestic purposes. Any direct opening between a milkhouse or room and a milking barn, stable or parlor shall be equipped with a tight-fitting, self-closing, solid door.

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

4. Easily cleanable ground surfacing material shall be provided under the hose port, adjacent to the outside wall, covering an area sufficient to protect the milk hose from contamination.

5. A suitable enclosed shelter shall be provided for a bulk transport truck when used for cooling and storing milk. The shelter shall be adjacent to, but not a part of the milkhouse or room, and shall comply with all standards and requirements applicable to a milkhouse or room.

(f) *Cleaning facilities.* 1. The milkhouse or room shall be equipped with a two-compartment wash and rinse vat so located as to prevent the contamination of milk or of cleaned equipment during cleaning operations. A cleaning-in-place vat for milk pipelines and milking machines may be accepted as one part of the two-compartment wash and rinse vat, if the cleaning-in-place inflation rack in or on the vat, and the milking machine inflations and appurtenances are completely removed from the vat during the washing, rinsing and sanitizing of other utensils and equipment.

2. Hot water heaters or hot water supply systems for use in the milkhouse or room shall have a capacity of at least 30 gallons for the manual washing of bulk tanks, 50 gallons for the mechanical washing of bulk tanks, or 75 gallons for the cleaning of C-I-P pipeline systems.

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

(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 milkhouse or milk room activities shall be permitted in the milkhouse or milk room. Animals and fowl shall be excluded.

(c) Pesticides other than those approved for use in the milkhouse or room shall not be stored in the milkhouse or room.

(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.

(c) Toilets in the residence, other farm buildings or otherwise conveniently located shall meet the requirements of par. (a).

(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) Dairy plant operators shall biennially sample water used by each producer for milkhouse and milking operations and have it analyzed at a certified laboratory approved by the department for making water quality tests. A copy of the current laboratory analysis for each producer shall be maintained by the plant operator for inspection by the department. The dairy plant operator shall promptly notify the department of any test result showing an unsafe water supply.

(e) All wells shall be constructed, located, and operated in accordance with ch. NR 112, Wis. Adm. Code.

(f) All containers and tanks used in the transportation of water to a dairy farm shall be sealed and protected from possible contamination. The containers and tanks shall be subjected to thorough cleaning and bacteriological treatment prior to filling with potable water for use at the dairy farm. To minimize the possibility of contamination of the water during its transfer from portable tanks to storage tanks at the dairy farm, a suitable pump, hose and fittings shall be provided. Water hauled to a dairy farm shall be sampled at the point of use at least once each month by the dairy plant for bacteriological examination at an approved certified laboratory.

(9) UTENSILS AND EQUIPMENT; CONSTRUCTION. (a) All multiuse containers, equipment and utensils used in the handling, storage or transportation of milk shall be made of smooth, nonabsorbent, noncorrodable, nontoxic 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 a hooded type. All milk and milk handling equipment shall comply with the requirements of sub. (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 and installed in compliance with sub. (22).

(10) UTENSILS AND EQUIPMENT — CLEANING. The product-contact surfaces of all multiuse 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 multiuse 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.

(c) Milker claws, inflations, weigh jars, milk hoses, receivers, takeoff units, milk pumps, and milk meters designed for mechanical cleaning and sanitizing may be stored in the milking parlor.

(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 of flanks and udders shall be completed before milking begins.

(b) The flanks, udders, bellies and tails of milking cows and goats shall be free from visible dirt at the time of milking and be clipped as often as necessary to facilitate the cleaning of these areas. The hair on udders shall be of such length that it is not incorporated with the teat in the inflation during milking.

(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.

(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.

(c) Equipment shall be so located and operations so conducted within the milking barn, stable or parlor, and the milkhouse or room, as to prevent overcrowding and contamination of cleaned and sanitized containers, equipment and utensils.

(d) While cows or goats are being milked, pipelines and equipment used to contain or conduct milk and milk products shall be effectively separated from tanks and circuits containing cleaning and sanitizing solutions. All product contact surfaces of containers, equipment and utensils shall be covered or otherwise protected to prevent the access of insects, dust, condensation and other contamination. All openings, including valves and piping attached to milk storage and transport tanks, pumps and vats, shall be capped or otherwise adequately protected at all times.

(e) Whenever air under pressure is used for the agitation or movement of milk, or directed at milk contact surfaces, it shall be free from odor, oil, dust, rust, excessive moisture, and extraneous material.

(f) Antibiotics and medicinals shall be stored in a manner which will prevent contamination of milk or milk product contact surfaces of equipment, containers or utensils.

