

LEGAL NOTICE NO. OF 1999

MILK HYGIENE REGULATIONS

Pursuant to section 71 of the Public Health Order 1970, 1

VOVA BULANE

Minister of Health and Social Welfare make the following Regulations:

Citation and Commencement

1. These Regulations may be cited as the Milk Hygiene Regulations 1999 and shall come into operation on the date of publication in the Gazette.

Interpretation

2. In these Regulations unless the context requires otherwise,
“butter” means the product derived mainly from butterfat having a minimum butterfat content of 80%;
“carrier” means a person who harbors a specific infectious agent in the absence of discernable clinical disease, and serves as a potential reservoir or source of infection from man;
“cheese” means the fluid product derived by the skimming of milk having a minimum butterfat content of 20%;
“closed package” means a package that is impervious to liquid, is leak proof and protects the product therein from contamination under normal conditions of storage, handling and transport;
“coliform bacteria” means rod-shaped, gram-negative, aerobic non-sporing bacterial that ferment lactose producing gas and acid;
“condensed milk” means milk concentrated by the evaporation process of a portion of its content with or without that addition of sugar;
“cottage cheese” means the coagulated product of milk, partly or wholly skimmed milk, reconstituted milk, buttermilk or a combination of these products which is obtained by souring with or without the use of rennet, and by the drainage of whey to the required firmness, hereafter food additive cream or other food ingredients may be added and which is ready for use directly after manufacture without further ripening;
“cultured milk” means fully fat milk, full cream, skimmed milk, pasteurized and cooled to which has been added an inoculum of selected lactic acid bacteria such as *Lactobacillus* or sour milk;
“dairy plant” means any premises in which milk is processed for human consumption;
“dairy farm” means premises on which milk is produced and includes a dairy holding to a temperature of not more than 5 degrees Celsius or 72 degrees for 15 seconds and cooled to a temperature of not more than 5 degrees Celsius, for the purpose of destruction of harmful bacteria;
“*Escherichia*” means the organisms that produce gas at 44 degrees Celsius in 2% brilliant green bile broth and produce indole in tryptone water at the same temperature wherein incubated for twenty four hours;

“food additive” means medical officer of health ,public health inspector, veterinary officer appointed and authorized by the government under this regulations;

“hermetically sealed package” means an unopened package that cannot be opened without breaking or damaging such package or seal, adhesive label or other part of or attachment to such package and is intended to protect its contents against the entry of microorganisms;

“inspector” means a health inspector or medical officer of health;

“milk powder” means the product obtained by the removal of only water from milk, whether or not containing permitted food additives;

“milk tank” means a vehicle for the transportation of milk in bulk;

“milking shed” means premises at or on which milk or milk products are sold for public consumption ,being premises on which only such milk or milk products are handled;

“pasteurized milk” means milk which has been treated at a temperature of not less than 63 degrees centigrade and holding it at that temperature for not less than 30 minutes and immediately cooled;

“pure water “ means clean and clear water that contains no Escherichia coli organisms per 100 ml and is free from any substance in concentrations detrimental to human health and include potable water;

“ultr-high temperature treatment “means milk derived from the process whereby such milk is exposed to the temperature above 135 degrees Celsius for one or more seconds and is aseptically-packaged so as to ensure that the finished product ,after being incubated for not less than 14 days at a temperature of 30 degrees c + 1 degrees c is free of spoilage microorganisms;

“raw milk” means the normal lacteal secretion obtained by milking of cows ,goats or sheep and which has not been subjected to heat or any other treatment;

“yoghurt” means the product which is derived for milk, skimmed milk or reconstituted milk which after pasteurization is inoculation and fermented with yoghurt cultured. *Bulgaricus* and *str.thermophiles* and, sometimes *L.Bidius* to produce sour milk gelled and thickened product with a characteristic taste.

Application for certificate of registration

3. 1) A person who wishes to carry out business of milking, selling milk or providing it for human consumption shall apply in writing to the Milk Dairy Board.

2) An application made pursuant to subsection (1) shall include the information;

- a) the name, address and telephone number (if applicable) of the applicant;
- b) a title description of the premises;
- c) an indication of the number of staff who are employed or involved;
- d)The maximum number of animals that are going to be milked.

3) The applicant shall be accompanied by the following:

- a) a site plan with north indicated and with an indication of all adjacent and bordering buildings and their uses;

b) a layout sketch to a scale of 1: 100 of all the milking shed facilities consisting of a ground plan, a sectional view and vertical elevation.

4) The Lesotho National Dairy Board may, in considering the application, request further information from the applicant as it may deem necessary.

5) The Lesotho National Dairy Board shall not consider an application for the issue of a certificate for registration unless a full inspection of the premises has been carried out by a suitable trained and qualified health inspector.

6) The Lesotho National Dairy Board shall, where it is satisfied that the milking shed complies with all the provisions of these regulations, issue a certificate of registration, issue a certificate of registration in respect of the milking shed.

7) Where the Lesotho National Dairy Board is of the opinion that the milking shed does not satisfy the requirements specified in this Act, it shall refuse the application.

8) The Lesotho National Dairy Board shall give reasons for refusal of the application to the applicant in writing.

