

National Dairy Code

Production and Processing Regulations

Fourth Edition

Amended July, 2005

Short Title

1. This Document may be cited as the National Dairy Code, 1997.

Interpretation

2. In this Code,

“bulk milk grader” means a person who holds a Bulk Milk Grader’s Permit;

“Bulk Milk Grader’s Permit” means a permit issued by a Regulatory Agency for the grading of milk at the farm and transport level;

“dairy animal” means cows, goats and sheep and such other species, as may be kept for the purposes of milking;

“dairy farm” means a farm where dairy animals are kept for milking and from which a part or all of the milk is sold, offered for sale or supplied for human consumption, and includes all buildings, yards and premises occupied or used in connection with the production of milk;

“dairy barn ” means a building or structure that is used to house dairy animals on a dairy farm and includes

- (i) a housing barn in which no milking occurs,
- (ii) a milking barn in which feeding and holding areas are used in conjunction with a milking system;

“dairy plant” means a premises, building or structure, where milk is received and the processing of dairy products occurs;

“dairy plant process worker” means a person who engages in activities, duties and functions governed by Part II of this Code;

“farm-separated cream” means the fatty liquid separated from milk on the farm;

“inhibitor” means any substance, other than a bacterial culture, that does not naturally occur naturally in milk and inhibits the growth of bacteria in milk¹;

“milk” means a normal lacteal secretion obtained from the mammary gland of a dairy animal;

¹ Once it is resolved whether the wording will be absence of inhibitors or absence of veterinary drugs, then this definition and other references to inhibitors should be changed accordingly.

“milk house” means a building or structure where
 (a) milk or farm-separated cream is cooled or stored; or
 (b) milking equipment is cleaned, sanitized, and stored;

“milk parlour” means a building, or structure, or a portion of building, or structure, where milking occurs but where no animals are housed;

“milk marketing agency” means a provincial or territorial agency or other such organization or entity, as is defined by the legislation applicable in each province or territory, that has the legislative authority with respect to the marketing of milk or farm-separated cream;

“pest” means any animal or arthropod that may contaminate raw milk or farm separated cream;

“producer” means a person who sells, or delivers for sale, milk or farm-separated cream that has been produced by a herd of dairy animals that they own or control;

“raw milk” means milk that has not been pasteurized;

“Regulatory Agency” means an organization or a government, minister or authority, of the federal, provincial or territorial government that is responsible for the administration and enforcement of this Code;

“sale” includes trade, or barter;

“transport vehicle” means a vehicle used for the transport of milk, or farm-separated cream;

“transport vehicle depot” means a building or shelter where milk or farm separated cream is transferred from one transport vehicle to another.

Application

3. This Code applies to all dairy farms, dairy plants, dairy process workers, producers and their personnel, bulk milk graders, and owners and operators of transport vehicles.

PART I²

PRODUCTION AND TRANSPORT

Construction, Arrangement and Operation of Production Establishments

4. The areas and yards surrounding a dairy barn and milk house shall be
 - (a) configured and maintained in a manner that will prevent contamination of milk and farm-separated cream
 - (b) kept free of refuse and animal and vegetable wastes; and
 - (c) well drained.

5. In order to permit passage by a transport vehicle, the roadway to a milk house shall be maintained by the producer so that it is
 - (a) accessible in all weather conditions;
 - (b) free of animals, locked gates and other obstacles .

Dairy Barns

6. A dairy barn shall be
 - (a) kept clean;
 - (b) maintained in good repair;
 - (c) provided with a water source; and
 - (d) insulated and ventilated so as to prevent the accumulation of odours or water condensation.

7.
 - (1) A dairy barn shall be designed, and constructed in a manner to
 - (a) permit the operations carried on therein to be performed under sanitary conditions;
 - (b) prevent the contamination of milk or farm-separated cream; and
 - (c) prevent damage by dairy animals.

 - (2) A dairy barn shall be constructed of materials that
 - (a) are durable;
 - (b) will permit the effective cleaning of all interior surfaces; and
 - (c) are free of any toxic or noxious substances.

 - (3) Subject to subsection (4), floors and alleyways of a dairy barn shall be
 - (a) constructed of concrete or other impervious materials and in a manner to prevent random cracking; and

² General prohibitions would go into an Act. This would include statements such as “No person shall sell raw milk, raw milk products or farm-separated cream other than to a licensed dairy plant or milk marketing agency” and all statements on who and what should be permitted, how permits are suspended or revoked, etc.

(b) maintained in good repair.

(4) Subsection (3) does not apply to bedded areas of loose housing barns or stalls in a free stall barn.

(5) For the purposes of subsection (4) the following definitions apply

(a) “free stall barn” a building with alleyways and individual stalls where dairy animals are housed and have free access to stalls; and

(b) “loose housing barn” a structure with a minimum of three walls and a roof that contains no stalls.

8. A dairy milking barn shall

(a) have walls that are hard, cleanable, and light-coloured;

(b) have stall platforms, gutters, floors, mangers and alleyways made of concrete or other impervious material and be constructed in a manner to prevent random cracking;

(c) have ceilings that are hard, cleanable, and light-coloured;

(d) have manure gutters of sufficient size to contain manure accumulated between cleanings;

(e) have gradient in stalls that permit complete drainage;

(f) be provided with light that is shielded so as to prevent breaking glass from falling into open milk containers;

(g) be illuminated in a manner that permits the person conducting the milking operation to

(i) see the udders of the dairy animals during milking, and

(ii) perform milking operations in a sanitary manner;

(h) have, in a case where a liquid manure pit is located under or adjacent to a dairy housing barn, ventilation for the pit to ensure that the odours from the pit do not enter the barn, milk house or milking parlour.

Milking Parlour

9. (1) A milking parlour shall

(a) be equipped with or have ready access to a pressurized hot and cold running potable water system that is protected from any source of contamination;

(b) be equipped with pipes, hoses and nozzles that are installed and arranged in a manner that permits cleaning of the parlour and equipment;

(c) be equipped with a ventilation system to eliminate condensation and odours that may affect the organoleptic characteristics of the milk;

(d) be equipped with a heating system to prevent freezing;

(e) be illuminated in a manner that permits the person conducting the milking operation to

(i) see the udders of the dairy animals during milking, and

(ii) perform milking operations in a sanitary manner;

(f) have walls and ceilings that are

- (i) covered with hard, smooth, washable, light-coloured, waterproof material,
 - (ii) free of indentations, loose scale, pitting and cracks;
 - (g) have the lower 15 cm of the walls, above floor level, constructed of concrete or other impervious material;
 - (h) be kept free of animals other than those of the dairy animal species kept for the purposes of milking.
- (2) The floor, ramps and platforms of a milking parlour shall
- (a) be constructed of concrete or other impervious material;
 - (b) be maintained in good repair;
 - (c) be free of indentations, cracks and crevices;
 - (d) be rounded at the intersection with the walls; and
 - (e) have covered drains, equipped with traps, that are sloped so as to flow into a wastewater drainage system.
- (3) Where a milking parlour is constructed as a part of a dairy housing barn it shall be located so that all equipment can be kept clean and free of contamination including stable odours.

Milk Houses

10. (1) A producer shall have a milk house used exclusively for
- (a) cooling and storing milk or farm-separated cream; and
 - (b) cleaning, sanitizing, storing materials and equipment used in the production and handling of milk or farm-separated cream.
- (2) A milk house, when attached to or part of a dairy housing barn or milk parlour, shall be
- (a) fitted with self-closing doors where the milk house enters directly into a milking barn;
 - (b) located, constructed and maintained so as to prevent any objectionable odours from entering the milk house directly from the milking parlour, barn or any other source; and
 - (c) accessible from an exterior entry point.
- (3) The floors of a milk house shall
- (a) be constructed of washable, waterproof material and be rounded and sealed at the intersection with the walls;
 - (b) be free of indentations, cracks or crevices;
 - (c) be sloped to covered drains, equipped with traps, to ensure the drainage of wastewater;
 - (d) have a wastewater drainage system; and
 - (e) have a concrete or impervious wall rising at least 15 cm above the floor.

- (4) A milk house shall
 - (a) be equipped with a pressurized hot and cold running potable water system,
 - (i) with pipes, hoses and nozzles installed and arranged in a manner that permits cleaning of the parlour and equipment, and
 - (ii) that is protected from any source of contamination to the water;
 - (b) be equipped with a ventilation system to eliminate condensation and odours that may affect the organoleptic characteristics of the milk;
 - (c) be properly insulated and heated to prevent freezing;
 - (d) be lighted in a manner that permits milk or farm-separated cream handling operations, inspection, cleaning and sanitizing of the premises and equipment;
 - (e) be equipped with a dispenser containing individual towels;
 - (f) have walls and ceilings that are
 - (i) covered with hard, smooth, washable and waterproof material, and
 - (ii) free of indentations, pitting and cracks; and
 - (g) be kept free of animals.
- (5) Lights in a milk house shall be protected by shatterproof covers or coatings.
- (6) All exterior doors, windows and openings of a milk house shall be closed or fitted with screens or other devices to prevent the entry of pests.
11. (1) A milk house shall contain
 - (a) a dual-compartment sink with a concave bottom, or a single compartment sink with concave bottom for washing equipment, and a separate sink for washing hands;
 - (b) the necessary materials for washing and drying the hands;
 - (c) a cupboard, stands or shelves of non-corrodible material located off the floor to hold the materials, and equipment used in the production and handling of milk or farm-separated cream.
- (2) All sinks referred to in subsection (1) shall be drained by a pipe equipped with a trap connected to a wastewater drainage system.
- (3) Where a milk house is provided with a lavatory, the lavatory shall
 - (a) not open directly into the milk house working area; and
 - (b) be maintained in a clean and sanitary condition.
12. (1) All cleaning materials, containers of detergents or sanitizers used in the production and handling of milk or farm-separated cream, shall be stored in a milk house in a location and manner that will not contaminate the milk or farm-separated cream.
- (2) No pesticides, or other toxic products, other than those that are directly related to the operation of a milk house, shall be stored in a milk house.

