
 STATUTORY INSTRUMENTS

1988 No. 2206

FOOD

MILK AND DAIRIES

 The Milk and Dairies (Semi-skimmed and Skimmed
 Milk) (Heat Treatment and Labelling) Regulations 1988

<i>Made - - - -</i>	<i>15th December 1988</i>
<i>Laid before Parliament</i>	<i>19th December 1988</i>
<i>Coming into force</i>	<i>1st January 1989</i>

The Minister of Agriculture, Fisheries and Food, the Secretary of State for Health and the Secretary of State for Wales, acting jointly, in exercise of the powers conferred by sections 33, 74(3) and 118 of the Food Act 1984^(a) and now vested in them^(b) and all other powers enabling them in that behalf, after consultation in accordance with section 118(6) of that Act with such organisations as appear to them to be representative of interests substantially affected by the Regulations, hereby make the following Regulations:—

Title and commencement

1. These Regulations may be cited as the Milk and Dairies (Semi-skimmed and Skimmed Milk) (Heat Treatment and Labelling) Regulations 1988 and shall come into force on 1st January 1989.

Interpretation

2.—(1) In these Regulations unless the context otherwise requires—

“the Act” means the Food Act 1984;

“atmospheric shade box” means a well ventilated box or cupboard so situated on the outside of a wall on the north side of a building or in a comparable position that it is at all times in the shade, such box or cupboard being not less than three feet above the ground at its lowest point and having inside it a maximum thermometer and a minimum thermometer of the meteorological type, accurate to within 0.5°C.;

“atmospheric shade temperature” means the temperature inside an atmospheric shade box;

“bulk milk” means milk which is not packed or made up in advance in the bottle or other container in which it is to be supplied to the consumer;

“consumer” means any person to whom milk is supplied and who neither sells it nor uses it in the manufacture of milk products for sale;

“local authority” has the meaning assigned to it by section 72 of the Act;

“milk” means cows’ milk intended for sale or sold for human consumption, but does not include such milk intended for manufacture into products for sale for human consumption;

“milk processor” means any milk pasteuriser, milk steriliser or person treating milk by the ultra high temperature method;

(a) 1984 c.30; section 132(1) contains a definition of “the Ministers” relevant to the exercise of the statutory powers under which these Regulations are made.

(b) In the case of the Secretary of State for Health, by virtue of S.I. 1988/1843.

“milk purveyor” includes any person who sells milk, whether wholesale or by retail; “the Minister” means the Minister of Agriculture, Fisheries and Food, and the Secretary of State, acting jointly;

“presentation”, in relation to semi-skimmed milk or skimmed milk, includes the appearance or packaging of the semi-skimmed milk or skimmed milk, the way in which the semi-skimmed milk or skimmed milk is arranged when it is exposed for sale and the setting in which the semi-skimmed milk or skimmed milk is displayed with a view to sale, but does not include any form of labelling or advertising;

“sample” means a sample taken by a person duly authorised in that behalf by a local authority;

“sell” includes offer or agree to sell or expose for sale; and “sold” shall be construed accordingly;

“semi-skimmed milk” means milk the fat content of which has been brought to at least 1.50 per cent. and at the most 1.80 per cent. calculated by weight;

“skimmed milk” means milk the fat content of which has been brought to not more than 0.30 per cent. calculated by weight.

(2) Any reference in these Regulations to a numbered regulation or to a Schedule shall, unless the reference is to a regulation of, or a Schedule to, specified Regulations, be construed as a reference to the regulation or Schedule so numbered in these Regulations.

Heat treatment of semi-skimmed milk and skimmed milk

3.—(1) Subject to paragraphs (3) and (4) of this regulation, no person shall sell any semi-skimmed milk or skimmed milk unless the requirements specified in paragraph (2) of this regulation are satisfied.

(2) The requirements to be satisfied are—

- (a) the general requirements of Schedule 1 in connection with the heat treatment of semi-skimmed milk and skimmed milk,
- (b) such of the special requirements as are applicable of Part I, II or III of Schedule 2 in relation to and in connection with such heat treatment by pasteurisation, sterilisation or the ultra high temperature method respectively,
- (c) the requirements as to sampling of Part I of Schedule 3 and such of the requirements as to testing as are applicable of Parts II, III, IV, V and VI of that Schedule.

(3) Where semi-skimmed milk or skimmed milk is brought from Scotland or Northern Ireland into England and Wales, the requirements of Schedule 1 and any Part of Schedule 2 in relation to that milk shall, so far as they would relate to anything to be done before that milk enters England and Wales, be deemed to be satisfied if the corresponding requirements of legislation having effect for the time being in Scotland or Northern Ireland (as the case may be) in relation to the heat treatment of that milk are satisfied.

(4) Paragraph (2)(b) and (c) of this regulation shall not apply to the sale of semi-skimmed milk or skimmed milk to a milk processor for heat treatment in accordance with these Regulations.

Labelling and presentation

4.—(1) No person shall sell any semi-skimmed milk or skimmed milk, which has been subjected to heat treatment by pasteurisation, sterilisation or treatment by the ultra high temperature method, in a container unless that container is labelled in accordance with the requirements of Schedule 4.

(2) No person shall sell to the ultimate consumer (as defined in Schedule 4) any semi-skimmed milk or skimmed milk whose presentation is such that a purchaser is likely to be misled to a material degree as to the nature, substance or quality of the semi-skimmed milk or skimmed milk.