9) The applicant whose application has been refusal may, in writing, appeal to the Minister within thirty days of the notice for refusal of the application.

Provisional certificate of registration

4. 1) The Lesotho National Dairy Board may, in respect of existing milk shed, issue a provisional certificate of registration where it is of the opinion that a milking shed is in all respects suitable for the production and hygienic handling of milk.
- 2) The provisional certificate of registration may be revoked at any time by the Lesotho National Dairy Board where it is of the opinion that existing milk shed is being used in a way which constitutes an immediate and real health hazard.

Animal health requirements for raw milk

5. 1) A dairy farmer shall ensure that milk originates from cows, sheep or goats-
 - a) which are officially free from tuberculosis and brucellosis;
 - b) which do not show any symptoms of infectious diseases communicable to human beings through their milk;
 - c) which are incapable of giving the milk abnormal organoleptic characteristics;
 - d) whose general state of health is not impaired by any visible disorder;
 - e) which are not suffering from any infection of the genital tract with discharge, and enteritis with diarrhea and fever or a recognizable inflammation of the udder;
 - f) which have not been treated with substances such as antibiotics and are dangerous to human health.

2) Notwithstanding subsection(1), where a cow ,sheep or goat is treated with antibiotics a dairy farmer shall ensure that an official waiting period laid down in the national health provisions is complied with.

3) Where different animal species are kept together on the dairy farm, each species shall satisfy the health conditions which would be required if it were alone.

4) A record of each separate milk animal disease and all veterinary examinations and treatment with the name of the veterinary surgeon if the veterinary surgeon was involved in the examination or treatment shall be kept at a dairy farm.

Inspection of dairy farms

6. 1) The Local Authority in whose area a milking shed is situated shall-
- a) Ensure that regular inspections of the milking shed are carried out at least every two years;
 - b) Inform the Ministry of Health and the Lesotho National Dairy Board of milking sheds which do or do not satisfy the requirements prescribed in this Act.

Requirements for milking shed

7. 1) A milking shed shall be designed ,constructed, maintained and managed in such way as to ensure-
- a) Good conditions of housing ,hygiene, cleanliness and health of the animals;
 - b) Satisfactory hygiene conditions for milking, handling, cooling and storing milk.
- 2)premises where milking is performed, stored handled or cooled shall-
- a) be sited and constructed in such a way as to avoid all risk of contamination of milk and be easy to clean in areas liable to soiling or infection;
 - c)have flooring which is laid in such a way as to facilitate the draining of liquids and satisfactory means of disposing waste such a manure or wash liquids;
 - d)have adequate ventilation and lighting;
 - e) have appropriate and sufficient supply of portable running water for use in milking and cleaning of the equipment and instruments used in milking;
 - f) have adequate separation from all sources of contamination such as lavatories and manure heaps;
 - g)have fittings which are easy to wash, clean and disinfect;
 - h) have suitable cooling equipment such as refrigeration facilities and be protected against vermin.

3) Where milk producing animal are kept untethered in the open, a dairy farmer shall ensure that a dairy farm has a milking parlor or milk shed which is adequately separated from the housing area.

4) Animals which are infected with diseases specified in this Act shall be isolated.

5) Animals of all species like dogs and horses shall be kept away from premises and sites where milk is stored, handled or cooled.

Hygiene in milking

8. 1) A dairy farmer shall-

- a) Before milking, ensure that all flanks, udders, bellies and tails of dairy stock are free of visible dirt and if a flank, udder, belly is washed, it is dried with a clean towel;
- b) Immediately after milking ensure that milk is placed in a clean place which is so equipped as to avoid adverse effects and is protected from direct sunlight and dust;
- c) Ensure that milk obtained for dairy stock during the first seven days following parturition is not added to milk destined for human consumption;
- d) Ensure that milk is transferred from the milk shed to the milk room or its equivalent immediately after the dairy stock has been milked;
- e) Ensure that milk is taken to the collection centre within three hours of milking and is cooled to a temperature of eight degrees Celsius or lower in the case of daily delivery to the centre or six degrees Celsius if delivery is every other day;
- f) Ensure that the equipment and instruments used in milking or their surfaces are made of smooth material which is easy to clean and disinfected, resists corrosion and does not transfer substances to the milk in such quantities as to endanger human health, impair the composition of the milk or adversely affect its organoleptic characteristics;
- g) Ensure that the utensils used for milking, any mechanical milking equipment or the containers which come into contact with the milk are cleaned and disinfected after use;
- h) Ensure that containers and tanks used for transporting raw milk are cleaned and disinfected before re-use.

Staff hygiene

9. A dairy farmer shall-

- a) Provide his farm staff involved in milking dairy stock with protective milking clothes;
- b) Ensure that his staff involved in milking or handling milk is wearing clean protective milking clothes;
- c) Ensure that his staff washes hands thoroughly with soap and water immediately before milking commences and keeps them clean thorough out the milking.
- d) Ensure that a person who suffers from a communicable disease or who has an open sore or abscess on his arms, hands, head or neck does not handle milk;
- e) Ensure that a person who performs milking and handles raw milk does not expectorate blow his nose or sneeze in the immediate vicinity of milking operations.