- (3) All veterinary drugs stored in a milk house, shall be kept in a cupboard or refrigerator in a manner that prevents contamination of the milk.
13. (1) A milk house shall be designed in a manner that
- (a) permits the installation of a bulk milk tanks having free space at each side and in front, behind, above and below to allow access for inspection, transfer, cleaning and sanitizing;
 - (b) the ceiling that is high enough to permit the inspection of the milk and complete vertical removal of the gauge or dipstick of the bulk milk tank.
- (2) A milk house shall be equipped with a hose port in one wall, in close proximity to the bulk milk tank outlet with a self-closing cover through which the hose connecting the milk transport truck to the milk tank may pass to permit collection.
- (3) There shall be
- (a) a concrete or crushed stone apron outside the milk house and directly below the hose port, that is connected to the main entrance of the milk house by a sidewalk constructed of hard material, that is large enough to keep the hose from the transport vehicle clean.
 - (b) a grounded exterior electrical outlet adjacent to the hose port and controlled by a bipolar switch located on the interior wall of the milk house in a location accessible to the bulk milk grader;
 - (c) a window in the milk house that permits the bulk milk grader to observe the transfer pump compartment of the transport vehicle's tank from inside the milk house;
- (4) When located in a milk house, the refrigeration compressor, vacuum pump of the milking system, water heater and the water pump, shall be installed and operated in a manner that does not contaminate the milk.
14. (1) A bulk milk tank shall be installed in a milk house.
- (2) A bulk milk tank installed in a milk house shall
- (a) be used exclusively for the storage and cooling of milk;
 - (b) have a capacity that is equivalent to a minimum of 2.5 days of milk production by the dairy animal herd during its peak production period;
 - (c) be equipped with a dipstick or gauge or other measuring device authorized by the Regulatory Agency to permit determination of the volume of milk contained in the tank on the basis of the calibration table bearing the same serial number as the dipstick or gauge and the tank;
 - (d) have mechanical agitation capable of restoring uniformity of all milk constituents throughout the tank without splashing or churning of the milk;
 - (e) not use air agitation;

- (f) be equipped with intermittent controlled agitation that provides a minimum of 5 minutes of agitation every hour;
- (g) be suitable for cooling the milk and maintaining it at a temperature of between 1°C and 4°C ;
- (h) be equipped with a thermometer in working order bearing graduations from at least 0°C to 50°C and showing the temperature of the milk contained in the tank to within 2°C;
- (i) be equipped with an outlet cap;

(3) A bulk milk tank shall be

- (a) emptied at least once every two days, unless approval for a longer period is granted by the Regulatory Agency; and
- (b) cleaned and sanitized following each transfer of milk to the transport vehicle.

15. (1) The milk contained in the farm bulk milk tank shall be maintained at a temperature of between 1°C and 4°C until collection.

(2) The temperature prescribed for milk in subsection (1) shall be achieved in the following manner:

- (a) the first milking placed in the bulk milk tank shall be cooled to 10°C or less within one hour and to between 1°C and 4°C within two hours after milking and maintained at that temperature;
- (b) the blend temperature, when subsequent milkings enter the tank, shall not rise above 10°C and milk shall be cooled to between 1°C and 4°C within one hour after milking and maintained at that temperature.

16. (1) A producer of farm-separated cream shall provide a cooling system capable of maintaining the farm-separated cream at a temperature necessary to achieve acidity levels set out in Table 1.

(2) A producer of farm-separated cream is not required to have a bulk milk tank in a milk house.

Equipment

17. All equipment that comes into contact with milk or farm separated cream shall

- (a) be maintained in working order;
- (b) be used only for the purposes of collecting, cooling, holding and transferring milk or farm-separated cream.
- (c) have surfaces that come into contact with milk and farm separated cream which are,
 - (i) constructed of non-corrodible materials;
 - (ii) smooth and free of cavities, open seams and loose particles;
 - (iii) non-toxic and resistant to damage from cleansers and sanitizers;

(v) unaffected by milk or farm-separated cream and which are manufactured in such a manner as not to affect them.

Operations

18. The premises, materials and equipment of the dairy barn, milking parlour and milk house shall be kept clean and maintained in good repair.
19. Prior to milking, a person who is conducting the milking operation shall;
- (a) ensure that the sides, flanks and belly of the animal are free of dirt;
 - (b) discard the first stream of milk from each teat;
 - (c) clean and sanitize the teats and udder base and dry them with single service towels.
20. (1) A person who is conducting a milking operation shall
- (a) wash their hands and dry them with single service towels to ensure that their hands are clean at all times during milking;
 - (b) not engage in milking with wet hands;
 - (c) have clean clothing;
 - (d) in a case where the person has an open lesion wear a waterproof dressing that prevents contamination of the milk or farm-separated cream.
- (2) No person, infected with or carrying any communicable disease that may be transmitted through the milk or farm-separated cream, shall work in a capacity that involves the production, handling, storage or transportation of raw milk or farm-separated cream.
21. Bedding shall not be changed or disturbed while milking is performed in the dairy milking barn.
22. (1) Subject to subsection (2) solid and liquid manure shall be removed daily from the dairy milking barn.
- (2) Manure may be permitted to accumulate in a loose housing barn provided there is sufficient bedding to ensure a clean, dry rest area for the dairy animals.
- (3) For the purposes of subsection (2) the definition of loose housing barn set out in subsection 7(5) applies.
23. The person who is conducting a milking operation shall, immediately after removing the milking machine, sanitize the teats with a teat dip solution approved for that purpose under the *Food and Drugs Act (Canada)*.
24. Equipment that comes into contact with the milk during milking shall be
- (a) rinsed, washed, rinsed and drained within one hour after use;

- (b) stored when not in use in a manner that prevents contamination and
- (c) sanitized and drained immediately before use.

25. A producer shall have posted procedures for the milking equipment sanitation program and ensure that they are followed.

26. Detergents, sanitizers, pesticides and other pest control products shall comply with the requirements prescribed by of the *Meat Inspection Act & Regulations (Canada)* and the *Pest Control Products Act (Canada)*, and any applicable provincial legislation.

27. All detergents, sanitizers, insecticides, pesticides and other pest control products shall be kept in their original labeled containers or kept in containers that are labeled to ensure easy identification of the type of products that they contain.

28. Alternative storage temperature regimes for raw milk used in the manufacture of specialty products may be approved where necessary, by the Regulatory Authority, as long as health and safety standards are maintained.

Animal Health

29. A dairy barn shall not be used to house animals other than dairy animals being kept for the purposes of milking.

30. Animals whose milk is intended for human consumption shall be kept clean and free of diseases transmissible to humans by milk.

31. Where more than one dairy species is maintained in the same operation,

- (a) dairy ewes shall be kept in separate buildings from other dairy species;
- (b) dairy species other than dairy ewes may be kept in separate areas of the same building; and
- (c) milking, collection, storage and transfer equipment shall be operated in a manner that prevents mixing of the milk between dairy animal species.

32. In dairy goat operations, all bucks shall be housed separately from the rest of the herd in order to prevent odour contamination of the milk

33. Only drugs or products approved for administration to dairy animals under the *Food and Drugs Act (Canada)*, *the Feeds Act (Canada)*, the *Pest Control Products Act (Canada)* and any applicable provincial legislation, may be administered to a dairy animal, as set out on the product label.

34. A producer shall identify treated animals and maintain a permanent written record of all veterinary drug use.

35. In a dairy barn young dairy animals shall be kept in separate pens or box stalls when housed in the same facility as the milking herd.

Handling and Transport of Bulk milk or Farm-Separated cream

36. Any person who performs the duties of a bulk milk grader under this Code shall have completed and passed a training course, approved by the Regulatory Agency, for the grading of milk.

37. A person who grades or collects milk, operates a transport vehicle or bulk milk transfer depot, or performs other duties related to the grading, or transporting of milk must be authorized to do so by a Regulatory Agency.

38. A bulk milk grader shall

- (a) wear clean clothing while performing any activities, duties or functions under this Code;
- (b) wear a waterproof dressing over any open lesion that prevents contamination of the milk.

39. A bulk milk grader shall not transfer milk from a bulk milk tank where

- (a) the milk in the tank has been placed under detention by the Regulatory Agency; or
- (b) the producer has been prohibited from shipping milk by the Regulatory Agency.

