

Milk Production, Transportation and Pasteurization Regulations

made under Section 105 of the
Health Protection Act
S.N.S. 2004, c. 4
O.I.C. February 15, 1966, N.S. Reg. 54/66
as amended by O.I.C. 71-456 (May 18, 1971), N.S. Reg. 10/71

Part I - Definitions

- 1 (a)** "cleaning in place" means cleaning and sanitizing of equipment in a pasteurization plant without dismantling;
- (b)** "dairy milking parlour" means a separate room specifically designed and maintained for the purpose of milking cows;
- (c)** "dairy stable" means that part of a barn where one or more cows are housed and milked, a part of all of the milk from which is sold or offered for sale for human consumption;
- (d)** "farm bulk tank" means a stationary storage tank used only for the holding and cooling of milk and includes fixtures thereto and the equipment required for use of the tank;
- (e)** "milk" means the lacteal secretion of one or more cows;
- (f)** "milk producer" means a person who owns or controls one or more cows, a part or all of the milk from which is sold or offered for sale for human consumption;
- (g)** "milk room" means a house or room at a dairy farm in which milk is handled and stored, and equipment is washed and stored;
- (h)** "milk tank truck" means a motor vehicle having a tank used only for the purpose of hauling milk from farm bulk tanks to pasteurization plants, or from one plant to another plant;
- (i)** "operator" means every person who by himself or by his agents owns or operates a pasteurization plant;
- (j)** "pasteurization plant" includes every plant in which milk is pasteurized and every building, machine, apparatus, equipment and appurtenance employed in or necessary for the pasteurization, heating, storing, cooling, processing, packaging or in any way handling milk in such plant and forming part of or connected with such plant, provided that where milk is pasteurized in any part of a plant, the entire plant shall be deemed to be a pasteurization plant.

Part II (Sections 2-6), Part III (Sections 7-8) repealed: O.I.C. 71-456, N.S. Reg. 10/71.

Part IV - Milk Pasteurization

Pasteurization Plants

Establishment and alterations

9 (1) No person shall establish, erect, reconstruct, alter or enlarge a pasteurization plant unless the approval of the Minister has been obtained.

(2) Where an application for approval is made under subsection (1), the applicant shall furnish to the Minister a copy of the plans and specifications therefor together with such other material and information as the Minister may require.

Buildings and locations

(3) The location of every pasteurization plant shall be free from any objectionable conditions including smoke, fumes, dust, odours, flies, and other conditions of a nature which might injuriously affect the quality of the milk, and there shall be ready access to and from every building.

Construction of buildings

(4) The building shall be of substantial construction, of adequate size for the operations involved, free from excessive dust, readily cleaned, well lighted and well ventilated.

Doors and windows

(5) (a) All outside openings in every building forming part of a pasteurization plant shall be effectively screened, or otherwise protected against the entrance of flies during the period from April 1st to November 1st.

(b) Window and door screens shall be tight-fitting and shall be kept in good repair, and all doors shall be equipped as far as possible with self-closing devices.

(c) Openings through which cans, crates and other articles are passed in rapid succession shall be equipped with flaps, fans or similar devices to exclude flies.

(d) Such additional precautions for the control of flies and other vermin as may be reasonably necessary or as the Minister may require, shall be provided.

Lighting and ventilation

(6) (a) Every room in which the processing or handling of milk is conducted or in which equipment is operated shall be well lighted by natural or artificial light or both.

(b) Every room shall be adequately ventilated through windows, doors or ventilating ducts so as to prevent water of condensation forming on walls, ceiling and equipment.

Floors, walls and ceilings

(7) (a) The floors of every room in which milk is handled or stored shall be constructed of concrete, tile, brick or other good quality, impervious material and the surface shall be

smooth, readily cleaned, sloped to convenient outlets, and free from joints and depressions in which water or dirt may collect and the joints between the walls and floors shall be coved.

(b) Floors shall be kept clean and free from materials and equipment not regularly used in the room.