Recognized authority checks on dairy farms

10. 1) The Inspector shall do periodic but regular checks on dairy farms.
- 2) The system used in periodic checks referred to in subregulation(1) may include the following:
 - a) the monitoring system which shall be used for purposes of preventing water being added to raw milk and detecting the freezing point of milk:
 - b) The Beckman method for accessing butter fat and solid-non-fat contents of milk.
- 3) Where the results of a periodic check show that water has been added the dairy farmer shall be penalized after two warnings by a deduction for the price paid for his milk.
- 4) A dairy farmer shall not milk or make it available for human consumption if it contains antibiotic are being used accordingly.
- 5) The Inspector shall visit farms periodically to check the farmer's records and whether antibiotics are being used accordingly.
- 6) Where antibiotics are used to treat the dairy animal, the farmer shall withhold his milk after treatment in accordance with the antibiotic manufactures instruction or the advice of a recognized veterinary surgeon.
- 7) The Inspector shall carry out the requisite checks on dairy animal health on dairy farms in accordance with the prevailing health regulations.

Milk collection centres

11. A milk processor shall, for purposes of carrying out its designated functions of receiving ,quality assessing ,recording and cooling raw milk effectively, ensure that a milk collection centre is constructed in such a way-
 - a) As to keep the raw milk clean and wholesome;
 - b) That there is no direct connection with a latrine or a room where gases, smoke, vapours or dust are present;
 - c) That the interior surface of the walls are smooth and washable and made of a hard durable material brought to a smooth finish;
 - d) That the ceiling is of a material which is washable and cleanable;
 - e) That the drainage system is connected to a disposal system which prevents pools of standing water on the floor;
 - f) That there is adequate ventilation and illumination and windows have fly screen of at hundred and forty four mesh per square inch;
 - g) That the is at least one tap with running pure water to which a flexible hosepipe may be connected for washing purposes;
 - h) That there is at least no gas, water or electricity conduits laid on the floor;
 - i) That there is protection against infection by flies ,rodents or other vermin ;or
 - j) That there are adequate facilities for the reception and initial quality and hygiene screening of incoming raw milk.

Training of staff of milk collection centre

12. The staff of a milk collection centre shall be adequately trained in understanding the health and hygiene risks of misleading a highly perishable product such as milk especially in the following:
- a) The organoleptic and visual inspection of milk
 - b) Carrying out check weighing of milk received from each dairy farm;
 - c) Accurately taking records of the daily weight of each farmer's milk and conveying the results on a week basis to the Lesotho National Dairy Board;
 - d) The correct procedures-
 - i) That each farmer's milk is adequately mixed in its milk can using a disinfected and washed plunger prior to carrying out the composition and hygiene screening tests;
 - ii) for carrying out the test for the adulteration of milk with using Beckman test or any other recommended test; or
 - iii) for carrying out the lactometer test for the determination of the density (specific gravity) of each supply or farmers 'milk.

Equipment and instruments at milk collection centre

13. A dairy plant processor shall ensure that-
- a) Suitable equipment and test facilities for carrying out the tests prescribed in this regulation are housed at the collection centre and maintained in good working order;
 - b) The check weighing scales are assessed for accuracy by the manufacturer at least four times a year;
 - c) The equipment used for the recommended hygiene tests are kept in good working condition and are cleaned and kept at the end of every working day;
 - d) Where the alizarol test is used, the alcohol used is kept safely in the locked cupboard when not in use;
 - e) Suitable and accurate thermometer is used for talking and recording the temperature of all daily incoming milk supplies from the dairy farm; or
 - f) The thermometer used is kept in a container with hypochlorite solution (200 ppm available chlorine) and rinsed under running water and wiped clean with a clean tissue before use.

Milk cooling at milk collection centres

14. 1) A dairy plant processor shall ensure that-
- a) Milk which has been held and cooled on the dairy farm does not exceed a temperature of 10 degrees Celsius on delivery to the milk collection centre;
 - b) For milk delivered to the collection centre within three hours of milking the temperature does not exceed thirty seven degrees Celsius.
- 2) A milk collection centre shall not receive or buy milk in excess of the temperatures specified in sub regulation (1)

3) A milk collection centre shall be equipped with a direct expansion bulk milk storage tank which is insulated and capable of bringing the temperature of the pooled farm milk supplies down to five degrees Celsius with three hours.

Cleaning and maintenance of milk collection centres

15. 1) A milk collection centre shall be fitted with a double compartment stainless still sink where delivery milk churns are washed and disinfected after each delivery is tipped into the bulk tank.
- 2) A dairy plant processor shall ensure that-
- a) Equipment installed and used in the centre is in good working condition and is regularly maintained; and
 - b) Sufficient supply of cleaning agents and disinfectants, as approved by the Lesotho National Dairy Board, are kept in stock at all times so that the bulk refrigeration plant, farmers milk churns, dippers and samplers are cleaned and disinfected at least once a day.

Warning and rejection of milk

16. 1) A milk collection centre shall not accept milk unless-
- a) It is transported to the centre by insulated transport;
 - b) It is pure ,sweet, clean and usable without health risk;
 - c) Nothing is removed from it or added to it;
 - d) It has no abnormal smell, taste or unusual physical characteristics such as ropiness, flies or dirt or any other foreign bodies ; and
 - e) It is free from colostrums.
- 2) Where the requirements of subregulation (1) are not complied with a milk collection centre shall reject the milk from the dairy farmer, notify and advise him as to how to correct the fault.
- 3) The advice given pursuant to subregulation (2) shall be made by dairy plant processor or dairy technical officer.