(17) PERSONNEL; HANDWASHING FACILITIES. A handwashing sink or lavatory fixture with running water, soap or detergent, and individual sanitary towels, shall be provided in the milkhouse or room, and in or convenient to the milking barn, stable, parlor, or toilet. A removable basin held by a support ring at least 30 inches above the floor, and installed beneath a water faucet shall meet the requirement of this subsection.

(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. (a) Milk shall be cooled to 45° F. (7° C.) or less within 2 hours after milking. The blend temperature during the second and subsequent milkings shall not exceed 50° F. (10° C.).

(b) Recirculated cold water which is used in plate or tubular coolers or heat exchangers shall be from a safe source and protected from contamination. The water shall be tested semiannually by a certified laboratory approved by the department, and comply with a bacteriological MPN (most probable number) standard of less than 2.2 MPN coliform organisms per 100 milliliters when tested by the multiple tube fermentation technique, or less than one MPN coliform organism per 100 milliliters when tested by the membrane filter technique.

(20) VEHICLES. (a) Vehicles used to transport milk from the dairy farm 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.

(c) No substance capable of contaminating milk shall be transported on the same vehicle used for the transportation of 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 insecticides and rodenticides approved for use by, and registered with, the department or the U.S. environmental protection agency shall be used for insect and rodent control.

(f) Insecticides and rodenticides shall be used only in accordance with the manufacturer's label directions and in a manner which will prevent the contamination of milk, milk containers, equipment, utensils, feed and water.

(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 SYSTEMS. (a) All milking and milk handling systems and equipment installed, reconstructed or extensively altered for use in the milking of cows and goats and the transfer of milk to containers, in 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 heat resistant glass, stainless steel of the American Iron and Steel Institute 300 series, or equally corrosion resistant material which is nontoxic and nonabsorbent. Plastic or rubberlike materials may be used for gaskets, sealing applications, or connections if they are nontoxic, fat resistant, relatively inert and nonabsorbent, and resistant to scratching, scoring, decomposition, crazing, chipping and distortion under normal conditions of use; do not impart flavor or odor to the products; and maintain their original properties under repeated conditions of use. Paper gaskets shall not be used.

2. All joints of permanently mounted pipelines, including solution lines, shall be welded or equipped with C-I-P (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 at least every 10 feet 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 pipelines.

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 s. 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.

(c) No manufacturer or distributor of milking or milk handling equipment shall sell, or distribute for sale in this state, any newly designed or redesigned milking or milk handling equipment without first submitting the equipment, or design drawings, plans and specifications for the equipment to the department for review and approval. The department shall, within 30 days of submission, approve or disapprove the equipment, or establish criteria for the field testing of the equipment, if considered necessary by the department, before final approval.

(23) FARM BULK TANKS. (a) Bulk tanks used for the holding and cooling of milk shall be installed in the milkhouse or room. All tank openings for bulk tanks installed in part through the wall shall be in the milkhouse. A clearance of 24 inches shall be maintained on the milk outlet side of the tank and at least 18 inches on all other sides of the tank except for that portion extending through the wall. A clearance of at least 6 inches for flat-bottom tanks and 4 inches for round-bottom tanks

shall be maintained at the bottom of the tank. The tank shall not be located over the floor drain or under a ventilator.

(b) Bulk tanks shall be self-draining. All lining and product contact surfaces shall be made of stainless steel or other material that is smooth, nontoxic, relatively stable and nonabsorbent, corrosion resistant, and capable of withstanding cleaning and bactericidal treatment. Milk contact surfaces shall be visible and easily accessible. Openings shall be equipped with self-draining covers. Openings and covers shall be constructed and installed so as to prevent drainage into the milk compartment. Each tank shall be equipped with an accurate indicating thermometer with a minimum range of 32° F. to 80° F., and a mechanical agitator which will ensure homogeneity of the milk within 5 minutes of operation. Bulk tanks with a capacity of 1500 gallons or more shall be equipped with an agitator which will ensure homogeneity of the milk within 10 minutes of operation.

(c) Tanks shall be capable of cooling milk from the first milking placed in the tank to 50° F. within one hour after it is placed in the tank, and of preventing the blend temperature from rising above 50° F. if milk from subsequent milkings is added to the tank.

(24) NOTICE PROHIBITING SALE OR DELIVERY OF MILK. (a) Whenever the department determines, as a result of a farm inspection or milk quality test, that milk of a producer is produced under insanitary conditions or that the milk is insanitary or adulterated, it may by notice in writing summarily prohibit the further sale of milk from the dairy farm as grade A or manufacturing grade milk for use as food for humans or the processing or manufacturing of food for humans. A copy of the notice shall be submitted to the dairy plant receiving the milk. No producer, upon receipt of the notice, shall continue to sell or deliver milk to any dairy plant until insanitary conditions have been corrected and the milk is of acceptable quality as determined by the department or the dairy plant receiving the milk, as provided in this section.

