Milk Plant Standards

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Saskatchewan

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Foreword and Scope

The Saskatchewan Milk Plant Standards are designed to assist operators to construct and operate a milk plant. As licensing is based on these standards, they should, therefore, be read in conjunction with *The Food Safety Regulations*.

Facilities who are only producing milk products (no dairy production or pasteurization), are also covered under *The Food Safety Regulations* but are considered a processing facility. The Saskatchewan Food Processing Facility Best Management Practice document would apply to the milk product production area of a milk plant as well as stand-alone milk product processors (as processing facilities).

Milk may cause illness if not properly handled. Herd health, good hygienic practices, well-constructed buildings, sufficient refrigeration, effective processing and subsequent handling of product, properly trained staff and the exclusion of pests all contribute to producing a safe product for the consumer.

These standards have been updated to assist operators of milk plants in meeting amendments to *The Food Safety Regulations* that came into force on May 8, 2019 and replaced the former *Milk Pasteurization Regulations*. Milk plant operators should note that while the standards in themselves are not considered law, provisions of the standards become legally binding when they are attached as a condition of a licence to operate. Existing milk plants that do not meet the standards may continue to operate provided that the facility is operated in compliance with *The Food Safety Regulations* and that a health hazard does not exist. It is expected that all new milk plants be constructed and operated in accordance with these standards. There may be, however, situations to which the standard may not be reasonably applied or there may be cases where the operator demonstrates an alternative method of meeting food safety requirements. Where supported by sufficient evidence submitted by the operator, a public health officer may deem a proposed alternative as equivalent to the prescriptive requirements provided that:

a. the alternative is capable of performing at least as well as the prescribed standard; and
b. the operator clearly demonstrates and supports how their proposed alternative will achieve the same outcome(s) as the prescribed standard. An appropriate level of evidence, which may include verification of performance by a qualified professional, is required.

The regulations require that all milk plants operate under a valid licence issued by the local authority except plants that are registered with and subject to inspection by the Government of Canada or an agency of that government (i.e. CFIA). *The Food Safety Regulations* requires that the milk plant be constructed and maintained in a hygienic condition and operated in such a manner that the product produced within is safe for human consumption.

The most current versions of *The Food Safety Regulations* and the Milk Plant Standards are available online at:
https://www.saskatchewan.ca/residents/environment-public-health-and-safety/environmental-health/environmental-health-legislation

Note: Where there is conflict in wording between the standards and regulations, the regulations will prevail.

DEFINITIONS:

For the purposes of this standard, the following definitions apply:

Approved means approval by a public health officer appointed pursuant to *The Public Health Act, 1994.*

Dairy Animal means cows, goats, sheep, and such other species, as may be kept for the purposes of milking.

Equipment means all tanks, valves, pipefittings and necessary apparatus used in the receiving, processing, pasteurizing, packaging, storing, dispensing, transporting, or marketing of milk and milk products.

Local Authority means the Saskatchewan Health Authority.

Milk means a normal lacteal secretion free of colostrum obtained from the mammary gland of a dairy animal.

Milk Plant means a building where milk is pasteurized, and includes facilities where milk is received, processed, cooled, stored, packaged, produce milk products or milk otherwise prepared for sale for human consumption, but does not include an establishment that is registered with and subject to inspection by the Government of Canada or an agency of that government.

Milk Products are products processed or derived from milk and include, but are not limited to, butter, cheese, cream cheese, yogurt, sour cream, cottage cheese, milk powder, and ice cream.

Potable Water means water that is safe for human consumption.

Producer means a person who markets or sells milk that has been produced by a herd of dairy animals owned or controlled by the producer.

Raw Milk means milk that has not been pasteurized.

Sanitize means the process of reducing the number of bacterial contaminants on a food contact surface to a safe or relatively safe level by means of heat or chemical treatment.

Section 1 – CONSTRUCTION and FACILITY REQUIREMENTS

Note: Anyone considering establishing or renovating a milk plant should be aware that in addition to the requirements of *The Food Safety Regulations* and accompanying standards, approvals from other ministries, agencies and/or local municipalities may also be required. These approvals may include, but are not limited to, building, fire, accessibility, plumbing and sewage disposal. It is up to the operator to identify and obtain needed approvals.