Transport of milk to the dairy

17. A dairy plant processor shall ensure that-
- a) Milk cans used for containing milk while it is being transported from a milk collection centre to a dairy are constructed of smooth, non-corrodible, non-toxic and non-absorbent material which is easily cleaned;
 - b) Milk cans used for containing milk while it is being transported from a milk collection centre to a dairy are seamless and kept in a clean and sanitary condition at all times;
 - c) Vehicles used for conveying raw milk from a milk collection centre to a dairy are kept in a clean and sanitary condition and are provided with a canopy as protection against direct sun rays or contamination by dust, dirt or rain water;

- d) Vehicles used for transporting raw milk in churns from a milk collection centre to a dairy or from a dairy farm to a milk collection centre are not simultaneously used for conveying any living or dead animals or any article which is likely to cause contamination of the milk;
- e) The delivery of milk collection centre has satisfied himself himself that refrigerated milk is at or below five degrees Celsius and visibly clean before it is pumped into the insulated bulk tank;
- f) Loaded bulk milk is delivered not later than four hours from the time of collection;
- g) Vehicle used for transporting raw milk legibly and conspicuously display the name and address of a dairy plant and the letters on the vehicle are not less than 80 mm in height;
- h) After test samples have been taken for quality assessment purposes and the milk has been unloaded-
 - i) The churns used for delivery are adequately washed free of milk, disinfected, rinsed in clean water, steamed and drained; and
 - ii) Where an insulated bunk tanker is used for delivery, the tanker is washed clean of milk solids, disinfected, rinsed and drained clean of all water.

General requirements for a dairy plant building

18. A dairy processor shall ensure that a dairy plant building has the following:
 - a) A working area of sufficient size for work to be carried out under adequate hygienic condition;
 - b) A design and layout which prevents contamination of the raw materials such as milk or cream;
 - c) Solid, durable, water proof flooring with a non-slip finish which is easy to clean and disinfect and is laid in such a way as to facilitate the drainage of water and be provided with equipment to remove water;
 - d) Walls which have smooth surfaces and are easy to clean, durable and impermeable, covered with a light colored smooth coating and are at least 2.7 metres high when measured from floor to ceiling;
 - e) Ceiling which are dust proof and easy to clean;
 - f) Roofing which is sound, durable and impervious;
 - g) Doors in non-corrodible materials which are easy to clean;
 - h) Adequate ventilation and, where necessary ,good steam and water vapor extraction facilities;
 - i) Adequate natural or artificial lighting;
 - j) Adequate facilities with hot and cold running water or water pre-mixed to a suitable temperature for cleaning and disinfecting hands;
 - k) Facilities with cleaning and disinfecting products and hygiene means of drying hands;
 - l) Adequate space for changing rooms for each sex and such rooms to be provided with ablutions and water closets with drainage with is adequate and suitable for the disposal of any substance;
 - m) Changing rooms with hot and cold running water and are lighted ,ventilated, provided with adequate supplier of soap, nail brushes, towels ,hand wash basins and a hanging locker;

- n) Facilities for cleaning tools, equipment and installations;
- o) Powerful refrigeration plant to keep the finished milk and dairy products at a maximum temperature of five degrees Celsius;
- p) Facilities for hygienic handling and protection of raw materials and non-packaged or wrapped dairy products during loading and unloading;
- q) Appropriate facilities for protection against pests, flies and vermin;
- r) Instruments and working equipment, intended to come into contact with raw and processed milk and dairy products, which are made of corrosion resistant material and are easy to clean and disinfect;
- s) Special watertight, non-corrodible containers in which to put raw materials or products not intended for human consumption such as cleaning disinfectants;
- t) Appropriate facilities for the cleaning and disinfection of equipment and utensils;
- u) A supply of potable water for use in processing ; and
- v) Adequate facilities for cleaning and disinfecting churns or tanks used for transporting milk.

General conditions of hygiene in dairy plants

19. A dairy plant processor shall ensure that-

- a) Equipment and instruments used for working on milk and dairy products, floors, ceilings, roof linings, walls or partitions are kept in a satisfactory state of cleanliness and repair so that they do not constitute a source of contamination of milk or dairy products;
- b) Animals are not allowed to enter rooms in which milk and dairy are manufactured and stored;
- c) Rodents, insects or any other vermin are systematically exterminated in the premises or on the equipment;
- d) Rodenticides, insecticides, disinfectants or any other potentially toxic substances are stored in rooms which can be locked so as to prevent contamination of products;
- e) Working areas, instruments and working equipment are only used for working on products;
- f) Potable water is used for all purposes except for steam raising, fire-fighting and for cooling equipment;
- g) Disinfectants and similar substances are handled in such a way that they do not have adverse effects on the machinery, equipment, milk, dairy products or personnel;
- h) Containers for disinfectants and similar substances are clearly identifiable and bear labels with instructions for their use.