Penalties and enforcement

5.—(1) If any person contravenes or fails to comply with any of the foregoing provisions of these Regulations he shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding £2,000.

(2) Each local authority shall enforce and execute such provisions in their area.

(3) Every local authority shall give such assistance and information to any other local authority as that other local authority may reasonably require for the purpose of carrying out their duties under these Regulations.

Application of various provisions of the Act

6. The following provisions of the Act shall apply for the purposes of these Regulations as if references therein to proceedings, or a prosecution, under or taken or brought under the Act included references to proceedings, or a prosecution, as the case may be, taken or brought for an offence under these Regulations:—

- (a) section 95(5) (which relates to prosecutions);
- (b) section 97(1), (2) and (3) (which relates to evidence of analysis);
- (c) section 100 (which relates to a contravention due to some person other than the person charged);
- (d) section 102(2)(a) and (b) (which relates to the conditions under which a warranty may be pleaded as a defence);
- (e) section 103 (which relates to offences in relation to warranties and certificates of analysis).

Importation of Milk Regulations 1988

7. Save as provided by the Importation of Milk Regulations 1988(a), these Regulations do not apply to imported semi-skimmed milk or skimmed milk which is drinking milk within the meaning of Council Regulation (EEC) No. 1411/71(b) laying down additional rules on the common market organization in milk and milk products for drinking milk.

Revocation

8. The Milk and Dairies (Semi-skimmed and Skimmed Milk) (Heat Treatment and Labelling) Regulations 1986(c) and the Milk and Dairies (Semi-skimmed and Skimmed Milk) (Heat Treatment and Labelling) (Amendment) Regulations 1988(d) are revoked.

In Witness whereof the Official Seal of the Minister of Agriculture, Fisheries and Food is hereunto affixed on 13th December 1988.

(L.S.)

Trumpington
Parliamentary Secretary,
Ministry of Agriculture, Fisheries and Food

15th December 1988

Kenneth Clarke
Secretary of State for Health

15th December 1988

Peter Walker
Secretary of State for Wales

(a) S.I. 1988/1803.

(b) OJ No. L148, 3.7.71, p. 4 (OJ/SE 1971 (II) p. 42. Corrigendum at OJ No. L199, 19.7.73, p. 38); the relevant amending instruments are Council Regulation (EEC) No. 566/76 (OJ No. L67, 15.3.76, p. 23. Corrigendum at OJ No. L107, 24.4.76, p. 22); Commission Regulation (EEC) No. 222/88 (OJ No. L28, 1.2.88, p. 1).

(c) S.I. 1986/722.

(d) S.I. 1988/1804.

Regulation 3(2)(a)

SCHEDULE 1

GENERAL REQUIREMENTS IN CONNECTION WITH THE HEAT TREATMENT OF SEMI-SKIMMED MILK AND SKIMMED MILK

1. Every milk processor shall take such measures as are adequate to ensure that any semi-skimmed milk or skimmed milk which has been heat treated by pasteurisation, sterilisation or the ultra high temperature method shall be kept apart from all other milk at all times except when it is in separate sealed containers.

2.—(1) Without prejudice to the generality of sub-paragraph (2) below, every milk processor shall keep accurate records of—

- (a) the quantities of bulk milk purchased by him and of the names and addresses of the persons from whom it was purchased;
- (b) the quantities of bulk milk delivered to him, other than by way of sale, and of the names and addresses of the persons by whom such deliveries were made;

(2) Every milk purveyor shall keep accurate records of—

- (a) the quantities of bulk milk purchased and sold by him, as the case may be, and of the names and addresses of the persons from whom it was so purchased and to whom it was so sold;
- (b) the quantities of semi-skimmed and skimmed milk purchased and sold by him, as the case may be, and of the names and addresses of the persons from whom it was so purchased and to whom it was so sold otherwise than by retail;

(3) Every milk processor and every milk purveyor shall—

- (a) retain the records referred to in sub-paragraphs (1) and (2) above for a period of twelve months from the date of the transaction to which the record relates;
- (b) permit any person duly authorised by the local authority—
 - (i) to inspect the arrangements and processes for the handling, treatment, storage and distribution of the semi-skimmed milk and skimmed milk at any place at which the milk is in the possession of the milk processor or milk purveyor, as the case may be;
 - (ii) to take samples of the milk at any such place; and
 - (iii) to inspect any records which the milk processor or the milk purveyor, as the case may be, is required to keep by these Regulations.

3. Milk which has been heat treated in another Member State of the European Economic Community shall not be accepted for further heat treatment unless it is accompanied by a certificate prescribed by the Importation of Milk Regulations 1988.

4. Milk which is transferred from one container to another prior to heat treatment shall be so treated as soon as practicable after the first container has been opened.

5. Raw milk shall not be accepted for heat treatment unless—

- (a) over the preceding two months not less than two samples have been taken each month of the producer's raw milk, the samples have been submitted to a plate count test the results of which have been recorded and the geometric average of those results is not more than 100,000 per ml; or
- (b) the milk processor has purchased the milk as bulk milk which complies with the requirements of sub-paragraph (a) above and with a written warranty to that effect.

6. Raw milk which is not heat treated within 36 hours of its admission to the heat treatment establishment shall not be subjected to heat treatment unless—

- (a) the milk processor has in the handling and storage of the milk taken steps to ensure that a sample of that milk taken and submitted to a plate count test achieves a result of not more than 200,000 per ml; and
- (b) a sample is taken of that milk, the sample submitted to a plate count test and the result is recorded.