(b) Upon receipt of the notice, the dairy plant shall reject all further shipments of milk from the producer until all conditions described in the notice have been corrected and the milk is determined to be of acceptable sanitary quality. On the request of the producer, it shall be the duty of the plant operator to conduct an immediate inspection of the farm premises to determine whether all conditions described in the notice have been corrected.

(c) If the sale of the milk is prohibited solely because of insanitary farm conditions, and it is determined on reinspection by the plant that all farm conditions as described in the notice have been corrected, the dairy plant may receive and the producer may ship milk produced after reinspection is made, as manufacturing grade milk. If the sale of milk is prohibited because of insanitary quality, the milk may not be shipped or received as manufacturing grade milk until milk quality retests have been made and the milk is determined by the plant to be of acceptable sanitary quality for use as manufacturing grade milk. Copies of all farm inspection reports or tests conducted by the dairy plant under this section shall be submitted to the department immediately upon completion of the farm inspection or tests. The dairy plant operator shall notify the department in writing of the acceptance of the producer's milk as manufacturing grade milk on the same day the milk is accepted. The depart-

ment shall conduct a farm inspection within 5 days after receipt of notice from the dairy plant that conditions have been corrected and that the milk has been accepted.

(d) Farm grade A permits for the sale of milk as grade A milk may be reinstated only by the department on written application of the producer. No milk may be received by dairy plants as grade A milk or for use as grade A milk until the grade A permit has been reinstated by the department.

(e) Any producer affected by notice under this section may, within 10 days, make a written request for hearing before the department. The hearing, if requested, shall be conducted as expeditiously as possible and not more than 20 days after receipt of the request.

(25) IDENTIFICATION OF ADULTERATED OR INSANITARY MILK. Whenever it is determined by the department that milk is adulterated or of insanitary quality, within the meaning of ss. 97.50 and 97.52, Stats., it shall summarily reject the milk by tagging the milk container and adding a harmless food grade color to the milk to prevent its sale or use for human food purposes. The plant operator shall identify and reject milk which it finds to be adulterated or insanitary by tagging the container of the milk.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; cr. (8) (d); renum. (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); renum. (17) to be (22), renum. (18) to (22) to be (17) to (21), Register, July, 1973, No. 211, eff. 8-1-73; am. (1) (b) and (e), (2) (a), (3) (a) and (b), (4) (a) to (d), (5) (c) 1, (5) (d) 1 and 2, (5) (e) 1 and 2, (5) (f) 1 and 3, (6) (b) and (c), (9) (a) and (e), (14) (a) and (b), (15) (b), (17), (20) (c), (22) (a) intro. and 1, r. (5) (b) 2 and 3, r. and recr. (1) (d), (5) (c) 2, (5) (f) 2, (8) (d), (19) and (21) (e) and (f), renum. (2) (b) to (f) to be (c) to (g), (5) (b) 1 to be (5) (b), cr. (2) (b) and (h), (3) (c) and (d), (4) (e) and (f), (5) (e) 4 and 5, (7) (c), (8) (e) and (f), (12) (c), (16) (c) to (f), (22) (c) and (23) to (25), Register, November, 1980, No. 299, eff. 12-1-80.

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 containers, equipment, and utensils are washed, shall be constructed of concrete or other equally impervious and easily cleaned material and shall be smooth, sufficiently sloped for adequate drainage, 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. The doors shall be self-closing. All doors and windows shall be kept closed during dusty weather. Screen doors, if used, shall open outward and be self-closing. All outer openings shall be rodent-proofed as necessary to prevent entry of rodents.

(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 with at least 30 foot-candles of light intensity on all working surfaces. Dry storage and cold storage rooms shall be provided with at least 5 foot-candles of light measured at the floor.

(b) All rooms shall be well ventilated to preclude odors and excessive condensation on equipment, walls and ceilings.

(c) Light bulbs, fluorescent tubes, fixtures, skylights, or other glass suspended over products shall be shielded or protected to prevent contamination of products from broken glass.

(5) SEPARATE ROOMS. (a) There shall be a separate room for the pasteurizing, processing, cooling, and packaging of milk and milk products, and a separate room for the cleaning of milk cans, bottles and cases. Rooms shall be of adequate size for their intended purposes. Cans of raw milk shall not be unloaded directly into a pasteurizing room.

(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) All bulk milk storage tanks shall be vented into a room used for pasteurization, processing, cooling or packaging operations, or into a storage tank gallery room. Tanks may not be vented elsewhere, unless adequately equipped with air filters to preclude the contamination of milk.

