

## 1981 No. 233

## MILK AND DAIRIES

Marketing of Milk Products (Amendment) Regulations  
(Northern Ireland) 1981

Made . . . . . 10th July 1981

Coming into operation . . . . . 31st July 1981

The Department(a) of Agriculture, in exercise of the powers conferred on it by sections 5(1), 7, 10 and 15 of the Marketing of Milk Products Act (Northern Ireland) 1958(b) and of every other power enabling it in that behalf, and with the concurrence of the Department(a) of Health and Social Services(c) insofar as they relate to the direct injection method of manufacturing ultra-heat treated cream, hereby makes the following regulations:

*Citation and commencement*

1. These regulations may be cited as the Marketing of Milk Products (Amendment) Regulations (Northern Ireland) 1981 and shall come into operation on 31st July 1981.

*Amendments to the 1966 regulations*

2. The Marketing of Milk Products Regulations (Northern Ireland) 1966(d) shall be amended as follows:—

(1) **After regulation 11 paragraph (2) there shall be added the following paragraph:—**

“(2A) In addition to the requirement in paragraph (2) all machinery, equipment and appliances used for the manufacture and packing of ultra-heat treated cream shall be thoroughly rinsed and washed if they become soiled while being operated.”.

(2) **In regulation 11 paragraph (3) for the word “All” there shall be substituted the words “Subject to paragraph (3A) all”.**

(3) **After regulation 11 paragraph (3) there shall be added the following paragraph:—**

“(3A) (a) All machinery, equipment and appliances used for the manufacture and packing of ultra-heat treated cream shall be sterilised immediately before the treatment of the cream is due to commence.

(b) If the machinery, equipment or appliances become contaminated or are exposed to the risk of contamination while being operated they shall be re-sterilised before the process is recommenced.”.

(4) **For Part 8 there shall be substituted:—**

(a) Formerly Ministry: see Northern Ireland Constitution Act 1973 (c. 36) Sch. 5 para. 8(1)

(b) 1958 c. 31 (N.I.) as amended by 1967 c. 15 (N.I.) ss. 13, 14 and 15

(c) See 1958 c. 31 (N.I.) s. 15(1A), as inserted by 1967 c. 15 (N.I.) s. 15

(d) S.R. & O. (N.I.) 1966 No. 204

## "PART 8

MANUFACTURE OF PASTEURISED AND ULTRA-HEAT  
TREATED CREAM*Method of manufacture*

23.—(1) Pasteurised cream shall be manufactured on registered premises and in accordance with the provisions of Part 2 of Schedule 4.

(2) Ultra-heat treated cream shall be manufactured on registered premises and in accordance with the provisions of Part 3 of Schedule 4.

*Packing of cream*

24.—(1) Reusable containers used for the dispatch of pasteurised cream from registered premises shall be cleansed before filling in accordance with regulation 41. Other containers used for the dispatch of pasteurised cream from registered premises shall be clean before filling.

(2) Containers used for the dispatch of pasteurised cream shall be securely closed immediately after filling. Materials used for closing containers of pasteurised cream shall be clean.

(3) Ultra-heat treated cream shall be aseptically packed on the premises on which the ultra-heat treatment takes place in sterile containers in which it will reach consumers.

(4) Each consignment of pasteurised cream, which is dispatched from registered premises in containers in which it will not reach consumers, shall be accompanied by a consignment note on which will be shown the following information:—

- (a) the name and address of the premises on which the cream was manufactured;
- (b) the date on which the cream in the consignment was manufactured;
- (c) the date of dispatch of the consignment.

(5) Containers in which pasteurised or ultra-heat treated cream is packed for sale to consumers shall be clearly marked with:—

- (a) the name or business name of the licence holder responsible for packing the cream;
- (b) the word "pasteurised" where the cream has been subjected to the process set out in Part 2 of Schedule 4 or the words "Ultra-heat treated" or the letters "UHT" where the cream has been subjected to the process set out in Part 3 of Schedule 4.