7. In any proceedings for a breach of paragraph 5 or 6 above, evidence of a sample taken in accordance with Part I of Schedule 3 or of a plate count test carried out as prescribed in Part IV of that Schedule shall be preferred to evidence of a sample taken or of a plate count test carried out, respectively, by any other method.

8. The milk processor shall retain for a period of not less than three months—

- (a) from the date of further heat treatment any certificate referred to in paragraph 3 above;
- (b) any warranty referred to in paragraph 5(b) above;
- (c) any records made in compliance with paragraphs 5(a) and 6(b) above.

SCHEDULE 2

Regulation 3(2)(b)

SPECIAL REQUIREMENTS IN RELATION TO AND IN CONNECTION
WITH THE HEAT TREATMENT OF SEMI-SKIMMED MILK
AND SKIMMED MILK

PART I

PASTEURISATION

A. Conditions applicable when pasteurised milk is produced from raw milk or from milk heat treated for transportation

1. The milk shall be pasteurised, that is to say—
 - (a) retained at a temperature of not less than 62.8°C. and not more than 65.6°C. for at least thirty minutes and be immediately cooled to a temperature of not more than 10°C.; or
 - (b) retained at a temperature of not less than 71.7°C. for at least fifteen seconds and be immediately cooled to a temperature of not more than 10°C.; or
 - (c) retained at such temperature for such period as may be specified by the licensing authority with the approval of the Minister.

2. The whole of the apparatus in which the milk is pasteurised, including the cooler, shall be so constructed as to secure the protection of the milk from risk of atmospheric contamination by dust or otherwise.

3. When the milk is heated by a continuous-flow method and is pasteurised in accordance with—
 - (a) the provisions of sub-paragraph (b) of paragraph 1 of this Part of this Schedule; or
 - (b) a method approved by the Minister under sub-paragraph (c) of paragraph 1 hereof,any apparatus in which the milk is to be heated to and maintained at a temperature of more than 65.6°C shall be provided with a device which shall automatically divert the flow of any milk which is not raised to the authorised temperature and automatically record each operation of the device. Such record shall be dated and preserved for a period of not less than three months.

- 4.—(1) Such indicating and recording thermometers as the local authority shall reasonably consider necessary shall be installed in suitable places in the apparatus in which the milk is pasteurised so as to indicate the temperatures at which the milk is retained and to which the milk is cooled.
(2) The records of recording thermometers shall be marked with graduations adequately spaced to give clear readings, and they shall be dated and preserved for a period of not less than three months.

- 5.—(1) A sample of the milk taken in accordance with Part I of Schedule 3 at the heat treatment establishment after pasteurisation shall satisfy the coliform test and the plate count test prescribed in Parts III and IV of that Schedule. The sample shall be deemed to satisfy the coliform test if the coliform count is less than 1 per ml. The sample shall be deemed to satisfy the plate count test if the plate count is not more than 30,000 per ml.
(2) A sample of the milk taken in accordance with Part I of Schedule 3 at the heat treatment establishment after pasteurisation shall after incubation for 5 days at 6°C. satisfy the plate count test prescribed in Part IV of that Schedule. The plated sample shall be incubated for 25 hours at 21°C. The sample shall be deemed to satisfy the test if the plate count is not more than 100,000 per ml.
(3) A sample of milk taken in accordance with Part I of Schedule 3 after pasteurisation and before delivery to the consumer shall satisfy the methylene blue test prescribed in Part II of that Schedule and the phosphatase test prescribed in Part V of that Schedule. The methylene blue test shall be deemed to be satisfied if the milk fails to decolourise methylene blue in 30 minutes. The phosphatase test shall be deemed to be satisfied if the milk gives a reading of 10 µg or less of p-nitrophenol/ml of milk.

- 6.—(1) Milk which is pasteurised in bottles shall be supplied to the consumer in those bottles, and milk which is pasteurised in containers other than bottles shall be put into the containers in which it is to be supplied to the consumer at the premises at which it is pasteurised as soon as possible after pasteurisation.
(2) Every container in which the milk is transported, exposed or offered for sale shall be tightly closed and securely fastened with a cap or cover overlapping the lip of the container or in some other suitable manner approved by the local authority.

B. Additional conditions applicable when pasteurised milk is produced from bulk milk which has been heat treated for transportation

1.—(1) Where any bulk milk which has, for the purposes of transportation, been heat treated in another heat treatment establishment is to be subjected to pasteurisation in accordance with these Regulations, the requirements specified in the following sub-paragraphs shall apply.

(2) Milk shall not be accepted for further heat treatment unless it has a temperature not exceeding 6°C. on admission to the heat treatment establishment and is retained at such a temperature until pasteurisation.

(3) The milk processor shall check and record the temperature of the milk on admission to the heat treatment establishment and immediately before pasteurisation.

(4) For purposes of identifying sources of supply which exceed a plate count of 100,000 per ml., in order to exclude such milk from pasteurisation in accordance with these Regulations, the milk processor shall—

- (a) before pasteurisation take a sample of the milk in accordance with Part I of Schedule 3;
- (b) submit it to the plate count test prescribed in Part IV of that Schedule;
- (c) record the result.

(5) The milk processor shall retain for a period of not less than three months the records made in compliance with sub-paragraphs (3) and (4) above.