(d) Facilities for the cleaning and sanitizing of milk tank trucks shall be equipped for manual or mechanical operation, or both. The facilities shall comply with subs. (1) to (4), (6) to (12), (14), (15), (20) and (22).

(e) Grade A dairy plants and receiving stations shall maintain a bulk unloading room in which milk shall be unloaded. The bulk milk unloading room shall be separate from milk storage facilities in all plants constructed or reconstructed after July 1, 1980.

(6) TOILET FACILITIES. (a) Every dairy plant shall be equipped with sanitary toilet facilities conforming to the rules of the department of health and social services. The toilet room shall be conveniently located and equipped with handwashing facilities with hot and cold running water, soap, and single service towels or air drying equipment.

(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 the language of s. Ag 80.13, Wis. Adm. Code, 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 and good repair. The rooms shall be well ventilated and well lighted. A dressing room, if provided, where employes may change and store clothing, shall be separate from processing, packaging, or storage rooms.

(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 located, protected, and operated in a manner which will prevent contamination of the water by microorganisms or foreign material. It shall be easily accessible, adequate in quantity and of safe and sanitary quality.

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

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

(d) Water reclaimed from milk or milk products may be reused for cleaning purposes if collected and stored in a sanitary manner.

(e) The location, construction and operation of any well shall comply with the Wisconsin well code, ch. NR 112, Wis. Adm. Code. Individual water supplies shall be sampled for bacteriological testing every 6 months, and when any major repair or alteration of the water supply system has been made. Bacteriological testing shall be conducted in a laboratory approved by the department. Test results shall be promptly filed with the department.

(8) HANDWASHING FACILITIES. (a) Convenient handwashing facilities shall be provided, including hot and cold or warm running water, soap, and sanitary towels. Handwashing facilities shall be kept clean. The use of a common towel is prohibited. Employes shall not resume work after using the toilet room without first washing their hands. No steam-water mixing valves and vats for washing bottles, cans, and similar equipment shall be used as handwashing facilities.

(b) Self-closing metal or plastic waste containers shall be provided for used towels and other wastes.

(9) MILK PLANT CLEANLINESS. (a) 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.

(b) No trash or solid waste shall be stored within the plant except in covered containers. Waste containers at the packaging machine or bottle washer may be uncovered during packaging or bottle washing operations.

(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, nontoxic, easily cleanable ma-

terial. All piping shall be in good repair and shall be accessible for inspection.

(b) Sanitary piping, fittings, valves, and connections including all interior surfaces of demountable piping, shall be designed, constructed, and installed to permit easy cleaning, inspection and drainage. Pipelines shall be free of breaks or corrosion and contain no dead ends in which milk may collect. Where rigid pipelines are not practical, flexible pipelines of approved plastic or other sanitary materials may be used for the transfer of partially processed products during intermediate stages of production in the manufacture of cheese, and for the loading and unloading of bulk tank trucks, provided the flexible pipeline does not exceed 25 feet in length. Not more than 48 inches of approved flexible pipeline may be used between different pieces of equipment to eliminate vibration.

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

(d) All sanitary piping, connections and fittings shall be constructed of stainless steel of the American Iron and Steel Institute 300 series, or equally corrosion resistant material which is nontoxic and nonabsorbent. Plastic or rubberlike materials may be used for gaskets, sealing applications, or connections if they are nontoxic, fat resistant, relatively inert and nonabsorbent, and resistant to scratching, scoring, decomposition, crazing, chipping and distortion under normal conditions of use; do not impart flavor or odor to the products; and maintain their original properties under repeated conditions of use.

(e) All cleaned-in-place milk pipeline and return solution lines shall be rigid, self-draining and supported to maintain uniform slope and alignment. Pipelines shall have a minimum slope of 1 inch to 10 feet and shall be supported at least every 12 feet. Return solution lines shall be constructed of material meeting specifications of par. (d). If gaskets are used, they shall be self-positioning, made from material meeting specifications of par. (d), and be so designed, finished and applied as to form a smooth, flush interior surface. If gaskets are not used, all fittings shall have self-positioning faces designed to form a smooth, flush interior surface. All interior surfaces of welded joints in pipelines shall be smooth and free of pits, cracks or inclusions. All welded lines shall be inspected and approved by the department.

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

(b) All milk contact surfaces of multiuse containers and equipment shall be constructed of stainless steel of the American Iron and Steel Institute 300 series, or equally corrosion resistant metal which is nontoxic and nonabsorbent; or plastic or rubberlike materials meeting standards as provided under s. Ag 80.08 (10) (b), Wis. Adm. Code.

