

## Chapter Ag 33

### PASTEURIZATION AND PASTEURIZATION EQUIPMENT

Ag 33.01	Definitions	Ag 33.05	High-temperature short-time (HTST) pasteurization standards
Ag 33.02	Pasteurization; general	Ag 33.06	Pasteurization records
Ag 33.03	Pasteurization holding time and temperature requirements	Ag 33.07	Applicability
Ag 33.04	Batch pasteurization equipment		

**Ag 33.01 Definitions.** As used in this chapter:

(1) "Batch pasteurization" means heating a dairy product in a vat or large container to the batch pasteurization temperature and for the holding time specified for the appropriate product group under s. Ag 33.03 (1).

(2) "Dairy plant" has the meaning specified in s. 97.20 (1) (a), Stats.

(3) "Dairy product" or "product" has the meaning specified in s. 97.20 (1) (b), Stats.

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

(5) "High-temperature short-time pasteurization" (HTST) means heating every particle of a dairy product to the temperature specified for the appropriate product group under s. Ag 33.03 (1), and holding it continuously at or above this temperature in a holding tube for the required time period.

(6) "Milk" has the meaning specified in s. 97.01 (10), Stats.

(7) "Pasteurization" means thermally processing a dairy product or dairy ingredient for purposes of microbial destruction and includes batch pasteurization, high-temperature short-time pasteurization, ultrapasteurization or any other pasteurization process which is equally effective for microbial destruction and is approved by the department in writing.

(8) "Ultrapasteurization" means thermally processing a dairy product or dairy ingredient for the ultrapasteurized holding time and temperature requirements specified in s. Ag. 33.03 (1).

**History:** Cr. Register, January, 1987, No. 373, eff. 10-1-89.

**Ag 33.02 Pasteurization; general.** (1) All dairy products shall be pasteurized or manufactured from pasteurized milk or other dairy ingredients which have been pasteurized at the dairy plant where the final dairy product is manufactured, unless the product's standard of identity authorizes the use of unpasteurized milk.

(2) If a dairy product is pasteurized, the label for all bulk packages of the product shall indicate that the product is pasteurized and include the factory number of the dairy plant where pasteurization occurred. If a dairy product is not made from pasteurized ingredients, the label for all bulk and consumer packages or containers shall indicate the product is made from raw or unpasteurized milk. As an alternative, any cheese whose standard of identity authorizes the cheese to be made from raw or

unpasteurized milk may be held 61 days or longer before marketing and labeled as "aged over 60 days."

History: Cr. Register, January, 1987, No. 373, eff. 10-1-89.

**Ag 33.03 Pasteurization holding time and temperature requirements.** (1) Milk and other dairy products identified in the following table shall be pasteurized in compliance with the specified pasteurization requirements for the respective product groups in a non-coil batch pasteurizer or HTST pasteurizer, or be subjected to ultrapasteurization. Pasteurization equipment shall heat every particle of milk, dairy product or dairy ingredient to the required temperature and continuously hold them at or above the specified temperature for the required period of time. A dairy product or dairy ingredient which is ultrapasteurized shall be thermally processed at or above a temperature of 280° F. for at least 2 seconds for purposes of microbial destruction.

Product Group	Batch Pasteurization	HTST Pasteurization
(a) Milk, skim milk, whey or buttermilk	145° F. for 30 minutes	161° F. for 15 seconds
(b) Cream and fluid dairy products having more than 9% milkfat	150° F. for 30 minutes	166° F. for 15 seconds
(c) Cream for butter	166° F. for 30 minutes	185° F. for 15 seconds
(d) Condensed dairy products including condensed products in group (a) and blends of those products	155° F. for 30 minutes	166° F. for 15 seconds
(e) Frozen dessert mixes	155° F. for 30 minutes	175° F. for 25 seconds
(f) Process cheese	150° F. for 30 seconds	—

(2) Whey, whey protein concentrate, reduced mineral whey, reduced lactose whey, sweet cream and whey cream buttermilk, when condensed or dried, shall be pasteurized prior to final condensing or drying, except that partially crystallized condensed whey products containing 40% or more total solids, if pasteurized before being condensed, need not be repasteurized prior to final drying.

(3) Whenever the standard of identity for a dairy product under 21 Code of Federal Regulations Parts 131, 133, 135, or rules of the department requires pasteurization of an ingredient, it shall be pasteurized in accordance with the time and temperature requirements specified for the particular ingredient's product group under sub. (1).

(4) Subsection (1) does not prohibit the use of another pasteurization process which is equally effective for microbial destruction, provided that the process is specifically approved in writing by the department.

History: Cr. Register, January, 1987, No. 373, eff. 10-1-89; am. (1) (c), Register, September, 1989, No. 405, eff. 10-1-89.

**Ag 33.04 Batch pasteurization equipment.** Batch pasteurization equipment shall be of the non-coil type. Vats shall be constructed so that every particle of milk or dairy product is heated to the appropriate batch pasteurization temperature and held continuously at or above that temperature for the required time. All pasteurization vessels shall be equipped

with leak detector valves. Batch pasteurizers shall have recording thermometers, mercury column product thermometers and a thermometer to record the temperature of the air space above the product in the pasteurizer.

History: Cr. Register, January, 1987, No. 373, eff. 10-1-89; am. Register, September, 1989, No. 405, eff. 10-1-89.

**Ag 33.05 High-temperature short-time (HTST) pasteurization standards.** Pasteurization by means of high-temperature short-time pasteurization shall comply with the standards set forth in "3-A Accepted Practices for the Sanitary Construction, Installation, Testing and Operation of High-Temperature Short-Time Pasteurizers, Revised" (1967), published by the International Association of Milk, Food and Environmental Sanitarians, Department B, P.O. Box 701, Ames, Iowa 50010. Amended standards adopted after the effective date of this chapter will have no effect in this state, until this chapter is amended to include the amended standards.

Note: Copies of the "3-A Accepted Practices for the Sanitary Construction, Installation, Testing, and Operation of High-Temperature, Short-Time Pasteurizers, Revised" (1967) may be obtained from the International Association of Milk, Food and Environmental Sanitarians, Department B, P.O. Box 701, Ames, Iowa 50010. Copies are on file in the offices of the department, the secretary of state and the revisor of statutes.

History: Cr. Register, January, 1987, No. 373, eff. 10-1-89; r. (2), renum. and am. (1), Register, September, 1989, No. 405, eff. 10-1-89.

**Ag 33.06 Pasteurization records.** A dairy plant shall maintain records of pasteurization of all dairy products processed by the dairy plant in the past 6 months. Records shall consist of recording charts or other records accurately showing the date of pasteurization and the name of the individual responsible for the pasteurization operation. 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.

History: Cr. Register, January, 1987, No. 373, eff. 10-1-89.

**Ag 33.07 Applicability.** This chapter applies to all dairy plants producing or processing any graded or ungraded dairy product sold or intended for use as human food or as an ingredient or component in another food product sold or intended for use as human food.

History: Cr. Register, January, 1987, No. 373, eff. 10-1-89.