Staff of dairy plant

20. 1) Members of staff of a milk dairy plant shall-

- a) Wear suitable clean working clothes, gumboots and headgear which completely encloses the hair;
- b) Wash their hands at least each time they handle or prepare raw materials or dairy products or whenever contamination occurs;
- c) Keep their finger nails short and clean at all times;
- d) Not smoke, spit, eat or drink in rooms where milk or dairy products are worked on or stored;

- e) On recruitment, produce a medical certificate to the effect that there is no medical impediment to such employment.
- 2) A dairy plant processor shall provide his staff with suitable clean working clothes, gumboots and headgear referred to in subregulation (1)(a).
- 3) The provision of section 6 and 71 of the Public Health Order of 1970 shall apply to a dairy plant processor.

Special requirements for a dairy plant

21. In addition to the general requirements laid down under regulation 18, a dairy plant building shall have the following:
- a) Equipment for the mechanical or hand –filling and containers with proper automatic sealing which shall be used for packaging heat-treated drinking milk after filling;
 - b) Equipment for the cooling and cold storage of heat –treated milk, liquid milk-based products or raw milk where such operations are carried out;
 - c) Cold store which are equipment with correctly calibrated temperature measuring devices;
 - d) In the case of wrapping in disposable containers, a n area for the storage of such containers and raw material intended for manufacture;
 - e) Containers for storing raw milk and standardizes milk;
 - f) Centrifuges or any other suitable means for physically purifying milk;
 - g) Pasteurizers fitted with the following ;
 - i)an automatic temperature control;
 - ii)a recording thermometer;
 - iii)an automatic safety device preventing insufficient heating;
 - iv)an adequate safety system preventing the mixture of pasteurized heated milk; and
 - v)An automatic recordings device for safety system referred to in subparagraph (iii).

Hygiene requirements relating to dairies

22. 1) A dairy plant processor shall ensure that-
- a) Cross-contamination between operations by equipment, ventilation or staff is avoided by dividing rooms intended for production processes into wet and dry area, each having its own operating conditions;
 - b) Containers and tanks used for transporting milk to the milk collection centre or to the dairy plant are cleaned and disinfected before re-use;
 - c) Processing equipment, containers and installations which come into contact with milk or dairy products or other perishable materials during production are cleaned and disinfected at the end of each working day;
 - d) A testing regime to establish the microbiological efficiency of the cleaning processes used is set up;
 - e) Plant operatives are adequately trained to carry out efficient cleaning procedures;

- f) The treatment section of the dairy plant premises is cleaned at least once every working day; and
 - g) A cleaning programme for equipment containers and installations which come into contact with perishable milk and dairy products is drawn up.
- 2) A cleaning programme referred to subregulation (1) (g) shall be based on the inadequate cleaning methods.

Standards for the acceptance of raw milk at dairy plants

23. 1) A dairy plant processor shall, when selling raw milk to the consumer ensure that-
- a) The raw milk is not subjected to any form of physical or chemical treatment except cooling;
 - b) The raw milk does not contain less than 3% of butter fat and 8.3% of milk-solids not fat;
 - c) The raw milk does not contain faecal *Escherichia coli* in 0.01 ml;
 - d) The raw milk does not contain pathogenic micro-organisms;
 - e) The raw milk does not contain more than 100,000 micro-organisms/ml when tested by a standard plate count at thirty degrees Celsius on four consecutive counts over a period of two months;
 - f) The raw does not contain antibiotics;
 - g) The raw milk gives a Lovibond disc reading of not more than four when subjected to the one hour Resazurine reduction test.
- 2) Any raw milk sold for the production of heat treated drinking milk, pasteurized milk or long-life UHT milk, the manufacture of fermented milk such as sour milk or yogurt, flavored milk, cream or soft cheese shall meet the same standards as in subregulation (1), except that the minimum microbiological count at thirty degrees Celsius shall not exceed a maximum of 250,000 microorganisms/ml on four consecutive counts over a period of two months.
- 3) The raw milk referred to in this regulation shall not have a Somatic cell count in excess of 750,000 cells/ml when assessed by the Ministry of Agriculture.
- 4) A dairy plant processor shall not sell pasteurized milk if it contains-
- a) less than 3.3% butterfat, 8.3% of milk solids or no fat;
 - b) antibiotics;
 - c) pathogenic micro-organisms;
 - d) more than 10 coliform bacteria/ml in four consecutive counts;
 - e) viable *Escherichia coli* (faecal coli) in 1 ml of milk when tested by the modified Eijkmann test;
 - f) added water;

g) more than 50.000m micro-organisms/ml when subjected to a standard Plate Count at thirty degrees Celsius;

h) more than 10 micrograms of p-nitrophenol per ml when subjected to Aschaffenburg and Mullen test for phosphatase.

5) All pasteurized milk shall be packed in a hermetically sealed package when sold the ultimate consumer.

6) All UHT milk shall-

a) be of such good preservability that no deterioration will be observed in the product after it has spent at least fourteen days at a temperature of thirty degrees Celsius plus one degree Celsius;

b) possess the same compositional standards for butterfat and milk solids-non-fat as pasteurized milk;

c) not contain antibiotics;

d) not contain viable micro-organisms, or pathogenic;

e) not contain added water; or

f) be aseptically packed in a hermetically sealed package when sold to ultimate consumer.