(c) Floor drains and other drains shall be constructed in accordance with the National Building Code of Canada.

(d) The walls and ceilings of rooms in which milk is handled or stored shall have smooth surfaces of impervious and washable material, and such surfaces shall be kept clean.

Rooms in pasteurization plants

(8) (a) Separate rooms shall be provided in every pasteurization plant for

(i) pasteurization, cooling and bottling operations,

(ii) washing and bactericidal treatment of containers and miscellaneous equipment.

(b) Cans of unpasteurized milk shall not be unloaded directly into or stored in the pasteurizing room.

(c) Self-closing doors as far as possible shall be provided in the pasteurizing room, and such doors shall not open directly into any stable, garage, or living quarters.

(d) Cleaned utensils and containers shall be stored in a room or compartment which is kept free from flies, dust, and other contaminations.

Facilities for use of employees

(9) (a) Every pasteurization plant shall, for the purposes of employees, be equipped with

(i) soap and hot and cold water,

(ii) clean towels of such kind and quantity that not more than one employee shall use the same towel,

(iii) washing facilities which shall be conveniently located and shall not be used in any way in the operation of the pasteurization plant or the handling of milk,

(iv) such toilet rooms as may be necessary and such rooms shall be conveniently located, properly equipped, of a sanitary condition, in good repair, provided with ventilation and lighting, and shall not open directly into any room in which milk, equipment or containers are used or handled.

Water supply

(10) A supply of potable water shall be provided from a source satisfactory to the Minister.

Disposal of wastes

(11) (a) All wastes and drainage from the operation of any pasteurization plant shall be disposed of in a sanitary manner approved by the Minister.

(b) Refuse shall not be permitted to accumulate in the building or in or near the premises.

Handling, processing and storage equipment

(12) (a) The equipment and containers used in the handling, processing or storage of milk shall be so constructed and kept in repair as to facilitate cleaning and bactericidal treatment. Any surfaces of such equipment and containers with which milk comes in contact shall be of smooth, non-corroded metal or other approved material, free from accumulation of milk solids and other foreign substances, self-draining and readily accessible for cleaning. Every joint in any such equipment or container shall be made flush with the surface or otherwise constructed so as to avoid open seams.

(b) Every pasteurization plant shall have equipment of sufficient capacity for the maximum output of the plant.

(c) Any equipment used for processing or storing milk shall be constructed of such material and so maintained as not to adversely affect the quality or taste of the milk.

(d) Holding vats shall be adequately insulated to prevent undesirable heat losses.

(e) Tight fitting covers shall be provided for the equipment, and shall be so arranged as to prevent the entrance of drainage or water of condensation from the outside into the milk, when in either the open or closed position.

(f) Milk receiving vats shall be so placed and protected as to prevent contamination of the milk.

Valve and pipe connections

(13) Every inlet and outlet valve and pipe connection to pasteurization holders shall meet the following requirements:

(a) every valve and pipe line used in inlet and outlet connections and pasteurizers or holders shall be of metal or other approved material, not affected by milk or cleansing agents, to the extent of corroding or pitting the material, and shall not affect the flavour of milk by electrolysis or by other means;

(b) every surface in contact with the milk shall be smooth and free from pits, crevices, cracks, open seams or threads;

(c) passages shall be constructed to prevent pocketing;

(d) every part shall be [able to be] readily disassembled for cleaning;

(e) every inlet valve shall be of the leak-protector type and every inlet valve connection shall be so constructed and so located as to prevent leakage or short circuiting of unpasteurized milk into the pasteurized, or into a pasteurizer or holder other than that being filled;

(f) every groove of an inlet valve for diverting leakage shall be of ample dimensions and arranged to permit free drainage;

(g) every pipe line between any inlet valve and pasteurizer or holder shall be as short as possible and shall be sloped or otherwise arranged to drain freely;

(h) every outlet valve shall be of the leak-protector type and shall have the valve seat either flush with the inner wall of the pasteurizer or so closely coupled that all milk in the valve pocket is within the influence of the agitation created by the stirring equipment;

(i) every outlet valve shall prevent leakage past the valve seat into the milk outlet, and grooves for diverting leakage shall be of ample dimensions and arranged to permit free drainage;

(j) valves shall be provided with necessary stops and guides to insure proper operation.