40. A bulk milk grader, when collecting milk at the farm, shall use the hose port and

- (a) ensure that their hands are clean before handling or touching equipment;
- (b) accept or reject the milk contained in the bulk milk tank on the basis of its appearance, odour, temperature or other abnormalities;
- (c) measure the volume of milk contained in the producer's bulk milk tank;
- (d) draw a representative sample of milk
 - (i) by means of the mechanical sampler on the transport vehicle, or
 - (ii) directly from the producer's bulk milk tank; using a pipette, sanitized dipper rinsed in the milk prior to sampling or other sanitary sampling device; following agitation of the milk contained in the tank for at least 5 minutes or as otherwise authorized by the Regulatory Agency to assure uniform agitation of the milk;
- (e) draw a sample of milk, on a monthly basis or as otherwise authorized by the Regulatory Agency, in an aseptic manner following agitation of the milk contained in the tank for 5 minutes or as long as is necessary to assure homogeneity of the milk;
- (f) maintain all samples at a temperature of between 1°C and 4°C and delivery to the responsible person at the processing plant or other agreed place;
- (g) record on a collection report all information required by the processing plant, Regulatory Agency or milk marketing agency; and
- (h) following transfer of the milk to the transport vehicle, disconnect the hose, and rinse the interior surfaces of the bulk milk tank with lukewarm water.

41. (1) The bulk milk grader shall leave the milk in the bulk milk tank, where the milk in the tank,
- (a) is abnormal in odour;
 - (b) contains objectionable matter or other physical defects or abnormality;
 - (c) is abnormal in temperature;
 - (d) would, if transferred to the transport vehicle, have a detrimental effect on the milk in the transport vehicle or on subsequent transfers of milk;
 - (e) is otherwise not of good quality; or
 - (f) cannot be sampled.
- (2) The bulk milk grader shall, following the taking of the action referred to in subsection (1), issue a written notice to the producer detailing the reason for the rejection, or any other information required by a Regulatory Agency and as soon as possible thereafter inform the appropriate Regulatory Agency or milk marketing agency of this action.

Transport Vehicles³

42. Transport vehicles shall be used exclusively for the transportation of milk, farm separated-cream or potable water unless otherwise authorized by the Regulatory Agency.
43. (1) On a transport vehicle, the inner wall of the tank, and any equipment that comes into contact with the milk, and any container used for the transportation of farm-separated cream shall be
- (a) constructed of non-corrodible material, and manufactured in such a manner as not to affect milk or farm-separated cream;
 - (b) smooth and free of cavities and loose particles;
 - (c) non-toxic and resistant to damage from cleansers and sanitizers,
- (2) The tank of a transport vehicle shall be
- (a) insulated in a manner such that the temperature of the milk cannot rise more than 2°C in 24 hours; and
 - (b) equipped with sufficient number of spray balls to allow for proper cleaning.
- (3) The tank and accessories of the transport vehicle shall be washed and sanitized at least once per day in a manner that prevents contamination of the milk and if more than one load is collected in one day in a transport vehicle the pump, hoses and fittings of the transport vehicle shall be washed between loads.
- (4) The outer wall of the tank of a transport vehicle shall be constructed of hard, smooth, non-corrodible, washable, waterproof material.

³ Should 3A standards be used?

(5) A transport vehicle shall be equipped with a compartment to store hose, pump and any equipment used in the transfer of milk to protect them from any source of contamination.

44. Containers used for the transportation of farm-separated cream shall be washed and sanitized in a manner that prevents contamination of the farm-separated cream.

Milk Transfer

45. Transport vehicle depots shall

- (a) be constructed and maintained such that there is no risk of contamination to the milk during the transfer process;
- (b) provide hot and cold potable water to permit the proper sanitizing of the transport vehicle and equipment;
- (c) provide sanitary storage space for equipment used in the transfer of milk; and
- (d) be maintained free of pests.

46. Pesticides, sanitizers and any other products used in the operation of a transport vehicle depot shall be used and stored in a manner that will not cause contamination of the milk or milk transfer equipment.

Milk Quality Standards⁴

47. (1) Milk and farm separated cream shall be negative for the presence of veterinary drug residues and inhibitory substance residues as tested by an approved screening method or testing below the MRL by an approved quantitative method.

(2) Methods to determine compliance with subsection (1) shall use an approved screening method or an approved quantitative method.

48. All methods used for the analysis of milk for the purposes of this Code shall conform to the handling, procedural, and quality control parameters described in the most recently published “Standard Methods for the Examination of Dairy Products” approved by the American Public Health Association, or the “Official Methods of Analysis of the Association of Official Analytical Chemists”, or any method approved by the International Dairy Federation or the National Liaison Group on Milk Product Quality, or any other method approved by the Regulatory Agency.

49. Milk shall not be sold that

- (a) comes from an animal 15 days prior to and 3 days after parturition, or such longer period that is necessary to assure that the milk is free of colostrum;

⁴ Should milk that is rejected for human consumption and destined for animal consumption be coloured to avoid diversion back to the human food chain?

- (b) contains blood, coagulation, or other foreign particles;
- (c) is watery;
- (d) has odours that adversely affect its organoleptic characteristics;
- (e) is contaminated by chemical, veterinary drug residue, inhibitory substance residue or any other foreign substance.

50. Raw milk, farm separated cream or a product produced from raw milk or farm separated cream may only be sold to a dairy plant or milk marketing agency.

51. (1) Milk samples taken from producers shall be tested as required by the Regulatory Agency to ensure compliance with this Code.

(2) Raw milk samples, obtained for the purposes of this Code, shall be tested in a laboratory designated by the Regulatory Agency.

52. A producer whose milk has been found to contain veterinary drug residues or inhibitory substance residues is not permitted to sell or supply milk until a subsequent bulk milk sample taken from the farm bulk milk tank tests negative.

53. (1) Milk or farm-separated cream shall meet the standards set out in Table 1.

(2) The standard set out in Table I must be met by a producer in order to sell or market milk or farm separated cream.

**TABLE 1 - CHEMICAL AND MICROBIOLOGICAL STANDARDS
FOR MILK AND FARM-SEPARATED CREAM**

PRODUCT	PARAMETER	STANDARD
Raw milk	Temperature	1°C to 4°C for milk contained in the bulk milk tank (subject to sections 15.1 and 15.2).
	Total living mesophilic aerobic bacteria count	Producer: maximum 50,000 total living mesophilic aerobic bacteria per ml.
	Somatic cells	Cow's milk: maximum 500,000 somatic cells per ml. Goat's milk: maximum 1,500,000 somatic cells per ml.
	Veterinary drug residues and inhibitory substance residues	Negative for the presence of veterinary drug residues and inhibitory substance residues as tested by an approved screening method or testing below the MRL by an approved quantitative method.
	Cryoscopy	Maximum: -0.525°H or (-0.507°C) for cow's milk.
Farm-separated cream	Acidity	Unacceptable if greater than 0.60% lactic acid.
	Veterinary drug residues and inhibitory substance residues	Negative for the presence of veterinary drug residues and inhibitory substance residues as tested by an approved screening method or testing below the MRL by an approved quantitative method.
	Frequency of Testing	Every pickup.

PART II
PROCESSING

54. In this Part

“commercially sterile” means the condition obtained in a dairy product that has been processed by the application of heat alone or in combination with other treatments, to render the dairy product free from viable forms of micro-organisms, including spores, that would be capable of growing in the dairy product at normal temperatures at which the dairy product is designed to be held during distribution and storage;

“contaminated dairy product” means a dairy product that has been exposed to contamination;

“contamination” means the introduction, or occurrence in food or the food environment of any biological or chemical agent, pest, foreign material or substance that has the potential to compromise food safety, or render the food unfit for human consumption and sale;

“critical control point” means a point or procedure in a dairy plant, where, with respect to the receiving of milk, or the processing of dairy products, a failure to exercise the control over the process at that point or a failure to follow a procedure in the process may result in a health hazard;

“critical limit” means identified tolerances in processing that shall be met to ensure that a critical control point effectively controls a health hazard;

“dairy plant permit holder” means a person holding a permit to operate a dairy plant;

“dairy product” means milk or a product thereof, that

- (a) contains no oil or fat other than that of milk,
- (b) is prescribed by a standard set out in this Code, including foods made by modifying the standard in accordance with this Code, or
- (c) contains a minimum of 50% milk ingredients by weight;

“dairy product contact surface” means any surface, including equipment, that comes into contact with dairy products during processing;

“food grade steam” shall be steam made from potable water;

“hand washing station” means a hand basin or similar reservoir for holding liquid where soap is provided in a dispenser, and has both a hot and cold water source;

“HTST” means high temperature, short time;

“hygienic practices” means all practices and measures necessary in the production, processing, and distribution of dairy products to ensure that the dairy products are free from contamination and meet the requirements in this Regulation, including Schedules II and III;

“pasteurization” means the process of heating every particle of a dairy product in equipment that is designed and operated to meet or exceed the required time and temperature relationships as specified by these regulations;

“permit” means a registration, licence or certificate issued by a Regulatory Agency for the processing of dairy products;

“processing” means the manufacture, modification, pasteurization, preparation, reconstitution, packaging or storage of dairy products, and includes the cleaning and sanitizing of equipment and the dairy product contact surface;

“sanitary” means a condition that prevents contamination by a microbiological, chemical or physical hazard;

“sanitize” means the killing of any pathogenic bacteria.

“spoilage” means in the case of a raw milk, farm separated cream and dairy foods, an action that renders the food unfit for human consumption;

“thermal processing” means a heat preservation process applied to food with the object of reducing the level of pathogenic microorganisms associated with that food in order to assure the safety of that food over its intended shelf-life and storage conditions;

“UHT” means Ultra High Temperature, the thermal processing of dairy products by systems that are capable of rendering the product commercially sterile upon exiting the thermal processor.