(c) All single-service containers, closures, gaskets, and other articles with which milk or milk products come in contact shall be nontoxic and shall have been manufactured, packaged, transported, and handled in a

sanitary manner. Articles intended for single-service use shall not be reused.

(d) All openings in covers of tanks, vats and separators shall be protected by raised edges, or in a manner which will otherwise prevent the entrance of surface drainage. Condensation-diverting aprons shall be provided as close to the tank or equipment as possible on all pipes, thermometers, temperature-sensing elements and other equipment extending into a tank, bowl, vat or distributor, unless a water-tight joint is provided.

(e) All surfaces with which milk or milk products come in contact shall be self-draining and easily accessible or demountable for manual cleaning.

(f) No V-threads shall be used in contact with milk or milk products except where needed for functional and safety reasons. The threads shall be of a sanitary type.

(g) All multiuse containers and other equipment shall have rounded corners, and be free from breaks, crevices and corrosion. Milk dispenser cans shall have umbrella-type covers.

(h) Strainers for the production of certain milk products such as buttermilk, whey and dried milk products, may be constructed of woven material where it is impractical to use perforated metal strainers. Parts made of woven materials shall be mechanically cleaned by methods that thoroughly clean the woven material and do not contaminate the product.

(i) Manufacturers or distributors shall, before sale or distribution of any newly designed or redesigned multiuse plastic container for retail sale of milk or milk products in this state, submit a prototype of the container and its manufacturing specifications to the department for approval. The department may prohibit the sale or distribution of any multiuse plastic containers which are not determined to be safe or suitable for their intended use.

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

(b) Records shall be maintained of all cleaned-in-place circuits and circuits used as an aid to cleaning, including the cleaning of storage tanks. The records shall identify the circuits which have been cleaned or sanitized, and show the date and time they were cleaned and sanitized, the temperature of the cleaning or sanitizing solution, and the length of time the circuit was exposed to each cleaning and sanitizing solution. The records shall be signed or initialed by the operator and be retained for not less than 90 days.

(c) A temperature recording device which accurately records temperatures on a temperature recording chart shall be installed in the solution return line of all C-I-P circuits.

(d) Storage tanks shall be cleaned when emptied, and be emptied at least every 72 hours. Storage tanks used to store raw milk for longer than 24 hours shall be equipped with a 7-day temperature recording device.

(e) Each milk truck shall be cleaned and washed after each use and sanitized prior to reuse, and shall bear a tag showing the date and time of cleaning, washing and sanitizing, the name and location of the plant where it was done, and the signature of the employe or bulk milk hauler who cleaned, washed and sanitized the tank truck. The tag shall be attached to the outlet valve and may not be removed until the tank is again washed and sanitized. The tag or other record of each washing and sanitizing shall be kept by the plant where the washing and sanitizing was done for a period of 90 days.

(f) Plants in which multiuse containers, utensils and equipment are washed manually shall be equipped with a two-compartment wash and rinse vat for this purpose. If sanitizing is done with steam, the plant shall also be equipped with a steam cabinet or individual steam-jet plate with hood. If sanitizing is done with chemicals, a third treatment vat shall be provided for immersion of the containers, utensils, and equipment in the chemical sanitizing solution.

(g) Bottles cleaned in automatic bottle washers shall be sanitized while in the washer by means of steam, hot water, or chemical treatment. For soaker-type bottle washers, in which the effectiveness of bactericidal treatment depends upon the causticity, temperature, and soaking time of the bottles in the washing solution, the combinations of caustic strength, expressed in terms of percent concentration of sodium hydroxide (NaOH), soaking time, and temperature which may be used to achieve effective bactericidal action, shall be as specified in the following table:

		Temperature, degrees						
Time in minutes	F	170	160	150	140	130	120	110
	C	77	71	66	60	54	49	43
		Concentration of NaOH, percent						
3		0.57	0.86	1.28	1.91	2.86	4.27	6.39
5		0.43	0.64	0.96	1.43	2.16	3.22	4.80
7		0.36	0.53	0.80	1.19	1.78	2.66	3.98

(h) The residual bacterial count of single-service containers and cleaned and sanitized multiuse containers used for packaging pasteurized milk and milk products, shall not exceed one organism per milliliter of capacity, when the rinse test is used, nor more than 50 colonies per 8 square inches of product contact surface when the swab test is used, in 3 out of 4 samples taken and tested on a given date. All multiuse and single-service containers shall be free of coliform organisms.

