SRI LANKA STANDARD 773 : 1987

UDC 637.3

SPECIFICATION FOR
CHEESE

SRI LANKA STANDARDS INSTITUTION

SPECIFICATION FOR CHEESE

SLS 773:1987
(Attached AMD 197)

Gr. 6

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SRI LANKA STANDARDS INSTITUTION
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This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD
SPECIFICATION FOR CHEESE

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1987-01-07, after the draft, finalized by the Drafting Committee on Milk and Milk Products, had been approved by the Agricultural and Food Products Divisional Committee.

This specification covers four types of cheese. Examples for types of cheese are given in Appendix A.

This specification is subject to the provisions of the Food Act No. 26 of 1980 and the regulations framed thereunder.

The standard values used throughout this specification are given in SI units.

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with CS 102. The number of significant places retained in the rounded off value should be the same as that of the specified value in this specification.

In the preparation of this specification the assistance obtained from the publications of the Food and Agriculture Organization of the United Nations (FAO) and the Indian Standards Institution is gratefully acknowledged.

1 SCOPE

This specification prescribes the requirements and methods of sampling and test for cheese.

2 REFERENCES

CS 102 Presentation of numerical values

SLS 428 Random sampling methods

SLS 467 Labelling of prepackaged foods
Part 1 General guidelines

SLS 516 Microbiological test methods

Part 2 Colony count of yeasts and moulds

Part 3 Detection and enumeration of coliforms, faecal coliforms and *Escherichia coli*

Part 6 Enumeration of *Staphylococcus aureus*

SLS 735 Methods of test for milk and milk products

Part 1 Determination of fat

Part 3 Determination of moisture

Part 4 Determination of salt

3 DEFINITIONS

For the purpose of this specification the following definitions shall apply:

3.1 cheese : The fresh or matured product obtained by draining after coagulation of milk, cream, skimmed or partly skimmed milk, butter-milk or a combination of some or all of these products.

3.2 ripened cheese : Varieties of cheese with appropriate microbial growth on the surface which contributes to the characteristic flavour of the cheese. The microbial growth may include yeast, mould and bacteria or combination of these microorganisms.

3.3 hard cheese : Ripened cheese with a moisture content within the range of 35 per cent to 45 per cent.

3.4 semi-hard cheese : Ripened cheese with a moisture content within the range of 45 per cent to 55 per cent.

3.5 soft cheese : Ripened or unripened cheese with a moisture content within the range of 55 per cent to 80 per cent.

3.6 processed cheese or cheese spread : The product obtained by heating cheese with permitted emulsifires and/or stabilisers or with or without buffering agents.

4 TYPES

Cheese shall be of the following four types:

a) hard cheese;

b) semi-hard cheese;

c) soft cheese; and

d) processed cheese or cheese spread.

5 REQUIREMENTS

5.1 Ingredients

5.1.1 Milk used in the making of cheese may be standardized and should preferably be pasteurized. If the milk has not been pasteurized but heat treated the cheese made therefrom shall be held for a period of not less than 90 days at a temperature of not less than 2 °C and not higher than 10 °C.

5.1.2 The product shall not contain any ingredient which is not found in milk except as indicated in 5.1.3.

5.1.3 Additives if used, in the making of cheese shall be as given in Appendix B. Processed cheese shall not contain more than 4.0 per cent of permitted emulsifires and/or stabilisers on dry basis.

5.2 Colour, flavour and texture

5.2.1 The product shall be cream or yellowish in colour. This requirement will not be applicable to mould ripened cheese.

5.2.2 The product shall have a pleasant odour and the flavour characteristic of the particular variety of cheese.

5.2.3 The product shall be of good texture and of uniform consistency.

5.3 Freedom from impurities

The product shall be clean and free from dirt and extraneous matter.

5.4 Other requirements

The product shall also conform to the requirements specified in Tables 1 and 2, when tested by the relevant methods prescribed in Columns 7 and 4 respectively of the tables.