Construction, Layout and Operation of Dairy Plants

55. The establishment, construction or alteration and operation of a dairy plant shall meet the following standards:

- (1) The access routes and exterior traffic areas shall be constructed with a dense material, so as to prevent contamination from dust and mud.
- (2) The surrounding area must be free of waste and refuse and of any other source that could contaminate the milk or food products that are produced at the plant.
- (3) The exterior of the plant shall be constructed of materials that are durable and maintained in good repair. The building shall be equipped with doors, windows and other

openings, that lead to the outside that have been designed and installed so as to prevent the entry of arthropods, birds, rodents or other vermin or such other thing from entering the plant and contaminating product.

(4) In order to prevent product contamination, the product handling areas within the plant shall have floors, walls and ceilings that are made of smooth, washable and waterproof material and constructed in such a manner as to be easily cleanable; free of cracks and crevices; floors that are free draining to drains that are connected to sewer piping that will *adequately* carry the waste from the plant in a sanitary manner and joined at the wall so as to prevent the accumulation of dirt and liquids.

(5) Have an adequate source of potable hot and cold water and food grade steam to serve the needs of the plant; be equipped with waste and sewage disposal systems to remove waste from the plant in a sanitary manner that is separate from toilets, urinals and sinks.

(6) The plant must have a lighting system that is designed and installed in each area to enhance food production and handling operations as well as the cleaning and disinfecting of facilities and equipment. The lights must be protected in order to prevent the contamination of product or packaging, in the event of lighting element breakage.

(7) The plant must be equipped with a ventilation system that will vent condensation, vapours and odours to the exterior and provide air flow that will not contaminate product.

(8) The plant shall be equipped with *sanitary* hand washing stations in working areas, equipped with hot and cold water under pressure so as to allow for the cleaning and disinfecting of hands.

(9) The plant shall be provided with *sanitary change rooms and* washrooms equipped with hot and cold water under pressure, *sanitary* hand washing sinks and toilets for employees and visitors. These facilities must not lead directly into processing and packaging areas of the plant.

(10) The plant shall be designed so as to prevent cross contamination between raw ingredients and finished products.

(11) The plant shall comply with the standards set out in regulations that have been developed by each jurisdiction, to meet the intent of the National Dairy Code in their jurisdictional areas and must operate only with prior approval of the Regulatory Agency.

Thermal Processing

56. (1) Subject to subsections (3) or (4), dairy products shall not be sold, unless the dairy products have been pasteurized, in accordance with Schedule I.
- (2) A dairy product that has been treated as ultra-high temperature (UHT) and aseptically packaged; and dairy products that have been sterilized in the container must conform to the definition of “commercial sterilization”.
- (3) Subsection (1) does not apply to cheese that has been manufactured in compliance with the *Food and Drugs Act & Regulations (Canada)*.
- (4) Subsection (1) does not apply to dairy products which have not been pasteurized that are sold or distributed for further manufacturing or processing to a facility approved by the Regulatory Agency in order to pasteurize it in a manner in accordance with Schedule I and are clearly and prominently labeled “Not for Retail Sale – Product not Pasteurized – Subsequently Must be Pasteurized or Thermally Processed”.
57. (1) The dairy plant permit holder shall ensure that
- (a) all pasteurization equipment, including UHT processes, are designed, constructed, and operated to ensure the pasteurization of dairy products;
 - (b) all batch pasteurizers, HTST pasteurizers and UHT pasteurizers meet the requirements set out in subsections (2) to (6);
 - (c) temperature recording charts are retained at the dairy plant for not less than twelve months and contain the information set out in subparagraphs (i) to (viii)
 - (i) the name of the dairy plant,
 - (ii) the date,
 - (iii) the pasteurizer or recorder number,
 - (iv) the temperature of pasteurization as shown by the indicating thermometer at a certain time or reference point during the holding period,
 - (v) the name and signature of the pasteurizer operator,
 - (vi) the products processed,
 - (vii) the flow diversion valve position forward or divert,
 - (viii) the cut-in and cut-out temperature recorded daily by the operator at the beginning of the run;
 - (d) HTST pasteurizers are designed to ensure that when in operation
 - (i) the flow diversion valve does not operate in forward flow unless the temperature of the dairy product being pasteurized equals or exceeds that required for its proper pasteurization, and
 - (ii) the product pressure in the pasteurize side of the regenerator is at least seven kPa greater than the product pressure in the raw side of the regenerator.
- (2) 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.
- (3) During the holding operation, the airspace temperature in batch pasteurizers shall be at least 3°C above the minimum product pasteurization temperature.
- (4) All HTST pasteurizers shall be equipped with
- (a) recording thermometer;
 - (b) a constant level tank;
 - (c) a regeneration section;
 - (d) a flow control device;
 - (e) a heating section;
 - (f) a holding device;
 - (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;
 - (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 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 temperature recording device;
 - (h) a divert flow controller;
 - (i) a divert flow indicator;
 - (j) a cooling section where applicable pursuant to these regulations; and,
 - (k) a flow diversion device.
- (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;

(c) function as a flow promoting device, except if it is interwired with the flow control device.

58. (1) Fluid milk and cream shall be cooled to 4° C immediately after pasteurization.
- (2) In the case of batch pasteurization, the cooling referred to in subsection (1) shall be accomplished within 1 hour.
- (3)
- (a) dairy products, which require refrigeration, must be kept at all times at a temperature which does not exceed 4°C;
 - (b) certain dairy products require to be kept at temperatures that exceed 4°C as part of their manufacturing process. These processes can include, but are not limited to, drying, curing, and aging of dairy products. However, when these manufacturing processes are completed, these dairy products must be kept as directed in 3 (a); and
 - (c) fresh cheese curd is permitted for sale at room temperature provided that all of the following conditions are met:
 - (i) the cheese curd is made from pasteurized milk,
 - (ii) the cheese curd is made in a licenced or registered dairy plant,
 - (iii) the cheese curd is made using an active bacterial culture, which reduces the pH at the expected rate for the cheese being made,
 - (iv) the cheese curd has a pH of less than or equal to 5.5 before being offered for sale,
 - (v) the cheese curd is of the hard or semi hard variety (a moisture content of less than 62% on a fat free basis),
 - (vi) the cheese curd is packaged before being offered for sale to preclude direct handling by the public,
 - (vii) the cheese curd must be refrigerated after 24 hours have elapsed after manufacturing. It is not to be offered for sale again at room temperature,
 - (viii) the cheese curd must be labelled to indicate to the consumer the time the product must be refrigerated,
 - (ix) any cheese curd that leaves the control of the processor must not be returned for reprocessing.

(4) Frozen dairy products must be kept in a frozen state at all times.

59. A dairy plant permit holder shall maintain a complete and accurate record of the temperature used in pasteurization for each lot of pasteurized dairy product.

60. A dairy plant permit holder shall ensure that all temperature indicating devices are accurate and maintained in working order.

Employees and Visitors

61. A dairy plant permit holder shall ensure that all dairy plant process workers are trained and competent to carry out their assigned duties or functions and hold appropriate permits from the Regulatory Agency authorising them to carry out those functions in a dairy plant.
62. (1) Entry to the processing, manufacturing, reprocessing, packing and repacking areas of a dairy plant shall be restricted to authorized personnel.
- (2) A dairy plant permit holder shall follow hygienic practices and require all dairy plant process workers and visitors to comply with those practices in order to ensure the sanitary processing of dairy products.
- (3) The plant facilities, material and equipment must be kept clean.
- (4) The dairy plant process workers shall
- (a) wear work apparel that shows dirt easily, and that has no pockets or buttons above the waist;
 - (b) wear a head covering or a hairnet and beard-cover in order to completely cover the hair while working in the plant; and
 - (c) change or cover clothing attire before moving from a high potential cross contamination area to an area with less potential cross contamination.
- (5) Watches or exposed jewelry shall not be worn within the dairy products processing areas.
- (6) Use of tobacco or eating of food shall be permitted only in approved, designated smoking or eating areas.
63. A dairy plant permit holder shall not permit:
- (a) any person who has a disease that is transmissible through food, in a food contact area;
 - (b) any dairy product to be handled by a person who has a disease that is transmissible through food;
 - (c) any dairy product to be handled by a person who has an open sore unless that person is wearing a waterproof protection on the wound that prevents contamination of the dairy products, ingredients, or surfaces with which the food may come into contact.

Milk Sources, Ingredients and Supplies

64. All raw milk received at a dairy plant shall
- (a) meet the minimum safety specifications set out in Schedule II or other applicable provincial legislation or as otherwise required by the Regulatory Agency;
 - (b) have been produced on a dairy farm approved by a Regulatory Agency; and
 - (c) have been transported by a person approved by the Regulatory Agency.

65. A dairy plant permit holder shall ensure that all raw milk and farm-separated cream received at a dairy plant is stored in a manner so as to be protected from spoilage and contamination.
66. (1) A dairy plant permit holder shall ensure that non-milk ingredients and supplies used in the processing of dairy products
- (a) conform to the requirements of the *Food and Drugs Act & Regulations (Canada)*; and
 - (b) are protected from contamination.
- (2) All raw materials and ingredients, during their use, must be fit for human consumption and, before their use, must be stored so as to be kept free of contamination and infestation.
- (3) Containers of raw materials and ingredients must be labeled to identify the type of raw materials and ingredients they contain.