PART II**STERILISATION****A. Conditions applicable when the milk is heated in bottles or by a continuous-flow method**

1. In this Part of this Schedule, "bottle" means any container which has a capacity of not more than five litres and is of a type approved by the local authority.

2. The milk shall be sterilised, that is to say, filtered or clarified, and (except in the case of skimmed milk) homogenised, and thereafter heated to and maintained at such a temperature, not less than 100°C., for such a period as to ensure that it will comply with the turbidity test prescribed in Part VI of Schedule 3. The milk shall be heated as aforesaid—

- (a) in bottles and in such a manner that on or before completion of the treatment the bottles shall be sealed with an airtight seal; or
- (b) by a continuous-flow method.

3. Such thermometers and pressure gauges as the local authority shall reasonably consider necessary shall be installed in suitable places in the apparatus so as to indicate the temperature or pressure to which the milk is raised or subjected, as the case may be.

4.—(1) A sample of the milk taken in accordance with Part I of Schedule 3 at the heat treatment establishment after sterilisation shall after incubation for 15 days at 30°C. satisfy the plate count test prescribed in Part IV of that Schedule. The sample shall be deemed to satisfy the plate count test if the plate count is not more than 10 per 0.1ml.

(2) A sample of the milk taken in accordance with Part I of Schedule 3 after sterilisation and before delivery to the consumer shall satisfy the turbidity test prescribed in Part VI of that Schedule. The sample shall be deemed to satisfy the test if it gives a filtrate showing no sign of turbidity.

B. Additional conditions applicable when the milk is heated by a continuous-flow method

1. Immediately after heating as aforesaid by a continuous-flow method the milk shall be put into the sterile containers in which it is to be supplied to the consumer. Such containers shall be filled and sealed at the premises at which the treatment has been carried out with such aseptic precautions as will ensure the protection of the milk from the risk of contamination.

2. The records of such recording thermometers as the local authority shall reasonably consider necessary to be installed in suitable places in the apparatus in which the milk is to be heated as aforesaid by a continuous-flow method shall be marked with graduations adequately spaced to give clear readings, and they shall be dated and preserved for a period of not less than three months.

3. Any apparatus in which the milk is to be heated as aforesaid by a continuous-flow method shall be provided with a device which shall automatically divert the flow of any milk which is not raised to the authorised temperature and automatically record each operation of the device. Such record shall be dated and preserved for a period of not less than three months.

4. Every container in which the milk heated as aforesaid by a continuous-flow method is transported, exposed or offered for sale shall be so closed and securely fastened that it is airtight.

PART III

TREATMENT BY THE ULTRA HIGH TEMPERATURE METHOD

1. The milk shall be treated by the ultra high temperature method, that is to say retained at a temperature of not less than 135°C. for not less than one second.

2. Any apparatus in which the milk is to be heated to and maintained at a temperature of not less than 135°C. shall be provided with a device which shall automatically divert the flow of any milk which is not raised to the authorised temperature and automatically record each operation of the device. Such record shall be dated and preserved for a period of not less than three months.

3.—(1) Such indicating and recording thermometers as the local authority shall reasonably consider necessary shall be installed in suitable places in the apparatus in which the milk is treated by the ultra high temperature method so as to indicate the temperatures to which the milk is heated.

(2) The records of recording thermometers shall be marked with graduations adequately spaced to give clear readings, and they shall be dated and preserved for a period of not less than three months.

4. A sample of the milk taken in accordance with Part I of Schedule 3 at the heat treatment establishment after treatment by the ultra high temperature method shall after incubation for 15 days at 30°C. satisfy the plate count test prescribed in Part IV of that Schedule. The sample shall be deemed to satisfy the plate count test if the plate count is not more than 10 per 0.1ml.

5.—(1) Milk which is treated by the ultra high temperature method shall immediately after such treatment be put into the sterile containers in which it is to be supplied to the consumer. Such containers shall be filled and sealed at the premises at which the treatment has been carried out with such aseptic precautions as will ensure the protection of the milk from risk of contamination.

(2) Every container in which milk treated by the ultra high temperature method is transported, exposed or offered for sale shall be so closed and securely fastened, either with a cap overlapping the lip of the container or in some other suitable manner approved by the licensing authority, that the container is airtight.

Regulation 3(2)(c)
and Schedule 2

SCHEDULE 3

PART I

PROVISIONS AS TO SAMPLING

Taking of sample

1. A sample may be taken at any time when the milk is in the possession of a milk processor or milk purveyor.

2. When the milk is in containers with a capacity not exceeding 1.25 litres, or when the milk has been treated by the ultra high temperature method whether or not such milk is in containers with a capacity not exceeding 1.25 litres, the sample shall consist of one such container which shall be delivered intact to the testing laboratory.

3. When the milk (other than milk which has been treated by the ultra high temperature method) is in containers with a capacity exceeding 1.25 litres, the sample shall consist of not less than 60 ml. of the milk. The milk shall be thoroughly stirred before sampling and the sample shall be taken from well below the surface of the milk. The instruments used for stirring and sampling shall be sterile and the sample shall be poured into a sterile bottle which shall thereupon be immediately stoppered. The part of the stopper which may come into contact with the milk shall be sterile. Where the person taking the sample breaks the seal on a container he shall, after taking the sample, re-seal the container and attach to it a label certifying that it has been opened and re-sealed by him.