7) A negative, phosphatase or negative peroxidase test shall not be used on UHT milk.

Sale of heat-treated milk

24. 1) A dairy plant processor shall not sell milk unless-

a) It has been subjected to pasteurization, sterilization or any other method of heat – treatment approved by the Ministry of Health;

b) The packaging container visibly and legibly displays the following:

1) The nature of the heat-treatment which the raw milk has undergone;

2) The volume of milk contained in the package;

3) The type of milk in the package;

4) The name and address of the dairy company which processed and packaged the milk and the name and address of the third party, where a third party such as supermarket processed and packaged the milk;

5) The net volume of the product;

6) Information reflecting the expiry date of the milk;

7) For pasteurized milk, the maximum temperature which the product shall be stored.

2) A dairy plant processor shall, while distributing milk or any milk product to the retail shop, café or any other institution, ensure that products which are perishable and cannot be stored at ambient temperature are-

a) transported under cool conditions;

- b) maintained at a maximum temperature of ten degree Celsius.
- 3) this regulation shall not apply to the UHT milk
- 4) Every person operating a business of a shop, supermarket or café shall ensure that milk, milk products or any other perishable dairy product, are kept at a temperature not higher than ten degrees Celsius in the chill cabinet compartment of the shop, supermarket, café or any other place while being displayed.
- 5) All milk products displayed for sale shall be within the minimum durability code marked on the package.
- 6) Any out of code stock shall be removed from display or storage and destroyed.

Duties of Health Inspector

25. 1) A health Inspectors shall-
- a) Enter any premises at any reasonable hour for the purpose of executing his duties under this Act;
 - b) Where he is of the opinion that a person employed in the milk production, processing ,distribution or retailing chain is suffering from any contagious disease, order the person to stop working on the premises until such time that the disease has been medically certified cured;
 - c) Where any processing dairy plant contravenes the provisions of this Act, order the dairy plant to halt production until he is satisfied that the fault has been rectified;
 - d) Where he has reasoble grounds for suspecting that the milk or any milk product produced or handled at any premises is infected with a disease communicable to man, give notice to the manager of the production plant requiring that such milk or milk product is not sold to the public and that it be disposed of according to section 68 of the Public Health Order 1970.

Standards for dairy products other than cheese and butter

26. 1) A dairy processor shall ensure that –
- a) All primary dairy products have a clean and characteristic flavor , and are free of substances that do not naturally form part of the milk;
 - b) Cultured cream is sourced by inoculation with a lactic acid producing culture;
 - c) A primary dairy know as cultured milk is obtained from pasteurized milk that has been inoculated with a culture to produce a specific microbiological flora under control conditions;
 - d) A primary dairy product known as yogurt-
 - i)is manufactured mainly from primary dairy products known as milk or reconstituted milk;
 - ii)is, after pasteurization, fermented with a yogurt culture;
 - iii) contains a great number of viable microorganisms.

- e) A primary dairy product of the type known as cream cheese is manufactured mainly from the primary dairy product known as cream.

Standards for cheese

27. 1) No dairy shall sell cheese for human consumption unless-
- a) It has the characteristic flavor and body of cheese of the type and designation concerned;
 - b) It is free of any substance that does not naturally form part of milk except with natural substances specified under this Act;
 - c) It complies with the standards laid in Schedule.....
- 2) Cheese of the types known as processed cheese and cheese spread shall-
- a) be manufactured by the grinding, mixing, melting and emulsifying of a type of cheese known as hard cheese or semi-hard cheese;
 - b) during the manufacture be heat treated for thirty seconds at a temperature of seventy degrees Celsius; and
 - c) contain at least 50% of the designated concerned cheese, provided that the fat-in-dry matter content of that processed cheese is three percent less than that required for cheese of the designation concerned.
- 3) Cheese with added food stuffs shall-
- a) be free of any substance that does not form part of the cheese or the food stuff that has been added to it;
 - b) comply with the applicable standards specified in Schedule.....
- 4) Notwithstanding the provision of this regulation, cheese may contain the following:
- a) rennet, colorant, calcium chloride, sodium chloride and those desired lactic acid forming and flavor producing bacteria or mould that has to be present in cheese with a specific designation; or
 - b) other edible additives such as chives or prawns.

Standards for butter

28. 1) No dairy plant processor shall sell butter for human consumption unless-
- a) It has a clean and characteristic flavor;
 - b) It is free of any substance that does not naturally form any part of the milk;
 - c) It complies with the compositional standards laid down in a Schedule....and;
 - d) It contains animal fat, vegetable oil or marine oil, other food stuffs or food additives which are nutritionally safe and edible such as lemon butter or garlic butter.

Classes of composite dairy products

29. Composite dairy products shall-

- a) In the case of products such as fruit yogurt, cottage cheese with added food stuffs, or dairy desserts be classified as in Schedule.....
- b) In the case of cheese with added food stuffs be classified as in Schedule.....