Dairy Plant Equipment

67. A dairy plant permit holder shall ensure that all equipment used in a dairy plant is designed, constructed, installed and operated in compliance with these Regulations.
68. A dairy plant permit holder shall maintain and operate all parts of a dairy plant, including the equipment, in a safe and sanitary manner.
69. (1) A dairy plant permit holder shall ensure that all equipment used in the processing of dairy products is designed, constructed, installed and operated to assure that there is no cross-contamination of pasteurized dairy products with any other product.
- (2) The surfaces of the material and equipment that come into contact with the dairy products must be
- (a) made of non-corrosive material;
 - (b) smooth and have no crevices or loose parts;
 - (c) non-toxic and resistant to cleaning and disinfecting operations;
 - (d) unaffected by dairy products, and be constructed in such a way so as not to alter the characteristics of these products; and
 - (e) free of components or residue which may act as contamination agents for dairy products;
- (3) Steam introduced directly into the milk or the dairy products, or which comes into direct contact with the surfaces of dairy product processing equipment must be prepared with potable water and be free of harmful substances.

(4) The material and equipment constructed by assembly, other than by welding, must be removable, and each of their components must be accessible so as to allow cleaning, disinfection and inspection.

Dairy Plant Safety Management^{5 6}

70. A dairy plant permit holder shall not sell any dairy product for human consumption that is contaminated.

71. A dairy plant permit holder shall document procedures to demonstrate that dairy products processed and stored in the dairy plant do not result in a health hazard including

- (a) the identification of critical control points;
- (b) the critical limits for all critical control points;
- (c) the procedures required to ensure adherence to the critical limits; and,
- (d) the actions to be taken in the event that critical limits are not met.

72. (1) A dairy plant permit holder shall have written procedures for the dairy plant's sanitation program.

(2) The sanitation program for a dairy plant shall include

- (a) cleaning and sanitizing requirements and protocols for the dairy plant, including equipment; and
- (b) identification of approved cleaning and sanitizing agents, their concentrations and their prescribed use.

(3) The material and equipment which come into contact with the dairy products must be cleaned at the end of the daily operations, and disinfected immediately before their use and every time they are contaminated.

(4) Hand cleaning of equipment must be carried out with non-metallic materials.

73. (1) All cleaning agents, disinfectants, insecticides, pesticides and other methods of fighting against pests must conform to the requirements set out in subsections 9(9) and (10) of the *Meat Inspection Regulations (Canada)*.

(2) Subject to subsection (3) all cleaning agents, disinfectants, insecticides, pesticides must be stored in an enclosed area or compartment, outside the dairy products handling

⁵ There is a conflict between sections based upon a prescriptive philosophy and a HACCP philosophy. Those jurisdictions that are not considering mandatory HACCP would not use sections 71 and 72, for example.

⁶ Consideration was given to the requirement for a pest control program however as no pests are permitted in the premises, (section 55.3) then such a program simply becomes a means of achieving this objective.

areas; and the containers for these products must be labeled to identify the nature of the products they contain.

(3) In cases where, as part of the daily operation, it is necessary to make constant use, of a product referred to in this section, the containers identified as being for daily use may be stored in an enclosed compartment located inside the dairy products processing areas.

74. A dairy plant permit holder shall establish written procedures so that any lot of a dairy product can be identified and traced from the point of purchase of the raw product to the point of distribution.

Sampling, Testing and Standards of Dairy Products

75. Dairy products shall not contain detectable levels of food-borne pathogens and microbial toxins except as provided for in Schedule III and shall meet the microbiological, chemical and temperature standards as prescribed in Schedules II and III .

76. All dairy products shall meet the food additives and labelling requirements specified in the *Food and Drugs Act & Regulations (Canada)*.

SCHEDULE I

Minimum Thermal Processing Parameters for Batch and HTST Pasteurizers

Product	Pasteurization Type	Time	Temperature
Milk Based Products - below 10% MF	Batch/Vat	30 minutes	63 ⁰ C 145 ⁰ F
Milk Based Products - below 10% MF	HTST	15 seconds	72 ⁰ C 161 ⁰ F
Milk Based Products - 10% MF or higher, or added sugar (fluid cream, chocolate milk, flavoured milk)	Batch/Vat	30 minutes	66 ⁰ C 151 ⁰ F
Milk Based Products - 10% MF or higher, or added sugar (fluid cream, chocolate milk, flavoured milk)	HTST	15 seconds	75 ⁰ C 167 ⁰ F
Frozen Dairy Product Mixes, Egg Nog	Batch/Vat	30 minutes	69 ⁰ C 156 ⁰ F
Frozen Dairy Product Mixes, Egg Nog	HTST	25 seconds	80 ⁰ C 176 ⁰ F
		15 seconds	83 ⁰ C 181 ⁰ F

All pasteurized dairy products must test negative when tested for phosphatase. The minimum requirements as stated above are accepted by the Regulatory Agency. Other time and temperature combinations for the purpose of thermal processing may also be approved by the Regulatory Agency.

SCHEDULE II

Standards for Raw Milk and Farm-Separated Cream⁷

Temperature	Receiving plants may reject any milk arriving at the plant at temperatures greater than 6° C.
Bacterial Count	50,000 total living aerobic mesophilic bacteria per ml
Somatic Cell Count	500,000 per ml In the case of goat's milk, somatic cell count shall not exceed 1,500,000 per ml
Veterinary drug residues and inhibitor substance residues	Negative for the presence of veterinary drug residues and inhibitory substance residues as tested by an approved screening method or testing below the MRL by an approved quantitative method.
Cryoscopy	Maximum: -0.525°H or (-0.507°C) for cow's milk.

⁷The NLGMPQ is asked to develop standards for farm-separated cream

SCHEDULE III
Standards for Dairy Products⁸

1. Fluid cow's milk products, except creams, shall have a freezing point of -0.508 °C or lower.

Product	Bacteria	n	c	m	M
Cheese (pasteurized milk)	<i>S. aureus</i>	5	2	100	10,000 (/g)
	<i>E. coli</i>	5	2	100	1,000 (/g)
Cheese (unpasteurized milk)	<i>S. aureus</i>	5	2	100	10,000 (/g)
	<i>E. coli</i>	5	2	100	1,000 (/g)
Cheese (pasteurized) without ripening, including fresh cheeses, lactic curd with a minimum of 50% moisture	Coliform	5	2	10	100 (/g)
Fermented dairy products (e.g. buttermilk, yogourt, sour cream)	Coliform	5	2	100	100 (/g or ml)
Pasteurized milk, cream and other non-fermented dairy products	Mesophilic aerobic bacteria (32°C)	5	2	10,000	25,000 (/ml)
	Coliform	5	2	1	10 (/ml)
Frozen dairy products	Mesophilic aerobic bacteria (32°C) ⁹	5	2	10,000	50,000 (/ml)
	Coliform	5	2	10	100 (/ml)
Butter	Mesophilic aerobic bacteria (32°C)	5	2	10,000	50,000 (/g)
	Coliform	5	2	10	100 (/g)
Milk powders and other dairy product powders	Mesophilic aerobic bacteria (32°C)	5	2	10000	50,000 (/g)
	Coliform	5	2	10	100 (/g)
Evaporated, sweetened and condensed milk	Shall be commercially sterile				

n=number of sample units (subsamples) to be examined per lot¹⁰

c=maximum number of sample units (subsamples) per lot that may have a bacterial concentration higher than the value for "m" without violation of the Regulations

m=maximum number of bacteria per g or ml of product that is of no concern (acceptable level of contamination)

M=maximum number of bacteria per g or ml of product, that if exceeded by any one sample unit (subsamples) renders the lot in violation of the Regulations

⁸ The bacterial standards are to be met at the processing plant as these regulations only apply to processors. It has been the regulatory requirement of the *Food and Drugs Act (Canada)* that these same standards apply at the retail level.

⁹ Does not apply to frozen yogourt or other frozen fermented dairy products.

¹⁰ It should be clear in this document that this sampling plan is an obligation on the regulators, processors will have their own sampling plan

PART III

Dairy Product Composition Standards

1. Dairy product compositional and identity standards shall be based on provisions, both general and specific, as adopted by the Codex Alimentarius Commission, a joint committee of the Food and Agriculture Organization of the United Nations and the World Health Organization. Canada reserves the right to accept, to not accept or to accept with deviation these international standards for milk and milk products and other general principles advocated by the Codex Alimentarius Commission. Canada must also work towards harmonization regionally as set out under the North American Free Trade Agreement.

Food additive provisions are prescribed in the *Food and Drug Regulations (Canada)*. Specific food labelling provisions such as ingredient labelling and net quantity requirements are prescribed in the *Food and Drug Regulations (Canada)* or the *Consumer Packaging and Labelling Regulations (Canada)*. Labelling policies such as those for nutrient content claims (e.g. “fat free”) and those for modifying standardized common names (e.g. “low fat Colby cheese”) are included in the Guide to Food Labelling and Advertising.