Identification of sample

4. For the purpose of identification in the testing laboratory, the person taking the sample shall mark the container of the sample with a number or other suitable identification mark at the time of sampling and shall enter in a book or on a paper, which shall accompany the sample, the following particulars:-

- (a) the identification number or mark;
- (b) the name and address of the person by whom the milk was consigned, or by whom it was being delivered, or on whose premises the sample was taken.

Transport of sample

5. Subject to paragraph 6 below, the bottle or container containing any sample of milk shall be transferred forthwith to an insulated container, which shall not be artificially cooled, for transport to the testing laboratory. The sample shall be transported to the testing laboratory with the least possible delay. Any sample which does not arrive at the testing laboratory on the day on which it is taken shall be discarded.

6. A sample of milk, other than sterilised milk or milk treated by the ultra high temperature method in each case in an unopened container, to be subjected to the coliform test prescribed in Part III of this Schedule or the plate count test prescribed in Part IV of this Schedule shall, during its transportation to the testing laboratory, be retained at a temperature of not less than 0°C and not more than 4°C.

PART II

THE METHYLENE BLUE TEST FOR PASTEURISED SEMI-SKIMMED MILK AND SKIMMED MILK

Treatment of sample

1.—(1) On arrival at the testing laboratory the sample of milk shall at once be removed from the insulated container. Thereafter it shall be stored as follows:-

- (a) a sample taken at any time during the period from 1 May to 31 October, inclusive, in any year shall be kept at atmospheric shade temperature until 9.30 a.m. on the following day;
- (b) a sample taken at any time during the period from 1 November to 30 April, inclusive, in any year shall be kept in its original container or in a sterile sample bottle of at least 80 ml. capacity at atmospheric shade temperature until 5.00 p.m. on the day of sampling and thereafter at a constant temperature of 18.3°C. \pm 1°C. until 9.30 a.m. on the following day.

(2) If during the period of storage at atmospheric shade temperature to which a sample is subjected this temperature at any time exceeds 21°C., the test shall not be applied.

(3) The test shall be begun between 9.30 and 10.00 a.m. on the day after the sample is taken.

Reagent – Methylene Blue

2.—(1) Tablets manufactured under arrangements made by the Minister shall be used for the test. A solution shall be prepared aseptically by adding one tablet to 200 ml. of cold, sterile, glass-distilled water in a sterile flask, shaking until the tablet is completely dissolved, and making up the solution to 800 ml. with cold, sterile, glass-distilled water. The resultant solution shall be stored in a stoppered sterile flask in a cool, dark place, and shall not be used if—

- (a) it has been exposed to sunlight, or
- (b) a period of two months has elapsed since the date of preparation.

(2) The amount of methylene blue required for a day's work shall be poured off from the stock bottle into a suitable glass container. The pipette used for transferring the methylene blue solution to the tubes of milk shall not be introduced into the stock bottle.

Apparatus

3.—(1) Test tubes shall conform to British Standard 3218:1982, nominal size 150/16, and shall be accurately marked at 10 ml. They shall be plugged with cotton wool or covered with closely fitting aluminium caps or stored in such a way as to prevent contamination.

(2) Pipettes shall be 1.0 ml. straight-sided blow out delivery pipettes, and shall be plugged with cotton wool at the upper end.

(3) Glassware and rubber stoppers shall be sterile immediately before use.

(4) The water bath shall be fitted with a reliable automatic thermo-regulator capable of maintaining the water at a temperature of $37.5^{\circ}\text{C.} \pm 0.5^{\circ}\text{C.}$

Method of carrying out the test

4.—(1) The sample shall be mixed thoroughly by inverting and shaking and the milk shall be transferred to a test tube up to the 10 ml. mark in such a manner that one side of the interior of the test tube is not wetted with milk. 1 ml. of methylene blue solution shall be added without letting the pipette come into contact with the milk in the tube or with the wetted side of the interior of the tube. After a lapse of 3 seconds, the solution remaining in the tip of the pipette shall be blown out. The test tube shall be closed with a rubber stopper, aseptic precautions being taken, and shall then be inverted twice slowly, so that the whole column of contained air rises above the level of the milk. Within a period of 5 minutes the test tube shall be placed in a water bath. The water in the bath shall be kept above the level of the milk in the test tube, and its temperature, which shall be between 37°C. and 38°C. , shall be maintained as nearly uniform as possible by means of a reliable automatic thermo-regulator. The interior of the bath shall be kept completely dark.

(2) A control tube shall be used for comparison with each batch of experimental tubes to indicate when decolourisation is complete. The control tube shall be prepared by immersing in boiling water for 3 minutes a stoppered test tube containing 1 ml. of tap water and 10 ml. of mixed milk having a fat content and colour similar to that of the milk being tested.

(3) The milk shall be regarded as decolourised when the whole column of milk is completely decolourised or is decolourised up to within 5mm. of the surface. A trace of colour at the bottom of the tube may be ignored provided that it does not extend upwards for more than 5mm.

PART III**THE COLIFORM TEST FOR PASTEURISED SEMI-SKIMMED MILK AND SKIMMED MILK****Method of carrying out the test**

1. Subject to paragraphs 2 and 3 below, the sample shall be tested by the method prescribed in the British Standard 4285: Section 3.7: 1987 (ISBN 0 580 15866 7).

2. The "Colony count technique" specified in paragraph 8 of the British Standard referred to in the preceding paragraph shall be used.