TABLE 1 - Requirements for cheese

Sl. No.	Characteristics	Requirements for Types				Methods of test ref. to SLS 735
		hard	semi-hard	soft	Processed cheese or cheese spread	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Fat, per cent by mass, (on dry basis) min.	45.0	45.0	45.0	45.0	SLS 735: Part 1
ii)	Moisture, per cent by mass	35 to 45	45 to 55	55 to 80	35 to 80	SLS 735: Part 3
iii)	Dry matter*, per cent by mass	55 to 65	45 to 55	20 to 45	20 to 65	-
iv)	Salt, per cent by mass, max.	3.0	3.0	3.0	3.0	SLS 735: Part 4

* *Dry matter = 100 - water content*

TABLE 2 - Microbiological limits

Sl. No. (1)	Microorganisms (2)	Limit (3)	Method of test reference to Appendix (4)
i)	*E. coli*	absent in 0.01 g	Appendix C
ii)	Yeast and mould*, per g, not more than	200	
iii)	*Staphylococcus aureus*, (coagulase positive)	absent in 0.1 g	

* *In case of mould ripened cheese determination of this is not necessary.*

6 PACKAGING AND MARKING

6.1 Packaging

All the material used for wrapping or packaging cheese shall be of such a nature as to impart no off-flavour or odour, nor in any other way contaminate the product packed under normal conditions of manufacture, storage and use.

6.2 Marking

6.2.1 The following information shall be marked legibly and indelibly on each package or a label shall be attached with the following information.

a) Name and type of the product;

b) Name and address of the producer or trader (including country of origin);

c) Trade mark, if any;

d) Percentage of fat;

e) Net mass, in g; and

f) The date before which the contents should be used with the words USE BEFORE; and

NOTE - Cheese which is intended to ripen completely or partially in its packaging will be exempted from date marking.

g) Additives if any.

6.2.2 The marking and labelling shall also be in accordance with SLS 467:Part 1.

6.2.3 The product may also be marked with the Certification Mark of the Sri Lanka Standards Institution illustrated below on permission being granted for such marking by the Sri Lanka Standards Institution.

NOTE - The use of the Sri Lanka Standards Institution Certification Mark (SLS Mark) is governed by the provisions of the Sri Lanka Standards Institution Act and the regulations framed thereunder. The SLS Mark on products covered by a Sri Lanka Standard is an assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control, which is devised and supervised by the Institution and operated by the producer. SLS marked products are also continuously checked by the Institution for conformity to that standard as a further safeguard. Details of conditions under which a permit for the use of Certification Mark may be granted to manufacturers or processors may be obtained from the Sri Lanka Standards Institution.

7 SAMPLING

7.1 Lot

The entire quantity of cheese of the same type manufactured at the same time under similar conditions of manufacture shall constitute a lot.

7.2 General requirements of sampling

In drawing, preparing, storing and handling samples the following precautions and directions shall be observed.

7.2.1 Samples shall be drawn in a protected place not exposed to damp air, dust or soot.

7.2.2 Sampling equipment shall be dry and thoroughly clean when used.

7.2.3 Immediately after sampling the samples shall be placed in a clean, dry, sample container and no preservative substance shall be introduced into the sample container.

7.2.4 The sample container shall be sealed air tight after filling and marked with necessary details of sampling.

7.2.5 Precaution shall be taken to protect the samples, the product being sampled and the containers for samples from adventitious contamination.

7.2.6 The samples may be cut into pieces for insertion into the container but it shall not be compressed or ground.

7.2.7 The samples shall be transported to the laboratory and tested as quickly as possible after sampling. Precaution shall be taken to prevent exposure to direct sunlight or to high temperature during transit.

7.2.8 The samples shall be stored in a refrigerator. The samples of cheese shall be maintained under such conditions so as to avoid separation of fat or moisture.

7.2.9 In addition to requirements specified in 7.2.1 to 7.2.8 the following precautions and directions shall also be observed,

a) All equipment shall be sterilized before use;

b) Immediately after sampling, samples shall be placed in sterile containers of suitable size and sealed; and

c) Transport and storage of samples shall be at a temperature between 0 °C to 5 °C.

7.3 Sampling instruments

7.3.1 *Triers*, of a suitable shape and size.

7.3.2 *Stainless steel knife*, with a pointed blade.

7.4 Sample containers

The sample container shall be made of suitable, waterproof and grease proof material (glass, stainless metal, suitable plastic material). The sample container shall be provided with air-tight closures.

7.5 Scale of sampling

7.5.1 Samples shall be taken from each lot for ascertaining its conformity to the requirements of this specification.

7.5.2 *Sampling from reels or blocks (bulk units)*

The number of reels or blocks of cheese to be selected from the lot shall be in accordance with Table 3.