1.1 Site and Plan Approvals

1. Anyone considering constructing, extending, altering or establishing a milk plant must submit detailed plans to the local authority for approval. Approval must be received prior to commencement of work.

2. To enable a comprehensive review, plans are to include:
   a. a site plan to show the property boundaries, location of buildings, location of water supply and sewage disposal system, access roadways, fences, auxiliary structures and separation distances from other industrial, commercial and residential buildings;

   b. a layout of the building or buildings showing the arrangement and dimensions of rooms used for receiving, processing, pasteurizing, packaging, storing of milk or milk products.

   c. identification of separate rooms for:
      i. milk receiving;
      ii. can washing;
      iii. milk and milk product processing, pasteurizing, cooling, storing, and packaging; case receiving and washing; and,
      iv. change rooms, washrooms and staff rooms.

   d. a detailed description of the clean-in place (CIP)system(s), if applicable, including;
      i. the location of sinks for cleaning and sanitizing of equipment and the location of hand wash basins;
      ii. detailed information regarding the type of construction and finishing materials of all rooms where milk or milk products are received, processed, pasteurized, packaged or stored;
      iii. detailed information regarding the water supply and sewage disposal systems;
      iv. details of the type of equipment used in the receiving, processing, pasteurizing, manufacturing, packaging, storing, and dispensing of milk; and,
      v. other information as required depending on the complexity of the proposed operation.

1.2 Construction Requirements

1. Unless the public health officer provides written approval for any changes, applicants shall ensure that the facility is built in accordance with the plans and specifications submitted and approved by the local authority.

1.3 Exterior and Surrounding Area

1. The surrounding area must be free of waste, refuse and of smoke, fumes, dust, odours, flies, and any other source that could contaminate the milk or food products that are produced at the plant.

2. The access routes and traffic areas must be constructed with a dense material, to reduce dust and mud.

3. The exterior of the plant shall be constructed of materials that are durable and maintained in good repair

1.4 General Construction

1. Any rooms where milk or milk products are received, processed, pasteurized, packaged, stored, or where equipment is cleaned and sanitized are to be constructed and maintained as follows:

    a. The structure is to:
        i. be of sound construction and in good repair;
        ii. be large enough to facilitate required cleaning;
        iii. have tight-fitting window and door screens kept in good repair;
        iv. ensure all doors shall be equipped as far as possible with self-closing devices; and,
        v. ensure openings through which cans, crates and other articles are passed in rapid succession are equipped with flaps, fans or similar devices to exclude flies.

    b. When milk or milk product production takes place on the same premises with any retail, wholesale business or any trade, the milk plant shall be separated by a floor to ceiling wall from these other operations in a manner acceptable to the public health officer.

1.5 Walls, Floors, Ceilings, and Doors

1. To facilitate cleaning and to prevent contamination of the product, walls and ceilings are to be constructed of material that is:
    a. easily cleaned;
    b. durable;
    c. impervious;
    d. light in colour (to reflect light and facilitate proper cleaning);
    e. smooth;
    f. non-toxic; and,
    g. non-corrosive.

2. The joints between the floors and walls shall be coved and sealed to facilitate cleaning. The surfaces shall be free of flaking or peeling material.

3. In areas where floors are free draining, floors shall be inclined toward trapped drains and free from joints, crevices, and depressions in which water or dirt may collect so as to prevent the accumulation of liquids.

4. Floor mounted equipment, unless easily moveable, shall be sealed to the floor or elevated 15 cm (6 in) and installed in a manner to facilitate cleaning in and around the equipment.

5. All doors are to have a smooth, hard, non-absorbent finish suitable for cleaning. Exterior doors should be self-closing. Doors must be washable, smooth, in good repair, not rotten or in the process of rotting and free of bumps or peeling.

1.6 Elevated Utility Lines

1. Exposed service lines for gas, water, plumbing, sewer, electrical, and other utilities that are located within a milk plant shall be installed in a manner that allows for easy access for cleaning purposes.

2. Lines should be insulated where necessary and be designed and finished to prevent the accumulation of dirt and minimize condensation, mold growth, flaking, and to facilitate cleaning.

3. Elevated facilities such as walkways and conduits in the preparation areas must be coated with hard, smooth, washable and impervious material.