General Labeling Requirements

2. Unless otherwise specified, the following information shall appear on all prepackaged products defined in these regulations:

- a) name of the product;
- b) name and address of the manufacturer; or name and address of the person for whom the product was manufactured as well as the factory/plant registration or identification number;
- c) the volume/weight of the product in millilitres/litres or grams/kilograms;
- d) labeling of all ingredients in descending order of percentage used;
- e) method of storing the product - keeping instructions;
- f) lot number if the best before date or expiry date is not indicated on the container;
- g) type of milk, if other than cow’s milk;
- h) level of milk fat shall be shown on the principle display panel, followed by the words “milk fat” or the abbreviation “B.F.” or “M.F.” on the following foods:
 - (i) partially-skimmed milks, partially-skimmed evaporated milk and partially skimmed milk with added milk solids,
 - ii) flavoured milks,
 - iii) cream,
 - iv) any variety of cheese,
 - v) processed cheese,
 - vi) cream cheese,
 - vii) cottage cheese,
 - viii) cold-pack cheese,
 - ix) yogourt and

x) sour cream.

Frozen Dairy Products

3. Ice Cream Mix

a) **Description.** Ice cream mix is the unfrozen food composed of milk, cream or other milk and modified milk ingredients, singularly or in combination, sweetened with permitted sweetening agents; and, shall contain a minimum of 36% solids by weight and 10% milk fat by weight in plain flavours and a minimum of 36% solids by weight and 8% milk fat in the case of mix with added cocoa and syrups, and in the case of fat-reduced product shall contain a minimum of 30% total solids by weight.

b) **Optional Ingredients.** Ice cream mix may contain the following safe and suitable ingredients: egg, a flavouring preparation, cocoa or chocolate syrup, salt, fruit juice, sweeteners, sweetening agents, up to 1% added edible casein or edible caseinates, and permitted food additives.

c) **Nomenclature.** The name of the food is ice cream mix.

4. Ice Cream

a) **Description.** Ice cream is the frozen food obtained by the freezing of ice cream mix, with or without the incorporation of air. It shall contain a minimum of 36% total solids by weight with a minimum of 180 g/l of which 50 g/l is solids from milk fat and shall have a minimum milk fat of 10% by weight. In the case of ice cream with cocoa, chocolate syrup, fruit, nuts and/or confections, the ice cream shall contain a minimum of 36% total solids by weight with a minimum of 180 g/l of which 40 g/l is solids from milk fat and shall have a minimum milk fat of 8% by weight. In the case of fat reduced ice cream, the product shall contain a minimum of 30% total solids by weight.

b) **Optional Ingredients.** Ice cream may contain the following safe and suitable ingredients: cocoa or chocolate syrup, fruits, nuts and confections, fruit juice, and permitted food additives.

c) **Nomenclature.** The name of the food is ice cream.

5. Sherbet

a) **Description.** Sherbet is the frozen food made from **fruit juice, water , milk ingredients and/or** modified milk ingredients . It shall contain not more than 5% milk solids, including milk fat, and not less than 0.35% acid determined by titration and expressed as lactic acid.

b) **Optional ingredients.** Sherbet may contain the following safe and suitable ingredients: water, sweeteners, sweetening agents, fruits, fruit juice, flavouring preparations, up to one percent added edible casein or edible caseinates, and permitted food additives.

c) **Nomenclature.** The name of the food is sherbet (*version francaise: sorbet laitier*).

6. Milk Shake Mix (PROPOSED TO OMIT THIS STANDARD - NO LONGER RELEVANT)

a) **Description.** Milk shake mix is the unfrozen, pasteurized combination of milk, cream or other dairy products. The food shall contain not less than 23% total solids and not less than 3% milk fat.

b) **Optional Ingredients.** Milk shake mix may contain the following safe and suitable ingredients: egg, sweeteners, sweetening agents, flavouring preparations, cocoa or chocolate syrup, up to 1% added edible casein or edible caseinates, and permitted food additives

c) **Nomenclature.** The name of the food is milk shake mix.

Creams, Milk , Egg Nog, Buttermilk¹¹

7. Cream - OMIT

8. Whipping cream - OMIT

9. Milk- OMIT

10. Enriched Milk- OMIT

11. Egg Nog

a) **Description.** Egg nog is the food **made from milk and cream** containing milk and cream **which has been flavoured and sweetened**. The food shall contain not less than 3.25% milk fat and not less than 23% total solids.

b) **Optional Ingredients.** Egg nog may contain the following safe and suitable ingredients: milk ingredients, modified milk ingredients, egg and egg yolk-containing ingredients, sweeteners, sweetening agents, flavour, natural and artificial flavouring preparations and permitted food additives.

¹¹Compositional standards for milk, cream, whipping cream and enriched milk have been removed pending further discussion.

c) Nomenclature. The name of the food shall be egg nog. The name of the food shall be accompanied by a declaration indicating the presence of any characterizing flavouring.

12. Skim milk powder¹²

a) Description. Skim milk powder is the product obtained by the partial removal of water from milk.

(i) Skim milk powder (spray dried) shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	1.2%	1.29%
moisture	maximum	4.0%	5.0%
titratable acidity	minimum	0.11%	0.11%
titratable acidity	maximum	0.15%	>0.15%
solubility index	maximum	1.0 ml*	2.0 ml**
standard plate count	maximum	50,000/g	100,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 (15.0 mg)	3 (22.5mg)

* except skim milk powder designated as “High Heat” (High Temp.), which shall not be greater than 2.0 ml.

** except skim milk powder designated as “High Heat” (High Temp.), which shall not be greater than 2.5 ml

ii) Skim milk powder (instant process) shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	1.2%	1.29%
moisture	maximum	5.0%	5.0%
titratable acidity	minimum	0.11%	0.11%
titratable acidity	maximum	0.15%	>0.15%
solubility index	maximum	1.0 ml*	2.0 ml
standard plate count	maximum	50,000/g	100,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 * (15.0 mg)	3 (22.5 mg)

* except skim milk powder designated as “High Heat” (High Temp.), which shall not be greater than 2.0 ml.

** except skim milk powder designated as “High Heat” (High Temp.), which shall not be greater than 2.5 ml

¹² It was discussed that Canada 1 and Canada 2 are commercial standards and do not belong in this type of regulation.

b) Optional Ingredients. Skim milk powder may contain permitted food additives.

c) Nomenclature. The name of the food shall be skim milk powder (spray-dried) or skim milk powder (instant process).

13. Partly skimmed milk powder

a) Description. Partly-skimmed milk powder is the product obtained by the partial removal of water from milk.

(i) Partly-skimmed milk powder shall contain the following:

		Canada 1	Canada 2
milk fat	minimum	1.3%	1.3%
milk fat	maximum	25.9%	25.9%
moisture	maximum	4.0%	5.0%
titratable acidity	minimum	0.11%	0.11%
titratable acidity	maximum	0.15%	>0.15%
solubility index	maximum	1.0 ml*	>1.0% ml**
standard plate count	maximum	50,000/g	100,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 (15.0 mg)	3 (22.5 mg)

*except partly-skimmed milk powder designated as “High Heat” (High Temp.), which shall not be greater than 2.0 ml.

b) Optional Ingredients. Partly-skimmed milk powder may contain permitted food additives.

c) Nomenclature. The name of the food shall be partly-skimmed milk powder.

14. Whole Milk Powder

a) Description. Whole milk powder is the product obtained by the partial removal of water from milk.

(i) Whole milk powder (spray dried) shall contain the following:

		Canada 1	Canada 2
milk fat	minimum	26.0%	26.0%
moisture	maximum	2.5%**	5.0%
titratable acidity	minimum	0.11%	0.11%
titratable acidity	maximum	0.15%	>0.15%
solubility index	maximum	1.0 ml	>1.0 ml
standard plate count	maximum	50,000/g	100,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 (15.0 mg)	3 (22.5 mg)

** 3.5% in the case of whole milk powder that has been made more soluble by an instantizing process.

ii) Whole milk powder (gas packed) shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	26.0%	26.0%
moisture	maximum	2.5%**	5.0%
titratable acidity	minimum	0.11%	0.11%
titratable acidity	maximum	0.15%	>0.15%
solubility index	maximum	1.0 ml	>1.0 ml
standard plate count	maximum	30,000/g	50,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 *(15.0 mg)	3 (22.5 mg)
oxygen	maximum	3.0%	3.0%

* calculated to atmospheric pressure. This determination to be made 7-10 days after final gas packaging.

** 3.5% in the case of whole milk powder that has been made more soluble by an instantizing process.

b) Optional Ingredients. Whole milk powder may contain permitted food additives.

c) Nomenclature. The name of the food shall be whole milk powder (spray-dried) or whole milk powder (gas packed).

15. Buttermilk Powder

a) Description. Buttermilk powder is the product obtained by the partial removal of water from buttermilk.

(i) Buttermilk powder (spray dried) shall contain the following:

		Canada 1	Canada 2
milk fat	minimum	2.0%	<2.0%
milk fat	maximum	12.0%	12.0%
moisture	maximum	4.0%	5.0%
titratable acidity	minimum	0.08%	0.08%
titratable acidity	maximum	0.18%	>0.18%
solubility index	maximum	1.25 ml	>1.25 ml
bacteria	maximum	50,000/g	200,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	3 (22.5 mg)	4 (32.5 mg)

b) Optional Ingredients. Whole milk powder may contain permitted food additives.

c) Nomenclature. The name of the food shall be buttermilk powder (spray-dried).

16. Whey Powder

a) Description. Whey powder is the product obtained by the partial removal of water from whey.

(i) Whey powder (spray dried) shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	1.2%	>1.2%
moisture	maximum	4.5%*	5.0%
titratable acidity	minimum	0.11%**	0.11%**
titratable acidity	maximum	0.16%	>0.16%
bacteria	maximum	50,000/g	200,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 (15 mg)	3 (22.5 mg)

* 5.0% in the case on Non-hygroscopic Whey Powder

** 0.08% in the case of whey powder made from Swiss cheese whey, and identified as such.

b) Optional Ingredients. Whey powder may contain permitted food additives.

c) Nomenclature. The name of the food shall be whey powder (spray-dried).