Milk piping

(14) Milk piping and connections shall meet the following requirements:

(a) the piping and connections shall be of such size and material that they may be readily cleaned;

(b) the piping and connections shall be smooth, free from corrosion, and all joints shall be flush;

(c) the length of piping shall be reduced to a minimum;

(d) no piping, pumps or equipment shall be used for both unpasteurized and pasteurized milk.

Thermometers

(15) (a) Both indicating and recording thermometers of satisfactory type shall be installed and used on each holder in which the holding time is not automatically controlled and in both inlet and outlet manifolds of vat, pocket or continuous flow installations in which the milk is brought to the final pasteurization temperature before entering the holder and in which the time is automatically controlled.

(b) The bulbs of the indicating thermometer and the recording thermometer shall be as close together as practicable and at the point of lowest temperature in the pasteurizer holder.

(c) Indicating thermometers shall be easily read and shall be accurate within one-half of one degree Fahrenheit, and with scale divisions of not less than one-sixteenth of one inch for each degree between 140 degrees Fahrenheit and 150 degrees Fahrenheit.

(d) Recording thermometers shall be moisture-proof, easily read, with scale divisions of not less than one-sixteenth of one inch for each degree between 140 and 145 degrees Fahrenheit, and the smallest time-scale division shall not exceed ten minutes.

Foam in pasteurizers

(16) The equipment used in milk processing shall be such as to preclude as far as possible, the formation of foam in pasteurizers or holders and where foam collects in milk holders, means shall be employed to keep the atmosphere above the milk at a temperature at least five degrees Fahrenheit higher than the pasteurizing temperature.

Milk filters

(17) Milk shall be filtered in a manner and with equipment satisfactory to the Minister, before pasteurization only and no filters shall be placed on the outlet side of the pasteurizer or be used on milk after pasteurization.

Milk coolers

(18) (a) Milk cooling equipment shall be provided of sufficient capacity and type to cool the milk from each pasteurizer or holding vat in a period not exceeding one and one-half hours.

(b) The temperature of the pasteurized milk shall not be reduced to lower than 120 degrees Fahrenheit before passing over or through the cooling equipment.

(c) The milk shall be cooled to 45 degrees Fahrenheit or lower within a period not exceeding one and one-half hours and held at or below this temperature until delivered to the consumer.

(d) Regenerative heater-coolers shall be so constructed and maintained as to prevent access of the unpasteurized milk into the pasteurized milk.

(e) Solder shall not be used on the metal separating the pasteurized milk from the unpasteurized milk.

Bottling equipment

(19) Milk shall be bottled and capped at the plant where pasteurization takes place and in accordance with the following conditions:

(a) bottling shall be done in mechanical equipment which can be readily cleaned and which does not expose the milk to contamination during the operation;

(b) the equipment and the operation shall be such that a uniform mixture of the milk is added to each bottle;

(c) no unpasteurized milk shall be bottled or come in direct contact with bottling equipment used for pasteurized milk.

Capping equipment

(20) Containers shall be capped or sealed by mechanical equipment and hand capping or sealing shall not be permitted.

Cold storage facilities

(21) Cooling facilities and cold storage shall be provided in the pasteurization plant for the pasteurized milk and that held in storage prior to processing.

Pasteurization

(22) (a) The operation of the pasteurizer or holding vat shall be such that the variation in temperature between the hottest and the coldest of the milk shall not exceed one degree Fahrenheit.

(b) The temperature of the milk in the pasteurizer at any time shall be taken as that shown on the indicating thermometer rather than the recorder.