Packaging and labeling requirements for milk and milk products

30. 1) A dairy plant processor shall ensure that a container in which milk or milk product is packed-

- a) Is made from a material that-
 - i) is suitable for this purpose;
 - ii) will protect the contents from contamination;
 - iii) will not impact any undesirable flavor to the contents;
 - iv) is strong enough not to be damaged or deformed when it passes through the retail chain;
- b) In the case of re-usable containers, is thoroughly cleaned and sterilized before a product is packed in it;
- c) Is unbroken;
- d) Is properly closed; or
- e) Does not contain more than one class or imitation product;
- f) Has main panel which is marked with the following particulars;
 - i) the applicable class designation of that product ; and
 - ii) the applicable additions to such class designations.

2) No person shall make any misleading claims, whether written or illustrated pictorially, in the label of a dairy product unless the claim is substantiated by medical, nutritional or any other form of scientific evidence.

3) A person who contravenes the provisions of this regulation commits an offence and is liable on conviction to a fine not exceedingor to imprisonment for a period not exceeding.....

SCHEDULE 1

Recommended actions and tests to be made for acceptance and testing of raw milk at dairy plants.

Milk is delivered to the dairy plant in milk churns. Before any milk is accepted into the plant, whether it arrives from collection centre or direct from farms or dairy holdings, the Laboratory Manager or Processing Manager should:-

- i) carry out a visual and organoleptic examination of the milk in each individual churn. If the milk has no objectionable smell, appears copy or has foreign bodies floating in it should be rejected;
- ii) take the temperature of the milk. Milk from the Collection Centres should arrive at no more than ten degrees Celsius in normal circumstances (i.e. if no breakdown of the delivery vehicle has occurred) and if above this temperature it should not be accepted for processing into heat –treated milk. Milk churns above thirty seven degrees Celsius should not be accepted provided it is not more than 3 hours old.

If satisfied that the milk conforms to good standards of appearance, temperature, milk should be allowed into the dairy reception area. The Laboratory Manager, or Processing Manager, should then:-

- i)supervise the weighing of the milk from each farm and record third; and
- ii)take samples of the milk under clean and hygienic conditions for compositional and hygienic analysis in the laboratory.

Compositional and hygienic tests-

- a) Butterfat test: the Gerger method is recommended. Milk should have a minimum 3% butterfat;
- b) Determination of solid-non-fat: use of the Bachmann method or the Lactometer method is recommended. Milk should have an SNF of 8.5%;
- c) Test for added water. The Hortvet method is recommended;
- d) Titrateable acidity to measure the freshness of milk;
- e) The Rezazurim dye reduction test when subjected to the one hour test the Lovibond disc reading be four or more for good milk;
- f) In addition to carrying out the 10 minute Rezazurim test it is recommended that another dye-reduction test, the Methylene Blue test, is carried out on each farmer's milk on reception. This is best carried out by the Laboratory following a short pre-incubation of the farmer sample since the practice improves the sensitivity of the test. Decolorization of the Methylene Blue dye in less than 20 minutes indicates numbers of bacteria in excess of 20 million per milliliter and a residual keeping quality of 3 hour or less at twenty degrees Celsius. The Methylene Blue Test is a good means of grading milk and it is suggested that 3 standards should apply:
 - i)milk which does not decolorize the dye in 2 hours is "good";
 - ii)milk which only slightly decolorizes the dye in under 2 hours is "acceptable";
 - iii)milk which decolorizes the dye completely in 30 minutes or less is "non-acceptable" and should be rejected;
- g) A Standard Plate Count: using Milk Agar incubated at thirty degrees Celsius to assess the total Viable Count of milk supply;
- h) The Eijkman test: for faecal coliform microorganisms and Ecoli;
- i) A simple test for Antibiotics such as the International Dairy Federation Plate Assay where problems arise with any of these test results the farmers should be warned and advice given by the Laboratory Manager or Appropriate Authority.

SCHEDULE 2

CLASSES OF AND STANDARDS OF COMPOSITION FOR DAIRY PRODUCTS OTHER THAN CHEESE AND BUTTER

Product	Class Description	Milk fat Content (%m/m)	Minimum solids non-fat content On total content (%m/m)	Maximum Moisture content (%m/m)
Milk	High fat milk	4.5	8.2	-
	Full fat milk	3.3	8.3	-
	Low fat milk	1.5-2.5	8.4	-
	Fat-free milk	Less than 0.5	8.6	-
Cream	Whipping	At least 35	Minimum of 8.6 calculated	-
	Whipped	At least 25	on fat-free basis	-
	Dessert	At least 20		-
	Coffee	At least 12		-
	Cultured	At least 20		-
Cultured	Cultured high fat milk	At least 4.5	8.2	-
Milk	Cultured high fat milk	At least 3.3	8.3	-
	Cultured high fat milk	At least 1.5-2.5	8.4	-
	Cultured high fat milk	Less than 0.5	8.6	-
Yoghurt	High fat yoghurt	At least 4.5	8.2	-
	Full fat yoghurt	At least 3.0	8.3	-
	Low fat yoghurt	At least 1.5 but	8.4	-
		More than 2.5		