*Standard of quality of cream for sale for human consumption as cream*

25.—(1) Pasteurised cream for sale for human consumption as cream shall be regarded as being of the required quality if samples contain no coliform bacteria in one gramme of the cream where such samples are taken, transported, kept and tested in accordance with the procedure set out in Schedule 8.

(2) Ultra-heat treated cream shall be regarded as being of the required quality if samples of the cream contain not more than 100 bacteria in one gramme where such samples are taken, transported, kept and tested in accordance with the procedure set out in Schedule 8.

*Storage of cream*

26.—(1) Whilst on registered premises pasteurised cream intended for human consumption as cream shall be maintained at a temperature not exceeding 6°C.

(2) Whilst on registered premises ultra-heat treated cream shall be stored in an area used solely for the storage of milk, milk products or other foodstuffs in sealed packages or in a room provided for in regulation 7(2)(a)."

(5) In regulation 41(1) "50,000 per square foot" shall be replaced by "50,000 per 0.1 square metre".

(6) For Part 2 of Schedule 4 there shall be substituted:—

"PART 2

2. *Method of manufacturing pasteurised cream*

- (a) (i) The milk from which the cream is manufactured shall be heated to and retained at a temperature of not less than 71.5°C and not more than 90°C for a period of at least 15 seconds and the cream shall then be separated by means of a power driven centrifugal separator as part of a continuous process of pasteurisation and separation; or
- (ii) the cream shall be separated from milk by means of a power driven centrifugal separator and as part of a continuous process of separation and pasteurisation the cream shall be heated to and retained at a temperature of not less than 73°C and not more than 85°C for a period of at least 15 seconds; or
- (iii) the cream shall be separated from milk by means of a power driven centrifugal separator and as part of a continuous process of separation and pasteurisation the cream shall be heated to a temperature of not less than 85°C and not more than 90°C.
- (b) The cream shall be cooled as soon as practicable thereafter to a temperature of not more than 6°C.
- (c) The temperatures referred to in (a)(i), (ii) and (iii) shall be automatically controlled.
- (d) Any appliance in which milk or cream is to be heated in accordance with (a)(i), (ii) or (iii) shall be provided with equipment which shall automatically divert the flow of the milk or cream which is not retained at a temperature of at least 71.5°C or 73°C as the case may be or heated to a temperature of at least 85°C and with a device which shall automatically record the operation of the flow diversion equipment.
- (e) Indicating and recording thermometers shall be installed in suitable places in the pasteurising appliance to indicate and record the temperature to which the cream is heated or at which the milk or cream is retained. These thermometers shall be marked in graduations of not greater than 1°C or 2°F, adequately spaced to give clear readings.
- (f) Records of the operation of the flow diversion equipment and of temperatures shall be correctly dated and shall be retained for a period of not less than two months."

(7) For Part 3 of Schedule 4 there shall be substituted:—

"PART 3

3. *Method of manufacturing ultra-heat treated cream*

- (a) (i) The cream shall be separated from milk by means of a power driven centrifugal separator and as part of a continuous process of

separation and heat treatment shall be heated to and retained at a temperature of not less than 135°C for a period of at least one second and not more than 10 seconds; or

- (ii) pasteurised cream manufactured in accordance with Part 2 and which meets the standards of quality laid down in regulation 25(1) shall be heated to and retained at a temperature of not less than 135°C for a period of at least one second and not more than 10 seconds.
- (b) The appliance used shall be provided with a device which shall automatically divert or stop the flow of any cream which has not been heated to a temperature of at least 135°C.
- (c) The heat treatment may be carried out by one of the following methods:—
- (i) by the direct injection of cream into steam or of steam into cream; or
  - (ii) by heat transfer to the cream without direct contact between the heating medium and the cream.
- (d) When the direct injection method of heat treatment is being used the following requirements shall be observed:—
- (i) the steam shall be produced from water which is clean, free from pollution and contains no additives other than the following permitted boiler feed water treatment compounds:—
    - Potassium Alginate
    - Sodium Alginate
    - Potassium Carbonate
    - Sodium Carbonate
    - Sodium Hydroxide
    - Monosodium Dihydrogen Orthophosphate
    - Disodium Monohydrogen Orthophosphate
    - Trisodium Orthophosphate
    - Sodium Tripolyphosphate
    - Sodium Hexametaphosphate
    - Tetrasodium Pyrophosphate
    - Sodium Silicate
    - Sodium Metasilicate
    - Sodium Sulphate
    - Magnesium Sulphate
    - Neutral or Alkaline Sodium Sulphite
    - Unmodified Starch
    - Sodium Aluminate
    - Polyoxyethylene Glycol (Minimum Molecular Weight 1,000);
  - (ii) the steam shall be produced in such manner as will ensure that no solid matter is carried over from the boiler. There shall be automatic and continuous control to ensure that any entrained water droplets carried over from the boiler shall be separated from the steam before it enters the cream heating appliance;
  - (iii) only steam produced in accordance with sub-paragraphs (i) and (ii) and the internal surfaces of the equipment shall be allowed to come into contact with the cream;
  - (iv) facilities shall be provided to enable samples of water to be taken directly from the boiler and samples of steam to be taken before it mixes with the cream;
  - (v) an amount of water equivalent to that added to the cream in the