3. For the purposes of inoculation of Petri dishes 3 ml. of milk shall be transferred to a 150 ml. Petri dish or 1 ml. of milk transferred into each one of three 90 mm. Petri dishes.

4. Any sample on which the test is not begun within 24 hours of taking such sample shall be discarded.

PART IV

THE PLATE COUNT TEST FOR SEMI-SKIMMED MILK, SKIMMED MILK AND BULK MILK HEAT TREATED FOR TRANSPORTATION, PASTEURISED, STERILISED OR TREATED BY THE ULTRA HIGH TEMPERATURE METHOD

1. The sample shall be tested by the method prescribed in the British Standard 4285: Section 2.1: 1984 (ISBN 0 580 14091 1).

2. Any sample—

- (a) of raw milk, milk heat treated for the purposes of transportation or pasteurised milk, or
- (b) of sterilised milk or milk treated by the ultra high temperature method where the sample is taken from an open container,

on which the test is not begun within 24 hours of taking such sample, shall be discarded.

PART V

THE PHOSPHATASE TEST FOR PASTEURISED SEMI-SKIMMED MILK AND SKIMMED MILK

Examination of sample

1. The sample of milk shall be examined as soon as possible after arrival at the testing laboratory. If it is not examined immediately on arrival at the testing laboratory, it shall be kept at a temperature of between 3°C. and 5°C. until examined. The sample shall be raised to room temperature immediately before being tested.

Precautions

2. The following precautions shall be taken:—

- (a) A sample which shows evidence of taint or souring shall not be tested.
- (b) All glassware shall be clean immediately before use.
- (c) A fresh pipette shall be used for each sample of milk.
- (d) The test shall not be carried out in direct sunlight.
- (e) Distilled or de-ionised water shall be used throughout.

Reagents

3.—(1) Whenever possible, reagents of analytical quality shall be used.

(2) The buffer-substrate solution shall be prepared as follows:—

- (a) Buffer solution: 3.5 g. of anhydrous sodium carbonate and 1.5 g. of sodium bicarbonate shall be dissolved in distilled or de-ionised water, and made up to one litre.
- (b) Substrate: Disodium p-nitrophenyl phosphate. The solid substrate shall be kept in a refrigerator.
- (c) Buffer-substrate solution: 0.15 g. of the substrate shall be placed in a 100 ml. measuring cylinder, and made up to 100 ml. with the buffer solution. The solution shall be stored in a refrigerator and protected from light. It shall give a reading of less than the standard marked 10 on the comparator disc A.P.T.W. or A.P.T.W.7 when viewed in transmitted light through a 25 mm. cell in the 'all purposes' comparator, distilled or de-ionised water being used for comparison. The solution shall not be used for more than one week.

Apparatus

4. The following apparatus shall be used:

- (a) A Lovibond 'all purposes' comparator complete with stand for work in reflected light.
- (b) A Lovibond comparator disc A.P.T.W. or A.P.T.W.7.
- (c) Two fused glass cells, 25 mm. depth.
- (d) A water bath or incubator capable of being maintained at 37.5°C. \pm 0.5°C.
- (e) A pipette to deliver 5.0 ml.
- (f) A supply of 1.0 ml. straight-sided pipettes of an accuracy equal to that of N.P.L. grade B.
- (g) A 1,000 ml. graduated flask.
- (h) A 100 ml. measuring cylinder.
- (i) A supply of test tubes conforming to British Standard 3218: 1982, nominal size 150/16, with rubber stoppers to fit.

Care of apparatus

5.—(1) New glassware shall be cleaned and free from contamination from substances which may interfere with the test.

(2) After use, each test tube shall be emptied, rinsed in water, well washed in hot water containing soda, rinsed in warm water, rinsed in distilled or de-ionised water and finally dried.

(3) If after treatment in accordance with sub-paragraph (2) above, a test tube does not appear to be clean, the treatment shall be repeated with the addition that after being rinsed in warm water it shall be soaked in 50 per cent. commercial hydrochloric acid and then rinsed again in warm water before being rinsed in distilled or de-ionised water and finally dried.

(4) Glassware used for the test shall not be used for any other purpose and shall be kept apart from all other apparatus in the laboratory.

Method of carrying out the test

6. 5 ml. of the buffer-substrate solution shall be transferred to a test tube using a pipette and the test tube shall be stoppered and brought to a temperature of 37°C. 1 ml. of the milk to be tested shall be added, the test tube stopper replaced and the contents well mixed by shaking. The test tube shall then be incubated for exactly 2 hours at 37°C. One blank prepared from boiled milk of the same type as those undergoing the test shall be incubated with each series of samples. (Where the sample consists of highly coloured milk, such as homogenised milk or milk from Channel Island cows, a separate blank of such milk shall be prepared). After incubation the test tube shall be removed from the water bath and its contents shall be well mixed. The blank shall be placed on the left hand ramp of the stand and the test sample on the right. Readings shall be taken in reflected light by looking down on to the two apertures with the comparator facing a good source of daylight (preferably north light). If artificial light is needed for matching, a 'daylight' type of illumination must be used. The disc shall be revolved until the test sample is matched. Readings falling between two standards shall be recorded by affixing a plus or minus sign to the figure for the nearest standard.

PART VI

THE TURBIDITY TEST FOR STERILISED SEMI-SKIMMED MILK AND SKIMMED MILK

Examination of sample

1. The sample of milk may be examined at any time after delivery to the testing laboratory but shall be at room temperature when the test is begun.