1.7 Storage Areas

1. Milk plants shall have adequate storage space for all items required for its operation including raw milk, pasteurized milk, milk products, food, ingredients, equipment and non-food, packaging materials, cleaning supplies and other chemical agents.

2. Packaged milk (not bulk) and milk products shall be stored on impervious shelves which are of sufficient height to allow for easy cleaning of the floor and to allow for inspection for pests.

3. Cold and freezer storage must be adequate to meet the needs of the milk plant operation and equipped with an accurate thermometer.

1.8 Lighting

1. Adequate natural or artificial lighting is to be provided throughout the plant. Where Appropriate, the intensity at a distance of 90 cm (3 ft) above the floor is not be to be less than:

    a. 540 lux (50 ft/candles) in production areas;
    b. 110 lux (10 ft/candles) in storage areas; and
    c. 220 lux (20 ft/candles) in all other areas.

2. Light bulbs and fixtures suspended over any processing or production areas are to be of a safety type and protected to prevent contamination of milk or milk products in case of breakage.

1.9 Ventilation

1. Adequate ventilation shall be provided to prevent an accumulation of heat, condensation, smoke, dust, grease/oils and odours or other contaminants within the facility. The ventilation system shall be designed, installed and maintained to prevent contaminants from collecting on walls and ceilings and from dripping onto any area, surface or product in the facility.

1.10 Dressing Room

1. Dressing rooms should be provided if employees are required to change their clothes at the facility prior to commencement of shift.

2. To permit staff to store street clothing and personal belongings outside of the production or processing areas, a separate room, compartment, locker or cupboard, of adequate size, is to be provided.

3. Where provided, dressing rooms shall be:

    a. easily cleanable;
    b. well ventilated;
    c. well lit;
    d. provided with space for storage of employee possessions;
    e. maintained in a sanitary manner and in good repair; and,
    f. completely enclosed and provided with a lockable door unless separate facilities are provided for each sex.

1.11 Equipment Cleaning and Sanitation

1. Unless otherwise approved by the public health officer, the milk plant shall be equipped with:

    a. a non-corrosive three-compartment sink of sufficient size to accommodate pots and large food processing equipment*; or,
    b. a mechanical dishwasher that conforms to National Sanitation Foundation International Standards (NSF/ANSI Standard 3 – Commercial Warewashing Equipment) or equivalent for the washing, rinsing and sanitizing of all utensils and (non-stationary) equipment.
    *Equipment designed to be cleaned in place is exempt.

2. Where a dishwasher is in place, unless otherwise approved by the public health officer, a minimum of a two-compartment sink is required for the purpose of cleaning equipment that does not fit in the dishwasher, the disposal of liquid wastes, and to facilitate manual dishwashing in the event that the dishwasher malfunctions.

3. Where utensils and equipment are washed, rinsed and sanitized manually, drainage racks of corrosion-resistant material and of adequate size shall be provided. Drainage racks shall be stored in a manner that will prevent contamination when not in use.

4. For information on washing, rinsing and sanitizing processes refer to section 3 below.

5. For information on CIP equipment refer to section 3 below.

6. To provide for the cleaning requirements of the milk plant, each facility shall be equipped with adequate cleaning material, equipment and facilities located to prevent contamination of food or food contact surfaces.

1.12 Cleaning Supplies

1. A service sink, janitor's sink, or curbed cleaning facility (equipped with a floor drain) should be provided for the cleaning of mops and the disposal of mop water and similar liquid waste.

1.13 Washrooms

1. To facilitate good personal hygiene, washrooms are to be conveniently located, well lit, well-ventilated, adequate in size.

2. Washrooms shall be equipped with:
   a. hot and cold running water
   b. liquid soap in dispensers;
   c. paper towels in dispensers, hot air dryers or roller-type cloth towels; and
   d. an adequate number of easily cleanable waste containers.

3. Washrooms shall not lead directly into any milk or milk product handling areas.

Washrooms shall be cleaned at least on a daily basis.

1.14 Handwashing

1. An adequate number of conveniently located hand wash basins, for the sole purpose of hand washing, shall be located in areas where milk or milk products are handled or prepared.