form of steam shall be extracted from the cream by a process of evaporative cooling so that the percentage by weight of the total solids content of the cream shall be the same after treatment as before treatment:

- (vi) the appliance used shall be provided with control apparatus which shall ensure compliance with the provision in sub-paragraph (v). Before the appliance is initially used or after any operational change the control apparatus shall be calibrated in relation to the particular temperature to be used for treating the cream so as to determine the input and output temperatures of the cream. Records of the input and output temperatures, and the particular temperatures used for treating cream, shall be kept with such appliance;
- (vii) indicating and recording thermometers marked with graduations of not greater than 1°C or 2°F adequately spaced to give clear readings shall be installed in suitable places in the appliance to indicate the ultra-heat treatment temperature, the input temperature and the output temperature and continuously record the ultra-heat treatment temperature and both the input and output temperatures or one of them and the difference between them. All such records shall be correctly dated and retained for a period of not less than 12 months;
- (viii) in this Part the term "input temperature" means the temperature of the cream immediately before the application of the steam, the term "operational change" means any change in the site, lay out or construction of equipment used, or any change in the steam supply or in the particular temperature used for treating the cream and "output temperature" means the temperature of the vapour or of the cream at the point of leaving the evaporative cooling expansion vessel.
- (e) When the indirect heat transfer method of heat treatment is being used indicating and recording thermometers shall be installed in suitable places in the appliance to indicate and record the temperature at which the cream is heated and retained. The thermometers shall be marked in graduations of not greater than 1°C or 2°F adequately spaced to give clear readings and such records shall be correctly dated and retained for a period of not less than 12 months."

(8) **Part 4 of Schedule 4 shall be deleted.**

(9) **Schedule 7 shall be amended as follows:—**

(a) For paragraph 6 there shall be substituted:—

"6. *Method of swabbing*

(1) The apparatus shall consist of:—

- (a) a screw-cap bottle, 28 ml nominal capacity, with wide mouth;
- (b) a wooden stick approximately 14 × 1 × 0.1 cm;
- (c) 3.75 cm wide unmedicated ribbon gauze.

The swab shall consist of a 15 cm length of the gauze wound round one end of the stick and secured by means of thread or staple.

(2) An area of not more than 0.1 square metre of any part of the interior surface of the tanker shall be swabbed by rubbing the gauze saturated with the sterile swab solution completely over it, the swab being rotated while it is being rubbed over the surface. The area to be examined shall be treated

twice by the swab. The swab shall then be returned to the swab solution and the stick broken below the finger grip. The bottle shall then be stoppered.

(3)(a) The bottle shall contain 20 ml sterile swab solution.

(b) The swab shall be wrapped in grease-proof paper."

(b) For sub-paragraph (2) of paragraph 10 there shall be substituted:—

"(2) the total bacterial count per 0.1 square metre shall be ascertained by multiplying the colony count per millilitre of swab solution by 20."

(10) In Schedule 8:—

(a) For the heading of Part 1 there shall be substituted the following heading:—

"THE TAKING, HOLDING AND TRANSPORT OF SAMPLES".

