SRI LANKA STANDARD 917: 2018

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SPECIFICATION FOR
MILK ADDED DRINKS

(*First Revision*)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
SPECIFICATION FOR MILK ADDED DRINKS
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SLS 917: 2018

Gr. 5

SRI LANKA STANDARDS INSTITUTION
No, 17 , Victoria Place
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Sri Lanka.

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This Standard does not purport to include all the necessary provisions of a contract

Sri Lanka Standard
SPECIFICATION FOR MILK ADDED DRINKS
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FOREWORD

This Sri Lanka Standard was approved by the Sectoral Committee on Food Products and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2018-08-10.

This Standard was first published in 1991. It was felt necessary to revise this Standard because of the improvement of current trade practices in this country since the last publication and due to increasing consumer awareness of quality products.

A variety of soft drinks containing dairy ingredients added for the purpose of flavouring is presently being marketed. These drinks are distinct from flavoured milks which need to meet consumer expectations in terms of nutrition and therefore contain higher levels of milk solids-not-fat and milk fat. Flavoured milks are covered in **SLS 181**.

Milk added drinks belong to the low acid food group and also contain dairy ingredients. These drinks thus constitute ideal media for the proliferation of microorganisms. Therefore a full heat treatment should be given to achieve commercial sterility and to prevent the survival of spore forming bacteria which could cause health hazards to consumers, as well as those which could cause spoilage of products.

In this first revision, comprehensive list of ingredients have been updated to meet the market requirement.

This Standard is subject to the restrictions imposed under the Sri Lanka Food Act No. 26 of 1980 and the regulations framed thereunder.

For the purpose of deciding whether a particular requirement of this Standard is complied with, the final value, observed or calculated, expressing the results or an analysis shall be rounded off in accordance with **SLS 102**. The number of significant places to be retained in the rounded off value should be the same as that of the specified value in this Standard.

In revising this Standard, the assistance derived from the publications of the Codex Alimentarius Commission is gratefully acknowledged.

1 SCOPE

1.1 This Standard prescribes the requirements and methods of sampling and test for milk added drinks.

1.2 This Standard excludes pre-mixes.

2 REFERENCES

SLS 80 Food grade salt (powdered form)
SLS 102 Rules for rounding off numerical values
SLS 143 Code of practice for general principles of food hygiene
SLS 148 Cocoa powder and cocoa sugar mixtures
SLS 179 Sweetened condensed milk
SLS 181 Raw and processed milk
SLS 191 White sugar
SLS 258 Ground coffee
SLS 428 Random sampling methods
SLS 467 Code of practice for labelling of prepackaged foods
SLS 614 Potable water
SLS 731 Milk powder
SLS 735 Methods of tests for milk and milk products
Part 5: Determination of total solids
Part 6: Determination of total sugar
SLS 772 Treacle
SLS 872 Code of hygienic practice for dairy industries
SLS 873 Code of hygienic practice for canned foods
Part 1: Low acid canned foods
SLS 883 Brown sugar

3 DEFINITIONS

For the purpose of this Standard, the following definitions shall apply:

3.1 milk added drink: Ready-to-serve drink prepared from dairy ingredients, potable water, sugar and any one or more named food ingredients listed in **4.1.3** and with or without optional ingredients listed in **4.2** and requiring adequate heat treatment to achieve "commercial sterility".

3.2 commercially sterile:. Any condition achieved by application of heat, sufficient, alone or in combination with other appropriate treatments, to render the food free from microorganisms capable of growing in the food at normal non-refrigerated conditions at which the food is likely to be held during distribution and storage.

4 INGREDIENTS

All ingredients used shall comply with the requirements of the Food Act No. 26 of 1980 and the regulations framed thereunder.