17. Acid-Type Whey Powder

a) Description. Acid-type whey powder shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	1.2%	>1.2%
moisture	maximum	4.5%*	5.0%
titratable acidity	minimum	0.30%	0.30%
bacteria	maximum	50,000/g	200,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 (15 mg)	3 (22.5 mg)

* 5.0% in the case on Non-hygroscopic Acid-Type Whey Powder

b) Optional Ingredients. Acid-type Whey powder may contain permitted food additives.

c) Nomenclature. The name of the food shall be acid-type whey powder (spray-dried).

18. Blended Skim Milk and Whey Powder / Blended Whey and Skim Milk Powder

a) Description. Blended Skim Milk and Whey Powder / Blended Whey and Skim Milk Powder shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	1.2%	>1.2%
moisture	maximum	4.2%	5.0%
titratable acidity	minimum	0.11%*	0.11%*
titratable acidity	maximum	0.16%	>0.16%
bacteria	maximum	50,000/g	200,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 (15 mg)	3 (22.5 mg)

* 0.09% where the whey used comes from the manufacture of Swiss cheese, and is identified as such.

b) Optional Ingredients. Whey powder may contain permitted food additives.

c) Nomenclature. The name of the food shall be Blended Skim Milk and Whey Powder or Whey and Blended Skim Milk Powder.

19. (1) Edible Casein

a) Description. Edible casein shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	1.5%	>1.5%
moisture	maximum	10.0%	>10.0%
titratable acidity	minimum	0.20%	0.20%
bacteria	maximum	50,000/g	100,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	2 (15 mg)	>2 (>15.0 mg)
protein	minimum	95% dry basis	90% dry basis

b) Optional Ingredients. Edible casein may contain permitted food additives.

c) Nomenclature. The name of the food shall be edible casein.

19. (2) Edible Caseinates

a) Description. Spray Edible caseinates shall contain the following:

		Canada 1	Canada 2
milk fat	maximum	2.0% dry basis	>2.0% dry basis

moisture	maximum	5.0%	>5.0%
titratable acidity	minimum	0.20%	0.20%
bacteria	maximum	50,000/g	100,000/g
coliforms	maximum	10/g	10/g
sediment disc	maximum	3 (22.5 mg)	>3 (>22.5 mg)
protein	minimum	88% dry basis	<88% dry basis
pH	maximum	7.5* 7.0**	>7.5%* >7.0%*

* in the case of Calcium and Magnesium edible caseinates

** in the case of other edible caseinates.

b) Optional Ingredients. Edible caseinates may contain permitted food additives.

c) Nomenclature. The name of the food shall be (Spray) Edible Caseinates.

20. Evaporated Milk

a) Description. Evaporated milk is the liquid food obtained by the partial removal of water from milk. The food shall contain not less than 25.0 % milk solids, and 7.5 % milk fat.

b) Vitamin addition. Evaporated milk shall contain vitamin C in such an amount that a reasonable daily intake of milk contains not less than 60 milligrams and not more than 75 milligrams of Vitamin C. The food shall also contain, if having less than 7.5% milk fat, added Vitamin A in such an amount that a reasonable daily intake of the milk contains not less than 1200 International Units and not more than 2500 International Units of Vitamin A. It shall also contain Vitamin D in such an amount that a recommended daily intake of the evaporated milk contains not less than 300 International Units and not more than 400 International Units of Vitamin D.

c) Optional Ingredients. Evaporated milk may contain the following safe and suitable ingredients: milk ingredients, modified milk ingredients and permitted food additives.

d) Nomenclature. The name of the food shall be evaporated milk.

21. Sweetened Condensed Milk

a) Description. Sweetened condensed milk is the liquid food obtained by the partial removal of water from milk and safe and suitable sweetening agents. The food shall contain not less than 28.0 % milk solids including 8 % milk fat.

b) Optional Ingredients. Sweetened condensed milk may contain the following safe and suitable ingredients: milk ingredients, modified milk ingredients, sweetening agents, vitamin D and permitted food additives.

c) Nomenclature. The name of the food shall be sweetened condensed milk.

Cultured Products

22. Yogourt

a) Description. Yogourt is the food obtained by lactic acid fermentation through the protosymbiotic mixture action of *Streptococcus thermophilus* and *Lactobacillus delbrueckii* subsp. *bulgaricus* **from milk ingredients and modified milk ingredients** to which may have been added optional permitted ingredients listed below.

- (i) At the time of sale for consumption, yogourt shall have viable, active and abundant micro-organisms, except in the case of heated treated yogourt.
- ii) The acidity of yogourt shall be not lower than 0.70% per weight expressed as lactic acid from the activity of the micro-organisms. Minimum counts of characteristic micro-organisms shall be 10^7 cfu/g at the time of sale.
- iii) Yogourt shall contain at least 9.5% milk solids non fat or at least 7.6% milk solids non fat in the case of yogourt with added fruit.
- iv) Yogourt drinks shall contain at least 6.5% milk solids non fat.
- v) Yogourt shall contain at least 2.8% milk proteins in the final product or 2.2% milk proteins in the case of drinkable yogourts (yogourt drinks).

b) Optional Ingredients. Yogourt may contain the following safe and suitable ingredients: milk and milk ingredients, starter cultures of harmless microorganisms, fruits, juice or fruit extracts, jams, cereal, spices, vegetables, confections, seasonings, herbs, nuts or any other flavour, sweeteners, sweetening agents and permitted food additives.

c) Nomenclature. The name of the food shall be yogourt (with alternative spellings), or yogourt drink or alternatively drinkable yogourt in the case of yogourts which are to be drunk. Yogourt which, after fermentation, has been pasteurized or sterilized, shall bear in legible and uniform print, the size of which is at least half the size of the largest print on the container, the name 'pasteurized after fermentation' or as the case may be, 'sterilized after fermentation', placed immediately after the name of the food. When the word 'natural' is used along with the name yogourt, neither artificial flavours, flavouring agents, preservatives nor artificial colours may be present in either the natural yogourt or ingredients of fruit or flavouring of the (naming the flavour) yogourt.

23. Buttermilk

a) Description. Buttermilk is the liquid food obtained by the fermentation of milk and the addition of bacterial culture. The food shall contain not more than 3.25% milk fat, not less than 8.25% milk solids non fat and not less than a titratable acidity of 0.7%.

b) Optional Ingredients. Buttermilk may contain the following safe and suitable ingredients: starter cultures of harmless microorganisms, milk ingredients and modified milk ingredients, salt and permitted food additives.

c) **Nomenclature.** The name of the food shall be buttermilk.

24. Sour Cream and Cultured Cream

a) **Description.** Sour cream is the food obtained by the fermentation of cream **and/or milk ingredients and/or modified milk ingredients** by the addition of coagulating agents and must contain a minimum of 14% milk fat and not less than a titratable acidity of 0.2%.

b) **Optional Ingredients.** Sour cream may contain the following safe and suitable ingredients: milk ingredients and modified milk ingredients, buttermilk, starch, salt, flavours, rennet, microbial enzymes, enzymes and permitted food additives.

c) **Nomenclature.** The name of the food shall be sour cream or alternatively cultured cream.

25. Cottage Cheese

a) **Description.** Cottage cream is the food in the form of discreet curd particles, prepared from milk, evaporated milk or milk powder, and harmless acid-producing bacterial culture. The food shall contain not more than 80% moisture and in the case of creamed cottage cheese not less than 4% milk fat.

b) **Optional Ingredients.** Cottage cheese may contain the following safe and suitable ingredients: milk and milk ingredients, rennet, microbial enzymes, enzymes, Chymosin A and B, salt, calcium chloride, relish, fruits, vegetables and permitted food additives.

c) **Nomenclature.** The name of the food shall be cottage cheese or creamed cottage cheese when the milk fat content is not less than 4%.

Butter and Butter Products

26. Butter

a) **Description.** Butter is the solid food made from a minimum of 80% milk fat by weight. In the case of flavoured butters, the food may contain less than 80% milk fat if the percentage of milk is reduced by the amount of the product added, but in no case shall the resultant milk fat content be less than 75%.

b) **Optional Ingredients.** Butter may contain the following safe and suitable ingredients: milk ingredients and modified milk ingredients, bacterial cultures, salt, air or inert gas, added edible casein and caseinates in reduced-fat butter, flavour, seasoning, fruit, vegetable and relish.

c) **Nomenclature.** The name of the food shall be butter. If air or inert gas has been added, the name of the food shall be whipped butter. If flavouring ingredients have been

added, such as seasonings and fruit, additional descriptive terms shall be added to the name butter.

27. Whey Butter

a) Description. Whey Butter is the solid food made from a minimum of 80% milk fat by weight recovered from whey.

b) Optional Ingredients. Whey butter may contain the following safe and suitable ingredients: milk ingredients and modified milk ingredients, bacterial cultures, salt, air or inert gas, added edible casein and caseinates in reduced-fat butter, flavour, seasoning, fruit, vegetable and relish.

c) Nomenclature. The name of the food shall be whey butter. If air or inert gas has been added, the name of the food shall be whipped butter. If flavouring ingredients have been added, such as seasonings and fruit, additional descriptive terms shall be added to the name whey butter.