2. Each hand washing station shall be equipped with:

   a. hot and cold water under pressure;
   b. liquid soap in a dispenser;
   c. single use paper towels in a dispenser; and,
   d. an uncovered* plastic lined waste container.

*covered waste containers may be permitted if a foot pedal controls the lid

1.15 Waterworks

1. Operators of milk plants shall ensure that there is an adequate supply of potable hot and cold water under pressure for milk plant purposes.
2. Waterworks in milk plants are to be installed and inspected in accordance with applicable provincial regulations.

1.16 Sewage Works

1. A milk plant should be equipped with sewage disposal systems to remove waste from the plant in a sanitary manner that is separate from toilets, urinals and sinks. Evidence has shown that milk solids do not break down under anaerobic digestion present in a septic tank. Consequently, subsurface disposal fields should not be used with milk wastes. Operators should discuss options with the public health officer and can refer to the Saskatchewan Onsite Wastewater Disposal Guideline for more information.

2.0 OPERATIONAL REQUIREMENTS

2.1 Equipment

1. A milk plant is to have equipment of sufficient capacity for the maximum output of the plant.

2. All equipment used for the processing, pasteurizing, packaging or storing of milk and milk products are to be constructed of such material and maintained in such a manner that will not affect the quality of milk or milk product.

2.2 Testing of Milk or Milk Product

1. The operator of a milk plant must ensure laboratory tests of each batch of milk or milk product are conducted to ensure the quality of the product complies with the requirements of the regulations. The operator shall maintain a record of these tests and make them available to the public health officer upon request.

2. Testing requirements for milk to be pasteurized can be found in *The Food Safety Regulations* and are summarized in these standards **Appendix A**.

2.3 Handling of Returns

1. It is recommended that returned milk and milk products be treated as a waste product and handled in such a manner so as not to compromise the quality of the fresh product in any way.

2.4 Cleaning and Sanitizing

1. CIP equipment shall be cleaned as per manufacturer's instructions.
   For equipment that is CIP and without manufacturer's specific instructions, the following process shall be followed:

   a. clean food contact surfaces either by using a cloth immersed in a detergent solution or a pressure washer with detergent;
   b. rinse food contact surfaces with clean water in a spray bottle or pressure washer;
   c. sanitize food contact surfaces with a spray bottle containing a sanitizer or a pressure washer with a sanitizer. The concentration of the sanitizer shall be as specified for in subclause 2.4.3.c; and,
   d. rinse food contact surfaces with clean warm water to remove the sanitizer, if required by product. No rinsing required for chlorine solutions up to 200 ppm.

2. Instructions should be posted respecting:

   a. the procedures used for cleaning and sanitizing the equipment;
   b. the chemicals used for cleaning and sanitizing;
   c. the strength of the chemical solutions used;
   d. the length of time the equipment is to be exposed to the sanitizer; and
   e. disassembly and assembly instructions for cleaning and inspection purposes.

3. For equipment that is not CIP or steam cleaned shall be cleaned by using manual or mechanical dishwashing procedures. The manual dishwashing the procedure is:

   a. washed in the first sink compartment with an effective detergent at a wash temperature of not less than 44°C (111°F);
   b. rinsed in the second compartment in clean water at a temperature not less than 44°C (111°F);
   c. sanitized in the third compartment using one of the following bactericidal treatments:
      i. immersion for at least one minute in clean water at a temperature of at least 82°C (180°F);
      ii. immersion for at least two minutes in a lukewarm (24°C-44°C/75°F-111°F) chlorine solution of not less than 100 ppm;
      iii. immersion for at least two minutes in a lukewarm (24°C-44°C/75°F-111°F) solution containing a quaternary ammonium compound having a strength of not less than 200 ppm; or
      iv. immersion for at least two minutes in a lukewarm (24°C-44°C/75°F-111°F) solution containing an iodine base sanitizing agent having a strength of not less than 12 ppm.

4. Mechanical dishwashers have a wash, rise and sanitize cycle. Dishwashers may sanitize using hot water (82°C/180°F) or approved chemicals. Dishwashers shall be thoroughly cleaned at the end of each day's operation or more frequently to maintain them in a satisfactory condition.

5. Any equipment used for pasteurizing and handling of milk or milk products is to be given a bactericidal treatment by steam, hot water or chemicals or other approved disinfecting procedure prior to the day's operations and after each use.