(c) The temperature shown by the recording thermometer shall be checked daily by the operator against the indicating thermometer and shall be adjusted to read at no time higher than the indicating thermometer.

(d) The cover of the pasteurizer shall be kept closed, during the holding period and until the milk is removed, except in case of emergency.

(e) Any equipment used for pasteurization and subsequent handling of the milk shall be given a bactericidal treatment by steam, hot water or a sanitizing agent approved by the Minister, when assembled immediately prior to the day's operations.

(f) No piping, pumps or equipment with which pasteurized milk comes into contact shall be used in the handling of unpasteurized milk or other contaminated material, nor shall any connection be permitted between unpasteurized and pasteurized milk.

(g) Every valve and pipe connection to or from a pasteurizer or holder shall be disconnected during the holding period and when not in actual use.

Recording charts

(23) (a) No recording chart shall be used for a period which will interfere with the clarity of the record or which will permit overlapping of graphs.

(b) The person in charge of the recorder shall sign every chart and shall see that the following information is recorded thereon:

(i) the date of each operation of the pasteurizer or holder,

(ii) the number of the pasteurizer or holder, if more than one is in use, to which the recorder was attached,

(iii) a recording of the indicating thermometer at some time corresponding with a marked point in the holding period,

(iv) the product processed in relation to each graph on the chart.

(c) Where more than one recording thermometer is in use, the chart shall be numbered in such a manner as to indicate the recording thermometer which was used for such chart.

(d) The operator shall keep every chart for a period of thirty days after the date thereof.

Cleaning and sanitizing of equipment in the plant

(24) (a) Every container and any equipment which comes into contact with or is used in the handling of milk shall be thoroughly cleaned and sanitized after each use, and at least once each day.

(b) All demountable apparatus including piping, pump parts, valves, and pipe fittings shall be taken down daily for cleaning and sanitizing.

(c) Cleaning in place shall be permitted for equipment designed for this purpose.

(d) Notwithstanding subsection (c), equipment designed for cleaning in place shall be dismantled for inspection and cleaning upon request of the Health Unit Director.

(e) Every can used for transporting raw milk to a pasteurization plant shall be thoroughly cleaned and sanitized before leaving the plant.

(f) No such can shall be used for transporting milk or other products from the pasteurization plant, except in wholesale quantities to another pasteurization plant.

Unpasteurized and pasteurized milk in the same plant

(25) No unpasteurized milk shall be bottled or placed in containers in any pasteurization plant for delivery to consumers.

Products other than milk

(26) No products other than milk products and products of which milk is a substantial component shall be handled or processed in a pasteurization plant unless equipment entirely separate from equipment used in pasteurization is used and the handling or processing is carried on in a separate room.

Personnel in pasteurization plants

(27) (a) Every pasteurizing and processing operation shall be under the direct supervision of a person having knowledge of such operations.

(b) Any person employed in a pasteurization plant shall be clean in habits, wear clean, washable outer garments and keep his hands clean while engaged in work.

(c) No person shall smoke or use tobacco in any form, or spit, in any part of the plant in which milk is processed or handled, or where washing and sanitizing of containers and equipment is carried out.

Part IV, Section 10 repealed: O.I.C. 71-456, N.S. Reg. 10/71.

[Pasteurization plant must be constructed in prescribed manner]

11 (1) The owner or person in charge of a pasteurization plant shall cause the plant to be constructed, equipped, maintained and operated in the manner prescribed by these regulations.

(2) No person shall pasteurize milk in a pasteurization plant that is not constructed, equipped, operated and maintained in the manner prescribed by these regulations.

[Repeal of former regulations]

12 The regulations respecting Milk Production, Milk Pasteurization Plants, and Milk Plants, made by the Minister of Public Health on the 25th day of April, 1947, and all other regulations heretofore made under the Public Health Act respecting Milk Production, Milk Pasteurization Plants, and Milk Plants are hereby repealed.