28. Butteroil, Clarified Butter, Anhydrous Butter Oil, Ghee

a) Description. Butteroil, clarified butter, anhydrous butter oil and ghee are foods prepared from butter or cream and resulting from the removal of most of the water and solids non-fat content. In the case of butter oil and ghee, the food shall contain not less than 99.3 % milk fat and not more than 0.5% water. In the case of anhydrous butter oil, the food shall contain not less than 99.8% milk fat and not more than 0.1% water.

b) Optional Ingredients. may contain the following safe and suitable ingredients: milk ingredients, modified milk ingredients and permitted food additives.

c) Nomenclature. The name of the food shall be butteroil or alternatively clarified butter, or anhydrous butter oil or ghee according to the description in this standard.

Cheese and Cheese Products

29. Cheese

a) Description. Cheese

(i) is the fresh or matured solid or semi-solid dairy food obtained by

a) coagulating milk or milk products or any combination of these materials with the aid of bacterial culture, through the action of rennet and/or other suitable coagulating agents, and by partially draining the whey resulting from such coagulation; or

b) processing techniques involving coagulation and/or concentration of milk and/or materials obtained from milk which give an end-product which has the same essential physical, chemical and organoleptic characteristics as the product defined under (i).

ii) shall, in the case of a cheese variety named in Table 2 (Part I and Part II) to this section, contain no more than the maximum percentage of moisture in Column II thereof for that cheese.

iii) shall, in the case of a cheese variety named in Table 2 (Part I) to this section, contain not less than the minimum percentage of milk fat shown in Column III for that variety.

iv) shall in the case of a variety named in Table 2 (Part II) to this section, shall contain no more than the maximum percentage of milk fat shown in Column III for that variety.

v) of a variety named in Table 2 of this Section shall meet any standard developed for that cheese, as accepted by Canada, that is published by the Codex Alimentarius Commission, issued by the Secretariat of the Joint FAO/WHO Food Standards Program.

b) Optional Ingredients. Cheese may contain the following safe and suitable ingredients: milk ingredients, modified milk ingredients, salt, rennet, microbial enzymes, enzymes, relish, flavour, fruit, vegetable, spices, condiments, seasonings, herbs, bacterial cultures to aid in the further ripening and permitted food additives.

c) Nomenclature. The name of the food shall be Cheese and (Naming the Variety) Cheese. The descriptors as detailed in Table 1 to this section may also be used to describe firmness or ripening quality of the cheese.

TABLE 1

Descriptor	Requirement
Firmness	
Soft Fresh Cheese	having a moisture on fat-free basis content of 80% or more
Soft Cheese	having a moisture on fat-free basis content of 67% and less than 80%
Semi-Soft Cheese	having a moisture on fat-free basis content of 62% and not more than 67%
Firm Cheese	having a moisture on fat-free basis content of 50% or more and not more than 62%
Hard Cheese	having a moisture on fat-free basis of less than 50%
Ripening	
Ripened	where the cheese ripening process develops within the whole body of the cheese
Surface Ripened	where the ripening process starts from surface and moves into the body of the cheese
Blue Veined	where veins of mold occur within the body of the cheese
Unripened or fresh	where the cheese has not undergone any ripening

TABLE 2 PART 1

Item	Variety of Cheese	Column II Maximum % of moisture	Column III Minimum % of milk fat
1	Asiago	40.0	30.0
2	Baby Edam	47.0	21.0
3	Baby Gouda	45.0	26.0
4	Blue	47.0	27.0
5	Butter (Butterkase)	46.0	27.0
6	Bra	36.0	26.0
7	Brick	42.0	29.0
8	Brie	54.0	23.0
9	Caciocavallo	45.0	24.0
10	Camembert (Carré de l'est)	56.0	22.0
11	Cheddar	39.0	31.0
12	Colby	42.0	29.0
13	Danbo	46.0	25.0
14	Edam	46.0	22.0
15	Elbo	46.0	25.0
16	Emmentaler (Emmental, Swiss)	40.0	27.0
17	Esrom	50.0	23.0
18	Farmer's	44.0	27.0
19	Feta	55.0	22.0
20	Fontina	46.0	27.0
21	Fynbo	46.0	25.0
22	Gouda	43.0	28.0
23	Gournay	55.0	33.0
24	Gruyere	38.0	28.0
25	Havarti	50.0	23.0
26	Jack	50.0	25.0
27	Kasseri	44.0	27.0
28	Limberger	50.0	25.0
29	Maribo	43.0	26.0
30	Montasio	40.0	28.0
31	Monterey (Monterey Jack)	44.0	28.0
32	Mozzarella (Scamorza)	52.0	20.0
33	Part Skim Mozzarella	52.0	15.0
34	Muenster (Munster)	50.0	25.0

TABLE 2 PART I (Continued)

Item	Variety of Cheese	Column II Maximum % of moisture	Column III Minimum % of milk fat
35	Neufchatel	60.0	20.0
36	Parmesan	32.0	22.0
37	Pizza	48.0	20.0
38	Provolone	45.0	24.0
39	Romano (Sardo)	34.0	25.0
40	St. Jorge	40.0	27.0
41	Saint-Paulin	50.0	25.0
42	Samsoe	44.0	26.0
43	Tilsiter (Tilsit)	45.0	25.0
44	Tybo	46.0	25.0

TABLE 2 PART II

Item	Variety of Cheese	Column II Maximum % of moisture	Column III Maximum % of milk fat
1	Harzkase (Harzer Kase, Mainzer Kaze)	55.0	3.0
2	Skim Milk	55.0	7.0

30. Whey Cheese

a) Description. Whey cheese is the food obtained by the concentration of whey and the molding of the concentrated whey, with or without the addition of milk, milk products and milk fat. The dry matter of the whey cheese includes the water of crystallization of lactose.

b) Optional Ingredients. Whey cheese may contain the following safe and suitable ingredients: milk ingredients and modified milk ingredients, microorganisms to aid in further ripening, salt and permitted food additives.

c) Nomenclature. The name of the food shall be whey cheese.

31. Cream Cheese

a) Description. Cream cheese is the food made from cream and/or milk ingredients and/or modified milk ingredients with the use of coagulating agents, with or without the use of concentrating processes to form a homogenous mass. The food shall contain not more than 55% moisture and not less than 30% milk fat.

(i) Cream cheese with (naming the added ingredients) shall contain not more than 60% moisture and not less than 26% milk fat.

ii) Cream(ed) cheese spread shall contain not more than 60% moisture, not less than 24% milk fat and not less than 51% cheese.

b) Optional Ingredients. Cream cheese may contain the following safe and suitable ingredients: milk ingredients and modified milk ingredients, salt, vinegar, sweetening agents, flavours, fruits, vegetables, pickles, relishes, nuts, prepared or preserved meat, prepared or preserved fish and permitted food additives.

c) Nomenclature. The name of the food shall be cream cheese. When the food contains added ingredients, the name shall be Cream cheese with (naming the added ingredients).

32. Processed Cheese

a) Description. Processed cheese is the food made by comminuting and mixing the named variety or varieties of cheese and/or optional ingredients and permitted additives into a homogenous mass with the aid of heat. Processed cheese shall contain not less than 51% milk ingredients of which at least 50% are cheese.

(i) In the case of Processed (naming the Variety) Cheese, the cheese(s) used shall meet the compositional standards of the named variety or varieties. Processed (naming the Variety) Cheese shall have a total cheese ingredient content of not less than 51%.

ii) In all versions of processed cheese, the finished food shall contain not more than 60% moisture, except in the case of fat-reduced processed cheeses, the latter containing a maximum of 65% moisture.

b) Optional Ingredients. Processed cheese may contain the following safe and suitable ingredients: milk ingredients and modified milk ingredients, salt, vinegar, sweetening agents, flavours, seasonings, spices, condiments, chocolate, fruits, vegetables, pickles, relishes, nuts, prepared or preserved meat, prepared or preserved fish and permitted food additives.

c) Nomenclature. The name of the food shall be processed cheese or alternatively process cheese. In the case of named added ingredients, the food shall be named Processed Cheese with (naming the added ingredients).

33. Cold Pack Cheese

a) Description. Cold pack cheese shall be the food obtained by comminuting and mixing the named variety or varieties of cheese into a homogenous mass without the aid of heat. The food shall contain not less than 51% cheese and not more than 46% moisture.

(i) in the case of cold pack (naming the variety) cheese, the cheese(s) used shall meet the compositional standards of the named variety or varieties.

b) Optional Ingredients. Cold pack cheese may contain the following safe and suitable ingredients: milk ingredients and modified milk ingredients, added water to adjust moisture content and permitted food additives.

c) Nomenclature. The name of the food shall be cold pack cheese. The name shall be cold pack (naming the variety) cheese in accordance with the description in this section.

34. Grated (Naming the Variety) Cheese

a) Description. Grated (naming the variety) cheese is the cheese that is ground and dehydrated from a named variety cheese(s) including hard interior ripened cheese meeting the requirements for the (named variety) Cheese (Table 2) outlined in these regulations.

(i) the lactose level of the finished food shall be less than <1% using the official method determined by the Regulatory Agency.

b) Optional Ingredients. Grated (naming the variety) cheese may contain the following safe and suitable ingredients: permitted food additives.

c) Nomenclature. The name of the food shall be grated (naming the variety) cheese.