	Fat –free yoghurt	Not more than 0.5	8.6	-	
Product	Classes Description	Milk fat content (%m/m)	Minimum Solids non-fat content On total content (%m/m)	Maximum moisture content	
Cream Cheese	Cheese Cream	-	-	70	
Cottage Cheese	Full fat cottage cheese	-	-	75	
	Medium cottage cheese	-	-	77	
	Low cottage cheese	-	-	80	
	Fat-free cottage cheese	-	-	82	
Unsweetened	Unsweetened full fat	At least 7.5	-	75	
Condensed Milk	Unsweetened low fat milk	At least 1.0 but less than 40	-	77	
	Unsweetened fat free	Less than 1.0	-	80	
Milk Powder	High fat milk powder	At least 40	Minimum 35%	5	
	Full fat milk powder	At least 26 but Less than 40	milk protein content calculated	5	
	Medium fat milk powder	At least 10 but less than 26	on a fat-free classes of milk	5	
	Low fat milk powder	At least 1.5 but less than 10	powder	5	

SCHEDULE 3

CLASSES OF AND STANDARDS OF CHEESE

Type of Cheese	Class	Designation	Fat in dry matter content		minimum ripening period (weeks)
			Minimum	Maximum	
			(%m/m)	(%m/m)	
Hard Cheese	Full fat hard	Cheddar (mature)	48	-	25
	Cheese	Cheddar (mild)	48	60	8
		Mozzarella	45	-	-
		Emmentaler	45	60	-
		Gruyere	45	-	-
Semi-hard	High fat semi-	Drakensburg	62	-	-
	Hard cheese				
	Full fat blue	Wensskydale	50	60	6
	Or white semi-	Roquefort	50	60	6
	Hard cheese	Stilton	50	60	6
	Full fat semi-	Cheshire	48	60	-
	hard cheese	Feta	45	60	-
		Gouda	48	60	4
		Gouda (mature)	48	60	25
	Medium fat				
	Semi-hard	Brie	40	-	-
	Cheese	Caemembert	40	-	-

Type of cheese	class	Designation	Fat in dry matter content		Minimum
			Minimum	Maximum	ripening
			(%m/m)	(%m/m)	period
					(Weeks)
Semi-soft	High3 fat				
Cheese	Full fat	Bel Paese	45	60	-
	Medium fat				
	Low fat				
	Fat free	Rocotta	-	10	-
Soft cheese	High fat	-	60	-	-
	Full fat	-	45	-	-
	Medium fat	-	25	45	-
	Low fat	-	10	25	-
	Fat free	-	-	10	-
Process cheese	High fat	High fat	60	-	-
	Process cheese				
	Full fat	Full fat cheese	45	60	-
	Medical fat	Medium fat	25	45	-
	Cheese				
	Low fat	Low fat	10	25	-
	Fat free	Fat free	-	10	-

SCHEDULE 4

CLASSES OF AND STANDARDS FOR BUTTER

Class Designation	Alternate Designation	Milk fat (%m/m)	Maximum moisture (%m/m)	Minimum Snf (%m/m)	Maximum Sodium chloride (%m/m)
Salted Factory Butter	Butter Salted butter	At least 80	16	2	2
Unsalted factory Butter	Unsalted butter	At least 82	16	-	0
Farm butter	-	At least 80	16	2	2
Medium fat Butter	-	At least 50, but not more than 65	-	-	2
Low fat butter	-	At least 35, but Not more than 45	-	-	2

SCHEDULE 5

CLASSES OF AND STANDARDS FOR COMPOSITE DAIRY PRODUCTS

OTHER THAN CHEESE WITH ADDED FOODSTUFFS

Class of Composite Dairy product	Class designation	Milk fat content (%m/m)	Minimum milk solids content (%m/m)	Total dry matter content (%m/m)
Fruit yoghurt	High fat fruit Yoghurt	At least 4.5	-	At least 18.0
	Full fat fruit yoghurt	At least 2.5	-	At least 17.5
	Medium fat fruit yoghurt	At least 1.0		
		but less than 2.5	-	At least 18.0
	Fat free fruit yoghurt	Not more than 0.5	-	At least 17.0
Yoghurt with Added food	Full fat yoghurt with (name of added foodstuff)	At least 2.5	--	At least 17.0
Stuffs other Than fruit	Low fat yoghurt With (name of added Foodstuff)	At least 1.0		
		but less than 2.5		
	Fat free yoghurt	Not more than 0.5	-	At least 16.5
	With (name of other			

Foodstuff)

Cottage cheese	Full fat cottage cheese	-	-	At least 27.0
With added	with- - -			
Foodstuffs	Low fat cottage cheese	-	-	At least 22.0
	With - - -			
	Fat –free cottage cheese	-	-	At least 20.0

SCHEDULE 6

CLASSES OF AND STANDARDS FOR WITH ADDED FOODSTUFFS

Type of cheese	Class	Alternate	Fat in dry	Maximin dry
With added foodstuffs	designation	class designation	matter	Matter content
			(%m/m)	(%m/m)
Processed cheese	High fat - - -	Double cream	60	
With added foodstuffs	with - - -	processed cheese		
		With- - -		
	Full fat - - -	Full cream	At least 45	
	With- - -	Processed cheese	but not less than 45	
	Medium fat- - -	Medium cream	At least 25 but	
	With - - -	with- - -	less than 45	
	Low fat- - -	-	At least 10 but	
	With- - -		less than 25	
	Fat-free- - -	-	less than 10	
	With- - -			