4.1 Basic ingredients

4.1.1 *Dairy ingredients*
4.1.1.1 Milk/ skim milk, conforming to **SLS 181**

4.1.1.2 Milk powder/ skim milk powder, conforming to **SLS 731**
4.1.1.3 Sweetened condensed milk, conforming to **SLS 179**
4.1.2 *Potable water* conforming to **SLS 614**
4.1.3 Named food ingredients used in the product to impart the characteristic flavour to the product. The options for named food ingredients are:
4.1.3.1 Ground coffee, conforming to **SLS 258**, coffee extract/instant coffee
4.1.3.2 Cocoa powder, conforming to **SLS 148**
4.1.3.3 Fruit and fruit extracts/fruit derivatives
4.1.3.4 Vegetables and their extracts
4.1.3.5 Soy milk
4.1.3.6 Tea and Tea extracts/tea powder
4.1.3.7 Cereal and cereal extracts
4.1.3.8 Herbs and herbal extracts including mint
4.1.3.9 Aloe vera
4.1.3.10 Ginger
4.1.3.11 Spices or spice extracts

NOTE
It is recommended that the products contain not less than 20 *per cent by volume of dairy ingredients in terms of liquid milk equivalent*

4.2 Optional ingredients

In addition to the ingredients given in **4.1**, the product may contain one or more of the substances given below:

4.2. 1 *Sugar*
4.2.1.1 White sugar, conforming to **SLS 191**
4.2.1.2 Brown sugar, conforming to **SLS 883**
4.2.2 *Treacle*, conforming to **SLS 772**
4.2.3 *Food grade salt (Powdered form)*, conforming to **SLS 80**
4.2.4 *Prebiotics*
4.2.5 *Probiotics*
4.2.6 *Whey protein* (25 per cent m/m max)
4.2.7 *Maltodextri*n
4.2.8 *Vitamins*
4.2.9 *Minerals*
4.2.10 *Fatty acids*
4.2.11 *Dietary fibre*
4.2.12 *Food Additives*

4.2.12.1 Ascorbic acid

4.2.12.2 Acidity regulators

a)	Sodium ascorbate	INS 301	Limited by GMP
b)	Citric acid anhydrous	INS 330	
c)	Lactic acid	INS 270	
d)	Malic acid	INS 296	
e)	Calcium carbonate	INS 170 (i)	
f)	Calcium phosphate	INS 341 (iii)	
g)	Magnesium carbonate	INS 540 (i)	
h)	Magnesium phosphate	INS 343 (ii)	
j)	Sodium citrate	INS 331 (iii)	
k)	Disodium phosphate	INS 339 (ii)	
m)	Potassium hydrogen carbonate	INS 501 (ii)	
n)	Dipotassium phosphate	INS 340 (ii)	

4.2.12.3 Emulsifiers/Stabilizers

a)	Guar gum	INS 412	Limited by GMP
b)	Carrageenan	INS 407	
c)	Mono-and di-glycerides of fatty acids	INS 471	
d)	Sodium alginate	INS 401	
e)	Lecithin	INS 322	
f)	Gellan gum	INS 418	

4.2.12.4 Permitted flavouring substances

4.2.12.5 Permitted colouring substances according to Food (Colouring) substances Regulations. The total amount of synthetic colouring substances shall not exceed 100 mg/ kg in the final product.

4.2.12.6 Permitted sweetner substances according to Food (Sweetners) Regulations.

5 REQUIREMENTS

5.1 Hygiene

Milk added drinks shall be processed, packaged, stored and distributed in accordance with the conditions prescribed in **SLS 143, SLS 872** and **SLS 873.**

5.2 Heat treatment

Milk added drinks shall be UHT treated or heated without appreciable loss of volume, to a temperature above 100 ^{o}C, for a length of time sufficient to achieve commercial sterility.

5.3 Finished product requirements

5.3.1 *Physical requirements*

Milk added drinks shall have a characteristic flavour and odour of the descriptions appearing on the label. It shall be free from off-odour and off-flavour. It shall also be free from extraneous matter.

5.3.2 *Compositional and chemical requirements*

The product shall conform to the requirements given in Table **1**, when tested according to the methods given in Column **4** of the table.