6. Where only hot water is used for sanitizing, a suitable, accurate, and calibrated thermometer is to be used for checking and recording water temperature regularly.

7. Where chemicals are used for sanitizing, testing equipment is to be used for checking and recording the concentration of the sanitizers regularly.

2.5 Storage

1. Milk and milk products in a milk plant are to be adequately protected from contamination at all times. Raw milk must be stored separately and in separate equipment from pasteurized milk and milk products.

2. Raw milk received from delivery which is or which is likely to be held for more than 2 hours in the plant is to be cooled to 4°C (40°F) or lower upon arrival. Raw milk should reach 4°C (40°F) within 2 hours and shall be held at this temperature until pasteurization begins.

3. Raw milk collected onsite must cool and be maintained between 1° and 4°C (between 34°F and 40°F) within 2 hours after first milking, and within 1 hour after subsequent milking. The blend temperature should not exceed 10°C (50°F). It shall be held at this temperature until pasteurization begins.

4. Frozen milk products must be kept in a frozen state at all times.

5. Storage areas are to be of adequate size, and should have sufficient aisle space and wall clearance to facilitate cleaning and inspection.

6. Storage areas are to be dry and adequately ventilated.

7. Fluid milk products and milk products must be adequately separated from products that can taint or contaminate the milk or milk products. To adequately protect milk and milk products from accidental chemical contamination, items such as janitorial supplies must not be stored in the milk and milk product storage or processing areas.

2.6 Cleanliness and Repair

1. The operator of a milk plant is responsible for ensuring that it is kept clean and in good repair.

2. The written cleaning schedule shall be kept, monitored, verified, and adjusted as necessary to ensure its effectiveness.

2.7 Garbage Disposal

1. Garbage is to be handled, stored and disposed of in an approved manner. The operator is responsible for:

    a. providing an adequate number of covered garbage containers in convenient locations;
    b. keeping garbage containers clean and in good repair; and
    c. arranging for collection and disposal of garbage as often as is necessary to ensure unsanitary conditions are not created.

2.8 Pests and Domestic Animals

1. A milk plant is to be operated free of any pests or domestic animals. The operator shall ensure that a written record of all pest control measures used in the milk plant is maintained.

2. Areas surrounding the milk plant shall be maintained, adequately drained, kept free of rubbish, old equipment and any other potential pest harbourage.

3. All openings to the outside air shall be effectively screened. Doors should be self closing and equipped with tight fitting gaskets to prevent pests from gaining access to the plant.

2.9 Employees and Visitors

1. A milk plant operator is to ensure entry to the processing, manufacturing, reprocessing, packing and repacking areas of a milk plant shall be restricted to authorized personnel.

2. Every person who handles or comes in contact with milk or milk products, production areas, equipment or is packaging milk or milk products is to:

    a. be clean;
    b. wear clean, light coloured garments worn exclusively for work;
    c. wear clean footwear;
    d. keep the hair confined (tied back, hair nets and/or beard nets);
    e. ensure watches, nail polish, and jewellery are not worn in production areas;
    f. wash hands before commencing work, after use of sanitary facilities, after smoking or any other time hands become soiled or contaminated;
    g. when in direct contact with milk or milk product contact surfaces, wear hygienic hand coverings;
    h. be properly trained for the duties being performed;
    i. refrain from smoking or eating in production areas; and,

3. Every operator, employee, contractor or visitor must:

    a. be free of any contagious disease transmittable through the products;
    b. be free of any infected skin lesion;
    c. wear a clean waterproof bandage over any open non-infected skin lesion; and,
    d. wear a clean waterproof glove long enough to completely cover the bandage over the lesion if the lesion referred to in part c is on the hand, wrist or forearm and discard the glove when it is removed.

4. No person may use latex or latex powdered gloves in an area with milk or milk product contact.

2.10 Recalls

1. Occasionally it may be necessary for any one of a variety of reasons to recall a product. A recall is an effective method of removing products from the market that is unfit for human consumption.

2. All milk plants are to have a coding and tracking system in place that will permit complete and rapid recall of any day's production. The plan is to include the:
    a. designation of authorized individuals to initiate the recall process;
    b. establishment of an emergency response team;
    c. development of communication policies, recall procedures, and techniques;
    d. establishment of comprehensive tracking systems;
    e. establishment of efficient retrieval systems;
    f. participation in simulation exercises; and
    g. evaluation of the process once completed.