(i) Plants using multiuse plastic containers for the packaging and sale of milk and milk products shall install a device in the filling line capable of detecting in each container before it is filled, volatile organic contami-

nants which may adversely affect the purity, quality, and wholesomeness of milk or milk products. The device shall be constructed so that it can be sealed by the department to prevent the changing of its sensitivity functioning level. The device shall automatically reject and make unusable any container which exceeds the sensitivity functioning level of the device, so as to prevent the further use or filling of the container with milk or milk products. The device shall be interconnected so that the system will not operate unless the detecting device is in proper operating condition. The dairy plant shall use a test solution standard consisting of 0.5 ppm petroleum distillate, or other standard approved by the department, for daily testing of the device to ensure that it is functioning at the proper detection level.

(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 shall be conducted and equipment so located within the plant to prevent overcrowding and contamination of milk and milk products, ingredients, equipment and utensils and cleaned and sanitized containers.

(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.

(d) Newly installed processing equipment shall be located at least 24 inches from any wall or any other piece of equipment more than 48 inches long. This does not apply to storage or silo tanks where the face of the tank extends through a wall into a processing room.

(e) During processing, pipelines and equipment containing or used to conduct milk and milk products shall be effectively separated from tanks or circuits containing cleaning or sanitizing solutions.

(f) Milk and milk products drained from processing equipment at the end of a run, or collected from a packaging defoamer system which does not continuously return the collected product to the filler bowl, may be salvaged for sale if the milk or milk products are collected and handled in a sanitary manner, held at a temperature of 45° F. or less, and repasteurized.

(g) All openings, including valves and piping attached to milk storage and milk tank trucks, pumps or vats shall be capped or otherwise protected to prevent contamination. During inside unloading at a receiving or transfer station or pasteurization plant, a suitable filter shall be used to cover the manhole opening unless the dust cover and the manhole cover are opened slightly and held in this position by the metal clamps used to close the covers.

(h) If air under pressure is used for the agitation or movement of milk, or is directed at a milk contact surface, the air shall be free of oil, dust, rust, excessive moisture, extraneous materials and odor. The use of steam containing a toxic substance is prohibited. If steam is used in contact with milk or milk products, it shall be of culinary quality. Steam and air under pressure shall originate from systems approved by the department.

(i) Standardization shall be completed before the pasteurization process is begun, but this does not preclude the standardization of pasteurized milk and milk products if protected against contamination. In no case shall pasteurized milk or milk products be standardized with unpasteurized milk unless the standardized product is subsequently repasteurized. Reconstituted or recombined milk and milk products shall be pasteurized after reconstitution or recombining of all ingredients.

(j) No poisonous or toxic materials, insecticides, rodenticides, sanitizers, caustic compounds and medicinal agents may be present in a dairy plant except as necessary for dairy plant maintenance and operations. These products and materials shall not be stored in any room where milk or milk products are received, processed, or stored, or where equipment, containers or utensils are washed or stored, or single-service containers, closures or caps are stored.

(k) Only insecticides and rodenticides approved for use by and registered with the department or the U.S. environmental protection agency shall be used for insect and rodent control. Insecticides and rodenticides may be used only in accordance with the manufacturer's label directions and in a manner which will prevent the contamination of milk and milk products, milk containers and closures, equipment or utensils.

(16) PASTEURIZATION. (a) All pasteurization equipment shall meet standards and requirements for the equipment as provided under s. Ag 31.06 (3), Wis. Adm. Code. The equipment shall be operated in a manner which will ensure that all products, during the pasteurization process, meet the criteria set forth in s. Ag 71.01 (5) or (6), Wis. Adm. Code.

(b) Grade A dairy plant operators shall maintain records of pasteurization of all milk or dairy products processed by them in the past 6 months. Records shall consist of recording charts, or records accurately showing the date of pasteurization, the time and temperature at which pasteurized, and the signature of the operator of the pasteurization equipment. The records shall include a record of a daily check of the recording thermometer for accuracy, the date on which the check was made, and the name of the person who checked the thermometer.

(17) COOLING OF MILK. (a) All raw milk and milk products shall be maintained at a temperature of 45° F. or less until processed.

(b) All pasteurized milk and milk products except those to be cultured, shall be cooled in approved equipment immediately after pasteurization 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.

(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 of safe bacteriological quality and protected from contamination. It shall be tested every 6 months by a laboratory approved by the department. Freezing point depressants, if used in recirculating systems, shall be nontoxic.

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

(b) Packaging shall be performed in a sanitary manner with approved mechanical equipment.

(c) A drip deflector shall be installed on each filler valve. The drip deflector shall be designed and adjusted to divert condensation away from the open container.