TABLE 3 - Scale of sampling for reels or blocks (bulk units)

Number of reels/blocks (bulk units) in the lot	Number of reels/blocks (bulk units) to be selected
Up to 25	2
26 to 50	3
51 and above	4

7.5.2.1 Samples of cheese shall be obtained from each block selected as in 7.5.2 in accordance with one of the techniques given below.

7.5.2.2 Using a knife with a pointed blade two cuts shall be made from the centre of block across the two radii in case of cylindrical blocks and two cuts shall be made along the long axes, in case of rectangular blocks to obtain a slice of cheese of required mass.

7.5.3 Sampling from retail containers

7.5.3.1 The number of retail containers to be selected from a lot shall be in accordance with Table 4.

TABLE 4 - Scale of sampling for retail containers

Number of containers in the lot	Number of containers to be selected
Up to 50	3
51 to 150	5
151 to 300	8
301 and above	10

7.5.3.2 One of the techniques specified in 7.5.2.2 shall be employed to obtain the samples from the container selected as in 7.5.3.1.

7.5.4 The reels, blocks and containers shall be selected at random. In order to ensure randomness of selection random number tables as given in SLS 428 shall be used.

7.6 Preparation of samples

An equal quantity of cheese shall be obtained from each container, selected as in 7.5.2 or 7.5.3 and mixed to form a composite sample of not less than 100 g and immediately transferred to a sample container.

7.7 Reference sample

If a reference sample is required the size of the composite sample shall not be less than 300 g. The composite sample shall be divided into three equal parts and each part shall be transferred to a separate sample container. One of these samples shall be for the purchaser, one for the vendor and the third for the referee.

7.8 Number of tests

The composite sample prepared as in 7.6 shall be subjected to all the requirements of this specification.

8 METHODS OF TEST

Tests shall be carried out as prescribed in Column 7 of Table 1 and Column 4 of Table 2.

9 CONFORMITY TO STANDARD

The lot shall be declared as conforming to the requirements of this specification if all the test results satisfy the relevant requirements.

APPENDIX A

TYPES OF CHEESE

A.1 HARD CHEESE - Cheddar, Cheshire, Cantal and Emmental.

A.2 SEMI-HARD CHEESE - Port Salut, Caerphilly, Taleggio and Liederkranz.

A.3 SOFT CHEESE - Cambridge, Coulommiers, Quarg and Cottage.

A.4 PROCESSED CHEESE

APPENDIX B

PERMITTED ADDITIVES

B.1 EMULSIFIERS AND/OR STABILISERS

Citric acid, sodium citrate, sodium salts of phosphoric acid and polyphosphates.

B.2 BUFFERING AGENTS

Vinegar, acetic acid, lactic acid, citric acid and phosphoric acid.

B.3 COLOURING MATTER

Annato extract, beta carotene.

B.4 ANTI ROPING AGENTS AND MOULD INHIBITORS

Sorbic acid and its sodium and potassium salts, max. 1000 mg/Kg.

APPENDIX C

MICROBIOLOGICAL EXAMINATION

C.1 PREPARATION OF TEST SAMPLE

Weigh aseptically 10 g of cheese and transfer to the sterile container of a high speed blender. Add 90 ml of sterile 2 per cent sodium citrate solution warmed to 47 ± 2 °C. Blend for 1 to 2 minutes and allow to stand.

Make further dilutions with 0.1 per cent peptone water.

C.2 *E. COLI*

Proceed as described in SLS 516:Part 3.

C.3 YEAST AND MOULDS

Proceed as described in SLS 516:Part 2.

C.4 *STAPHYLOCOCCUS AUREUS*

Proceed as described in SLS 516:Part 6.

Amendment No. 1 approved on 1995-11-23
to SLS 773 : 1987

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Clause 5.1.4

Include the following text as clause 5.1.4:

"Rennet may be used as a coagulant."

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TABLE 2 - Microbiological limits

Column 3, Sl. No. ii

Substitute "200" with "100".

Clause 6.2.1

Item f)

Substitute the words "The date before which the contents should be used with the words USE BEFORE;" with "Date of expiry;"

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APPENDIX A.2 SEMI-HARD CHEESE

Include Gauda and Mozzarella cheese as semi-hard cheese.

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

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SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.

Printed at the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.