Reagent

2. Ammonium sulphate A.R. shall be used.

Apparatus

3. The following apparatus shall be used:—

- (a) Conical flasks of 50 ml. capacity.
- (b) Graduated cylinders of 25 ml. capacity
- (c) Test tubes conforming to British Standard 3218: 1982, nominal size 150/16.
- (d) Filter funnels of 6 cm. diameter
- (e) Beakers of 400 ml. capacity.
- (f) 12.5 cm. No. 2V Whatman folded filter papers or equivalent.

Method of carrying out the test

4. 4 ± 0.1 g. of ammonium sulphate shall be weighed into a 50 ml. conical flask. 20 ± 0.5 ml. of the milk sample shall be measured out and poured into the conical flask, the flask being shaken for 1 minute to ensure that the ammonium sulphate dissolves. The mixture shall be left for not less than 5 minutes and then filtered through a folded filter paper into a test tube. When not less than 5 ml. of a clear filtrate have collected, the tube shall be placed in a beaker of water, which has been kept boiling, and kept therein for 5 minutes. The tube shall be transferred to a beaker of cold water, and when the tube is cool, the contents shall be examined for turbidity by moving the tube in front of an electric light shaded from the eyes of the observer.

Regulation 4

SCHEDULE 4

REQUIREMENTS AS TO LABELLING OF CONTAINERS OF HEAT TREATED SEMI-SKIMMED MILK AND SKIMMED MILK

General labelling requirements

1. Subject to the following provisions of this Schedule, every container in which milk which has been pasteurised, sterilised or treated by the ultra high temperature method is sold shall be marked or labelled with—

- (a) the name of the semi-skimmed milk or skimmed milk;
- (b) an indication of minimum durability;
- (c) the name or business name and an address or registered office of the milk processor or packer, or of a seller established within the European Economic Community; and
- (d) particulars of the place of origin or provenance of the semi-skimmed milk or skimmed milk if failure to give such particulars might mislead a purchaser to a material degree as to the true origin or provenance of the semi-skimmed milk or skimmed milk;

unless the semi-skimmed milk or skimmed milk is intended for export to any place outside the United Kingdom.

Name of the semi-skimmed milk or skimmed milk

2.—(1) The name of the semi-skimmed milk or skimmed milk shall be "Milk" qualified by—

- (a) the expression "Semi-skimmed" or "Skimmed", as is appropriate, and
- (b) the expression "Pasteurised", "Sterilised", or "Ultra Heat Treated" or "UHT", as is appropriate.

(2) The name may be further qualified by other words which make it more precise, and any such other words may (but need not) appear between the various parts of the name prescribed in sub-paragraph (1) of this paragraph.

Indication of minimum durability

3.—(1) Subject to the following sub-paragraphs of this paragraph, the minimum durability of semi-skimmed milk or skimmed milk shall be indicated by—

- (a) the words "best before" followed by the date up to and including which the semi-skimmed milk or skimmed milk can reasonably be expected to retain its specific properties if properly stored, and
- (b) any storage conditions which need to be observed if the semi-skimmed milk or skimmed milk is to retain its specific properties until that date.

(2) The date in the indication of minimum durability shall be expressed in terms of a day, month and year, in that order, except that—

- (a) in the case of semi-skimmed milk or skimmed milk which can reasonably be expected to retain its specific properties for three months or less, it may be expressed in terms of a day and month only, and
- (b) in the case of semi-skimmed milk or skimmed milk which can reasonably be expected to retain its specific properties for more than three months, it may be expressed in terms of a month and year only, if the words "best before" are replaced by the words "best before end".

(3) The date up to and including which semi-skimmed milk or skimmed milk can reasonably be expected to retain its specific properties if properly stored may appear on the labelling of the semi-skimmed milk or skimmed milk separately from the words "best before" or "best before end", as the case may be, provided that those words are followed by a reference to the place where the date appears.

(4) In the case of semi-skimmed milk or skimmed milk which is intended for consumption within six weeks of being packed, the minimum durability of the semi-skimmed milk or skimmed milk may be indicated by—

- (a) the words "sell by"—
 - (i) followed (subject to sub-paragraph (5) of this paragraph) by the latest recommended date of sale of the semi-skimmed milk or skimmed milk, expressed in terms of a day and month, and
 - (ii) immediately preceded or immediately followed by an indication of the period from the date of purchase for which the semi-skimmed milk or skimmed milk can reasonably be expected to retain its specific properties if properly stored, and

- (b) any storage conditions which need to be observed if the semi-skimmed milk or skimmed milk is to retain its specific properties for the period referred to in paragraph (a)(ii) of this sub-paragraph.

(5) Where the minimum durability of semi-skimmed milk or skimmed milk is indicated in the manner permitted by sub-paragraph (4) of this paragraph, the latest recommended date of sale may appear on the labelling of the semi-skimmed milk or skimmed milk separately from the words "sell by", provided that those words are followed by a reference to the place where the date appears.

Field of vision

4.—(1) Where a container of semi-skimmed milk or skimmed milk is required to be marked or labelled with an indication of minimum durability, that indication shall appear in the same field of vision as the particulars specified in paragraph 1(a) of this Schedule.