(d) Container infeed conveyors to bottling or packaging machines shall have overhead shields to protect the bottles or packages from contamination. The shields shall extend from the bottle washer discharge or, where single-service containers are used, from the beginning of the conveyor to the bottle feed star on the filler.

(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 for grade A milk and milk products shall protect the pouring lip or opening rim of the container to at least its largest diameter. Single-service containers shall be so constructed that the product, the pouring lip, and the opening rim and area are protected from contamination during handling, storage and the initial opening of the container.

(d) The cap or closure for fluid milk product containers shall be designed and constructed so that the container cannot initially be opened without breaking the cap or closure seal, or leaving other readily apparent evidence of the fact that the container has been opened.

(e) The contents of bottles and containers which have been imperfectly capped or closed shall be emptied into a sanitary container. The milk and milk products shall be repasteurized before repackaging, or be discarded.

(20) PERSONNEL; CLEANLINESS. (a) Dairy plant employes shall thoroughly wash their hands before beginning work and as often as necessary to remove soil and contamination. No employes shall resume work after visiting the toilet room without thoroughly washing their 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, pasteurization, handling, or storage of milk or milk products is prohibited.

(d) All persons shall wear clean head coverings while engaged in the processing, pasteurization, handling, and storage of milk or milk prod-

ucts, containers, equipment or utensils. Persons having a beard or sideburns shall also wear hair restraints for the beard or sideburns.

(21) VEHICLES. (a) All vehicles used for the transportation of pasteurized milk and milk products shall have fully enclosed bodies with well-fitted solid doors and be provided with sufficient refrigeration to maintain the temperature of the milk and milk products at 45° F. or less while on the transportation vehicle. The vehicle shall be kept clean and operated so that the milk or milk products are maintained at 45° F. or less, and are protected from the sun, freezing, and from other contamination.

(b) No contaminating substances are to be transported in a vehicle used for the transportation of pasteurized 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 bulk milk tank trucks shall be inside the transfer station during the time milk is transferred from one tank truck to another.

(24) INSTALLATION, CLEANING AND CONSTRUCTION OF C-I-P SYSTEMS AND PIPELINE CIRCUITS. The construction and installation of C-I-P systems and pipeline circuits shall conform to the requirements of s. Ag 31.06 (4) (b) through (i) and (5) (b) through (j), Wis. Adm. Code. Cleaning and sanitizing procedures shall be as prescribed in s. Ag 31.07 (2), Wis. Adm. Code.

(25) GRADE A DAIRY PLANT RECORDS. In addition to other records required to be kept under this chapter, every dairy plant operator shall keep for at least one year, records of each producer showing the results of farm inspections, all milk quality tests conducted by the plant, and the date and quantity of any insanitary or adulterated milk rejected by the plant.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; cr. (23), (24), Register, December, 1971, No. 192, eff. 1-1-72; am. (1) (intro.), (3) (b), (4), (5) (a), (6) (a) and (c), (7) (a), (8), (10) (b), (12) (a), (15) (a), (16) (a), (17) (a) (b) and (d), (18) (b), (19) (c), (20) (a) and (c), (21) (a) and (b) and (23), r. and recr. (5) (c), (7) (d), (11) (b), (12) (b) and (c) and (24), renum. (9) to be (9) (a) and am., cr. (4) (c), (5) (d) and (e), (7) (e), (9) (b), (10) (d) and (e), (11) (d) to (i), (12) (d) to (i), (15) (d) to (k), (16) (b), (18) (c) and (d), (19) (d) and (e), (20) (d) and (25), Register, November, 1980, No. 299, eff. 12-1-80.

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

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.10 Facilities for ungraded products. (1) No grade A dairy plant shall receive any milk or milk products in or through equipment with which ungraded milk or milk products have been in contact unless the equipment has been first effectively cleaned and sanitized, and a record of the cleaning and sanitizing has been made as required under s. Ag 80.08 (12) (b), Wis. Adm. code.

(2) No grade A dairy plant shall process ungraded milk or milk products other than ice cream mixes or ice milk mixes received for processing as frozen desserts without written permission from the department. Where permission is granted for the processing of ungraded milk or milk products, the following separate facilities and equipment shall be maintained and identified as required under sub. (4):

(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 before processing shall be separately tagged to show the name and grade of the product and the date it was received.

(4) All bulk unloading rooms having 2 or more unloading pumps and pipelines used for the receipt of both grade A and ungraded milk and milk products shall have the unloading pumps and pipelines clearly labeled in a permanent fashion to show which are separately to be used for grade A or ungraded products.

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; am. (2) (intro.), (3) and (4), Register, November, 1980, No. 299, eff. 12-1-80.