3.0 PASTEURIZATION

3.1 General

1. All milk and milk products must be subjected to pasteurization or ultra-high temperature in accordance with the standards set out in Table 1. All pasteurization equipment used should be designed for that use and kept in good repair.

2. No person may hold, prepare, sell, serve in a place where it will be consumed or transported, a raw dairy product or a food product containing raw milk or cream for human consumption. However, cheese made in compliance with raw cheese requirements under *The Food and Drug Act (Canada)* is exempt from the pasteurization requirements found in Section 3.0.

3.2 Raw Milk

1. A milk plant operator must ensure that raw milk produced or received by a milk plant meets the requirements set out in *The Food Safety Regulations*.

2. The interior surfaces of the bulk tank must be rinsed with cold or lukewarm water after the milk has been transferred to the milk transport tank and leave the premises in the same state of cleanliness as found on arrival.

3.3 Pasteurization Requirements

1. A person who operates a milk plant shall ensure that every particle of milk or milk product is heated to not less than the correct temperature for the correct time as per Table 1. All milk and milk products must be immediately cooled to no greater than 4°C (40°F) following pasteurization.

2. A person who operates a milk plant shall ensure that:
   a. all equipment used in pasteurizing, processing and storing milk or milk products is designed, fabricated, installed and maintained in a manner that will prevent contamination of the milk or milk products;
   b. all instruments used to measure pasteurization temperatures and times are maintained and periodically tested and recalibrated to ensure their accuracy; and
   c. the milk plant is provided with product-cooling equipment that has sufficient capacity to cool milk or milk products to a temperature of 4°C (40°F) or less prior to processing and during storage.

Table 1: Milk and Milk Product Pasteurization Temperatures and Time by Method

Method	All milk and milk products less than 10% milk fat	All milk or milk products with 10% or more milk fat; all flavoured milk products other than eggnog	All ice cream mix, ice milk mix, eggnog
Batch Method	63°C (145°F) for at least 30 minutes	66°C (151°F) for at least 30 minutes	69°C (156°F) for at least 30 minutes
HTST Method	72°C (162°F) for at least 16 seconds	75°C (167°F) for at least 16 seconds	80°C (176°F) for at least 25 seconds
UHT Method	138°C (280°F) for at least 2 seconds	141°C (286°F) for at least 2 seconds	144°C (291°F) for at least 2 seconds

3.4 Testing of Pasteurized Milk

1. As laid out in *The Food Safety Regulations*.

3.5 Equipment

1. A milk plant operator shall ensure that all temperature indicating devices are accurate and maintained in working order. The operator shall ensure that all pasteurization equipment, are designed, constructed, and operated to ensure the pasteurization of dairy products. All batch pasteurizers, High Temperature/Short Time (HTST) pasteurizers, Ultra-high Temperature (UHT) pasteurizers must meet the requirements set out below:

2. During the holding operation, the airspace temperature in batch pasteurizers shall be at least 3^{o}C (37 ^{o}F) above the minimum product pasteurization temperature.

3. All batch pasteurizers shall be equipped with:
   a. indicating and recording thermometers;
   b. valves of close coupled and leak protector type with stops or equivalent valves;
   c. mechanical agitation that is continuously maintained throughout the heating and holding operations; and
   d. covers to prevent contamination.

4. All HTST pasteurizers shall be equipped with:
   a. recording thermometer or temperature recording device;
   b. a constant level tank;
   c. a regeneration section;
   d. a flow control device;
   e. a heating section;
   f. a holding section;
   g. a sensing chamber;
   h. a safety thermal limit recorder;
   i. an indicating thermometer;
   j. a flow diversion device;
   k. a pressure differential controller or pressure switch if a booster pump is used;
   l. a cooling section (where applicable);
   m. a vacuum breaker; and,
   n. components that ensure that the pasteurized dairy product in the regeneration section will, at all times, be at a pressure greater than the pressure of the raw dairy product in the same regeneration section.