(2) Where a container of semi-skimmed milk or skimmed milk is required by the Weights and Measures Act 1985(a) or by any statutory instrument made thereunder to be marked or labelled with an indication of net quantity, that indication shall appear in the same field of vision as the particulars specified in paragraph 1(a) of this Schedule and, if the container is also required to be marked or labelled with an indication of minimum durability, in the same field of vision as the indication of minimum durability.

Manner of marking or labelling

5.—(1) The particulars with which the containers of semi-skimmed milk or skimmed milk are required to be marked or labelled in accordance with this Schedule shall be easy to understand, clearly legible and indelible and the said particulars shall be marked in a conspicuous place in such a way as to be easily visible.

(2) The said particulars shall not in any way be hidden, obscured or interrupted by any other written or pictorial matter.

(3) Where the container is a bottle, the said particulars may appear on the bottle cap.

Exemptions

6.—(1) Bottles intended for re-use need not be marked or labelled with any of the particulars specified in paragraph 1 of this Schedule except the particulars specified in paragraph 1(a) and (d).

(2) Any container of semi-skimmed milk or skimmed milk whose largest surface has an area of less than ten square centimetres need not be marked or labelled with any of the particulars specified in paragraph 1 of this Schedule except the particulars specified in paragraph 1(a), (b) and (d).

(3) The container of any semi-skimmed milk or skimmed milk which—

- (a) is sold at a catering establishment for immediate consumption there, and
- (b) is sold as one individual portion, and
- (c) is intended as an accompaniment to another food,

need not be marked or labelled with any of the particulars specified in paragraph 1 of this Schedule except the particulars specified in paragraph 1(a) and (d).

(4) The container of any semi-skimmed milk or skimmed milk which is pre-packed for direct sale need not be marked or labelled with any of the particulars specified in paragraph 1 of this Schedule except the particulars specified in paragraph 1(a) and (d).

Definitions

7. In this Schedule—

"catering establishment" means a restaurant, canteen, club, public house, school, hospital or other establishment (including a vehicle or a fixed or mobile stall) where, in the course of a business, food is prepared for delivery to the ultimate consumer for immediate consumption;

"pre-packed for direct sale", in relation to semi-skimmed milk or skimmed milk, means put into containers on the premises where the semi-skimmed milk or skimmed milk is produced by the person owning or having control of the herd from which the semi-skimmed milk or skimmed milk is produced for sale by him on those premises or from a vehicle used by him;

"ultimate consumer" means any person who buys otherwise than—

- (a) for the purpose of resale;
- (b) for the purposes of a catering establishment; or
- (c) for the purposes of a manufacturing business.

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations re-enact with modifications the Milk and Dairies (Semi-skimmed and Skimmed Milk) (Heat Treatment and Labelling) Regulations 1986, as amended, and make provision for the implementation of Council Directive 85/397/EEC (OJ No. L226, 24.8.1985, p.13) on health and animal health problems affecting intra-Community trade in heat-treated milk.

The Regulations require that semi-skimmed milk and skimmed milk sold for human consumption shall have been heat treated in accordance with the Regulations (regulation 3 and Schedules 1 and 2). They include provision for sampling and tests (regulation 3(2)(c) and Schedule 3) and for labelling (regulation 4 and Schedule 4).

The heat treatment requirements of the Regulations apply only to imported bulk milk, semi-skimmed and skimmed milk imported for delivery as such to consumers being exempt from such requirements (regulation 7).

In addition to drafting amendments, the Regulations make the following changes of substance:-

- (a) a sample of milk taken in specified circumstances is required to satisfy a coliform test in the case of pasteurised milk and a plate count test in the case of raw milk, bulk milk heat treated for transportation, pasteurised milk, sterilised milk and milk treated by the ultra high temperature method (regulation 3(2) and Schedule 2, Part I, paragraph A5, Part II, paragraph 4(1), Part III, paragraph 4, Schedule 3, Parts III and IV); in consequence, the colony count test prescribed by the 1986 Regulations has been omitted;
- (b) records are required to be kept of bulk milk purchased by milk processors or delivered to them other than by way of sale, and purchased and sold by milk purveyors (Schedule 1, paragraph 2(1) and (2));
- (c) as pre-conditions for heat treatment of raw milk it is required that-
 - (i) over the preceding two months not less than two samples taken each month of the producer's milk have satisfied a prescribed average plate count;
 - (ii) in the case of raw milk not heat treated within 36 hours, steps have been taken to ensure a prescribed maximum plate count is not exceeded; and
 - (iii) the results of such plate counts are recorded (Schedule 1, paragraphs 5 and 6);
- (d) in any proceedings for a breach of the pre-conditions referred to in paragraph (c) above, evidence of a sample taken or of a plate count carried out in accordance with Part I or IV of Schedule 3, respectively, is to be preferred to evidence of a sample taken or of a plate count by any other method (Schedule 1, paragraph 7);
- (e) in continuous flow heat treatment apparatus, devices for the automatic diversion of milk not raised to the authorised temperature are required to record each operation automatically, and the records are required to be dated and preserved for a specified period (Schedule 2, Part I, paragraph A3, Part II, paragraph B3, Part III, paragraph 2);
- (f) in specified circumstances, a sample of milk to be subjected to a coliform or plate count test is required to be transported at a prescribed temperature (Schedule 3, Part I, paragraph 6).

These Regulations apply only to England and Wales.

Information as to British Standards referred to in these Regulations can be obtained by post from the British Standards Institution at Milton Keynes or from any of the Institution's sales outlets.