(b) For the heading of paragraph 2 there shall be substituted the following heading:—

"*Cream for sale for human consumption as pasteurised cream and farm bottled cream*".

(c) In sub-paragraph 2(1) for the words "samples may be taken" shall be substituted the words "samples may be taken in registered premises".

(d) Following paragraph 2 there shall be inserted the following paragraph:—

"2A. *Cream for sale as ultra-heat treated cream*

Samples may be taken at any time after the cream has been filled into the containers in which it is to be supplied to the consumer. Such containers shall be delivered intact to the testing laboratory."

(e) For the heading of paragraph 4 there shall be substituted the following heading:—

"*Transport and holding of samples of skimmed milk, buttermilk, pasteurised cream and farm bottled cream*".

(f) In paragraph 6 following the words "metal caps" shall be inserted the word "dilutents".

(g) Following paragraph 6 there shall be inserted the following paragraph:—

"6A. *Pre-incubation of ultra-heat treated cream samples*

Samples shall be placed in an incubator at a temperature of  $37^{\circ}\text{C} \pm 1^{\circ}\text{C}$  and retained at that temperature for 24 hours. If testing does not commence immediately the samples shall be placed in a refrigerator and held at a temperature of not more than  $5^{\circ}\text{C}$  until testing commences."

(h) In paragraph 7 for the words "0.9 per cent by weight aqueous sodium chloride solution" shall be substituted the words "2.0 per cent by weight aqueous sodium citrate solution".

(i) In sub-paragraph (1) of paragraph 8 for the words "sterile diluent" shall be substituted the words "one-quarter strength Ringer's solution".

(j) In sub-paragraph (2) of paragraph 8 for the words "Farm Bottled Cream or cream for sale for human consumption as cream," shall be substituted the words "Farm Bottled Cream or cream for sale for human consumption as Pasteurised Cream,"; and for the word "diluent" shall be substituted the words "2.0 per cent by weight sodium citrate solution".

(k) Following sub-paragraph (2) of paragraph 8 there shall be inserted the following sub-paragraph:—

"(2A) To make a 1 in 10 dilution of ultra-heat treated cream the sample shall be well mixed and 10 grammes shall then be weighed into a dilution

flask containing not less than 89 ml and not more than 91 ml of 2.0 per cent by weight sodium citrate solution at a temperature of not less than 35°C and not more than 40°C and the contents thoroughly mixed.”.

- (l) In sub-paragraphs (3) and (4) of paragraph 8 for the word “diluent” shall be substituted the words “one-quarter strength Ringer’s solution”.
- (m) In sub-paragraph (1) of paragraph 14 after the words “tanker swab solution” there shall be inserted the words “or into the sample of ultra-heat treated cream or into the 1 in 10 dilution of ultra-heat treated cream”.

Sealed with the Official Seal of the Department of Agriculture for Northern Ireland on 10th July 1981.

(L.S.)

*S. R. Armstrong*

Assistant Secretary

The Department of Health and Social Services hereby concurs with the foregoing Regulations insofar as they relate to the direct injection method of manufacturing ultra-heat treated cream.

Sealed with the Official Seal of the Department of Health and Social Services for Northern Ireland on 10th July 1981.

(L.S.)

*S. W. McDowell*

Assistant Secretary

## EXPLANATORY NOTE

*(This note is not part of the Regulations.)*

These Regulations amend the Marketing of Milk Products Regulations (Northern Ireland) 1966 by prescribing:—

- (1) two methods for the manufacture of ultra-heat treated cream, namely the direct method in which cream is mixed with steam and the indirect method in which heat is transferred to cream without direct contact between the heating medium and the cream;
- (2) quality standards for ultra-heat treated cream; and
- (3) packing requirements for ultra-heat treated cream.

The Regulations also:—

- (1) amend the method of manufacturing pasteurised cream by placing an upper limit on the temperature which may be used;
- (2) remove an alternative method of manufacturing pasteurised cream;
- (3) amend the requirements for packing pasteurised cream; and
- (4) remove an obsolete method for the taking of swabs from the interior surfaces of tankers to determine the efficiency of cleansing.