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) Milk and milk products returned to a dairy plant from retail outlets or wholesale distributors may not be resold or reprocessed for sale as grade A milk and milk products. Upon arrival at a plant and prior to final disposition, returned products shall be segregated from all other products and be held only in separately designated areas clearly labeled and identified as returned product holding areas. Returned products may be salvaged for use in the manufacture of manufacturing grade products only if the products have been maintained at a temperature below 45° F. and are otherwise determined to be unadulterated and of a safe sanitary quality.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. (1), Register, December, 1971, No. 192, eff. 1-1-72; r. and recr. (2), Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.12 Future dairy plants and dairy farms. (1) Plans for dairy plants and dairy farm and plant facilities to be constructed, reconstructed or extensively altered shall be submitted to the department and its approval obtained before work is begun. Plans shall be reviewed by the department and returned to the dairy plant operator or producer within 14 days after their receipt, together with comments or objections.

(2) Upon completion of the work on a dairy farm involving milking and milk handling systems, the installer shall furnish the purchaser with a signed statement certifying that the milking and milk handling system and equipment are installed in full compliance with this chapter.

Note: Systems and milking and milk handling equipment which conform to the current "3-A Accepted Practices for the Design, Fabrication and Installation of Milking and Milk Han-

dling Equipment," published by the International Association of Milk, Food and Environmental Sanitarians, Inc., Box 701, Ames, Iowa, will meet the requirements of this section.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; renum. to be (1) and am. and cr. (2), Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.13 Personnel; health. No person who is affected with any disease in a communicable form, or who is a carrier of the disease shall work for any milk producer or dairy plant operator in any capacity which brings the person 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 any person in this capacity who is affected with or a carrier of, or is suspected of being affected with or a carrier of any disease in a communicable form. 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 the disease, shall notify the local health officer and the department immediately.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. Register, November, 1980, No. 299, eff. 12-1-80.

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, the person's associates, and of their body discharges.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. (3), Register, November, 1980, No. 299, eff. 12-1-80.

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 the department. The inspection shall include bacteriological testing as considered necessary to determine the sanitary quality of the single-service articles. No grade A dairy plants shall purchase or use single-service articles unless manufactured by a plant listed in the current quarterly "Interstate Listing of Single-Service Containers" published by the U.S. public health service, food and drug administration.

History: Cr. Register, August, 1967, No. 140, eff. 9-1-67; am. Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.16 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 ±2° 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. All dirty or soiled cases or containers shall be removed from retail display cases.

(4) All retail establishments, other than restaurants licensed and inspected under subch. III of ch. 50, Stats., shall be subject to department inspection to ensure compliance with this section.

History: Cr. Register, March, 1973, No. 207, eff. 4-1-73; renum. from Ag 80.18 and am. (3) and (4), Register, November, 1980, No. 299, eff. 12-1-80.

Ag 80.17 Applicability; enforcement. (1) This chapter shall apply only to persons who are subject to the grade A milk law, s. 97.24, Stats. It shall be enforced on a uniform basis in accordance with enforcement standards and procedures meeting the requirements of the Grade "A" Pasteurized Milk Ordinance, 1978 Recommendations of the U.S. public health service, food and drug administration, U.S. department of health and human services.

(2) Grade A milk and milk products produced and processed under the inspection of another governmental unit and entitled to reciprocal recognition as provided in s. 97.24 (6) (b), Stats., may be sold in this state without further inspection by the department of the dairy farms or plants where they are produced or processed, but all milk and milk products entering or sold in this state in the course of trade or commerce shall be subject to inspection and sampling by the department for compliance with bacteriological, chemical and temperature standards under this chapter, and other standards and requirements relating to the composition, labeling, and sale of grade A milk and milk products.

(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 chapter, or for interference with the department in the performance of its duties. Upon repeated or serious violation, the department may revoke a permit following reasonable notice to the permit holder and an opportunity for hearing under s. 93.18 and ch. 227, Stats.

(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. In the case of a farm permit suspension, the department may require the dairy plant to collect and test producer samples.

(6) If the license or permit suspension was due to a violation of an item other than bacteriological standards or cooling temperature, the application for reinstatement shall be accompanied by a statement signed by the applicant to the effect that the violation has been corrected. Within one week after receipt of the application and statement, the department shall make reinspections of the applicant's establishment as necessary to determine compliance.

(7) The exemption in s. 97.24 (2) (c), Stats., for "incidental sales" of ungraded milk and cream to consumers at farms and dairy plants shall not apply to sales which are regularly made in the course of business or are preceded by any advertising, offer to or solicitation of members of the public, but shall include any sales to employes or 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; am. (1) to (3) and (5) to (7), Register, November, 1980, No. 299, eff. 12-1-80.