5. All HTST pasteurizers are designed to ensure that when in operation:
   a. the flow diversion valve does not operate in forward flow unless the temperature of the dairy product being pasteurized equals or exceed that required for its proper pasteurization, and
   b. the product pressure in the pasteurize side of the regenerator is at least 7 kPa (1.02 PSI) greater than the product pressure in the raw side of the regenerator.

6. Any auxiliary equipment shall not be installed or operated in conjunction with an HTST pasteurizer so as to:
    a. reduce the holding time below the legal minimum;
    b. influence the required pressure relationships within the regenerator; and,
    c. function as a flow promoting device, except if inter-wired with the flow control device.

7. All UHT pasteurizers shall be equipped with:
    a. a constant level tank;
    b. a regeneration section (where applicable);
    c. a flow control device;
    d. a heating section;
    e. a holding section;
    f. an indicating thermometer;
    g. a recording thermometer or temperature recording device;
    h. a flow diversion device;
    i. a divert flow controller;
    j. a divert flow indicator; and
    k. a cooling section (where applicable).

3.6 Record Keeping

1. A milk plant operator shall maintain a complete and accurate record of the temperature used in pasteurization for each lot of pasteurized dairy product. Temperature recording charts are retained at the milk plant for not less than twelve months and contain the information set out below:

    a. the name of the milk plant,
    b. the date,
    c. the pasteurizer or recorder number,
    d. the temperature of pasteurization as shown by the indicating thermometer at a certain time or reference point during the holding period,
    e. the name and signature of the pasteurizer operator,
    f. the products processed,
    g. the flow diversion valve position forward or divert, and,
    h. the cut-in and cut-out temperature recorded daily by the operator at the beginning of the run.

3.7 Processing Milk Products

1. All milk products shall be produced from pasteurized milk except for raw milk cheese made under *The Food and Drug Act* (Canada).

2. Processing of milk products are considered to be a food processing activity and fall under the scope of “processing facility”. Refer to appropriate sections of The Food Safety Regulation and supporting best management practice documents for guidance.

3. The National Dairy Code – Part 1, 2015, provides guidance on milk product composition standards as a helpful reference. Provincial legislation prevails over any discrepancies between such legislation and the National Dairy Code.

Appendix A

Quality of milk to be pasteurized - Testing Requirements

Test Type	Testing Criteria
Mesophilic Aerobic Count	Maximum 50,000 CFU/mL
Total Bacteria	Maximum 121,000 bacteria per mL
Somatic Cell count Cow Goat	 Maximum 400,000 somatic calls per mL Maximum 1,500,000 somatic cells per mL
Antibiotics/ Inhibitors	As per *The Food and Drug Act (Canada)*
Freezing Point Cow Goat	 -0.525 Hortvet/ -0.507 Celsius -0.554 Hortvet/ -0.535 Celsius

Appendix B

Resources for Operators

Note: Resources listed here are for reference only and not intended to be all inclusive. If any difference is noted between the information below and the Saskatchewan standards, the Saskatchewan standards will prevail.

Canadian Dairy Information Centre www.dairyinfo.gc.ca

The Canadian Dairy Information Centre (CDIC) is the unique Internet reference for comprehensive and up-to-date statistics and market information on the Canadian dairy industry.

Canadian Food Inspection Agency - Dairy Establishment Inspection Manual (DEIM)

This page was archived by CFIA due to the coming into force of the *Safe Food for Canadians Regulations*. Archived information is provided for reference or research purposes only. http://www.inspection.gc.ca/food/archived-food-guidance/dairy-products/manuals-inspection-procedures/dairy-establishment/eng/1339533901044/1339534012017

Canadian Maximum Residue Limits (MRLs)

A Maximum Residue Limit is a level of residue that could safely remain in the tissue or food product derived from a food-producing animal that has been treated with a veterinary drug. https://www.canada.ca/en/health-canada/services/drugs-health-products/veterinary-drugs/maximum-residue-limits-mrls.html

National Farm Animal Care Council (NFACC) - Code of Practice for the care and handling of farm animals - Dairy Cattle

https://www.nfacc.ca/codes-of-practice/dairy-cattle/code

The Safe Food for Canadians Regulations https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-108/index.html

SaskMilk – www.saskmilk.ca

SaskMilk's general role and responsibility is to design and implement dairy policies and programs for the benefit of producers and other industry stakeholders.