TABLE 1 – Chemical requirements for milk added drinks

Sl No (1)	**Characteristic** (2)	**Requirement** (3)	**Method of test** (4)
i)	Total solids content, per cent by mass, on dry basis, min.	10	**SLS 735: Part 5**
ii)	Total sugar content, per cent by mass calculated as sucrose, max.	13	**SLS 735: Part 6** or **HPLC**

5.3.3 *Microbiological requirements*

The colony count shall not exceed 10/0.1 ml, when tested in accordance with the method given in Appendix **C.**

6 PACKAGING

The product shall be hygienically packaged in glass bottles or other suitable retortable or aseptic food grade containers which have been thoroughly and effectively cleaned so as to prevent contamination of the product. The container shall not impart any off-odour or off-flavour to the product or transfer any of its components to the product.

7 MARKING AND/ OR LABELLING

7.1 The following shall be marked or labeled legibly and indelibly on each package /container:

a) Name of the product as “X- drink” or “X- flavoured drink” as applicable, where ‘X’ denotes the characteristic flavour imparted to the product by the named ingredient ‘X’ as given in **4.1.3**, The word “milk” shall not be used in the name of the product;
b) Brand name or trade name, if any;

c) Net volume, in ml or l;
d) Name and address of the manufacturer and distributor in Sri Lanka;
e) Batch or code number or decipherable code marking;
f) Date of manufacture;
g) Date of expiry;
h) Country of origin, in case of imported products;
j) A complete list of ingredients shall be declared on the label in descending order of proportion except that in the case of added vitamins and added minerals, these ingredients shall be arranged as separate groups for vitamins and minerals, respectively, and within these groups, vitamins and minerals need not be listed in descending order of proportion ;
k) Any permitted food additive's name and INS number; and
m) Instructions for storage and handling, where necessary.

7.2 Marking and labeling shall be in accordance with **SLS 467**.

8 SAMPLING

Representative samples of the product for ascertaining conformity to the requirements of this Standard shall be drawn as prescribed in Appendix **A.**

9 METHODS OF TEST

Tests shall be carried out as prescribed in Appendix **C** of this Standard and **Part 5** and **6** of **SLS 735**.

10 CRITERIA FOR CONFORMITY

A lot shall be declared as conforming to the requirements of this Standard if the following conditions are satisfied:

10.1 Each container examined as in **A.4.1** satisfies the packaging and marking and/ or labeling requirements.

10.2 Each subsample tested as in **A.4.2** satisfies the microbiological requirements given in **5.3.3.**

10.3 The contents of each container examined as in **A.4.3** satisfies the requirements given in **5.3.1**.

10.4 The test results on the composite sample, when tested as in **A.4.4** satisfy the requirements given in **5.3.2**

APPENDIX A
SAMPLING

A.1 LOT

In any consignment all the containers belonging to one batch of manufacture or supply shall constitute a lot.

A.2 GENERAL REQUIREMENTS OF SAMPLING

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

A.2.1 Samples shall be drawn in a protected place not exposed to damp, air, dust or soot.

A.2.2 The sampling instruments shall be clean and dry when used. When drawing samples for microbiological examination, the sampling instruments shall be sterilized.

A.2.3 Precautions shall be taken to protect the samples, the product being sampled and the sample container from adventitious contamination.

A.2.4 The samples shall be placed in clean and dry containers. When drawing samples for microbiological examination, the sample containers shall be sterilized.

A.2.5 The sample containers shall be sealed, air-tight after filling and marked with necessary details of sampling.

A.2.6 Samples shall be stored in such a manner that the temperature of the material does not vary unduly from the room temperature.

A.3 SCALE OF SAMPLING

A.3.1 Samples shall be tested from each lot for ascertaining its conformity to the requirements of this Standard.

A.3.2 The number of containers to be selected from a lot shall be in accordance with Column **2** of Table **2**.

TABLE 2 – Scale of sampling

Number of containers in the lot (1)	**Number of containers to be selected** (2)
Up to 200	12
201 to 500	13
501 to 1 200	15
1 200 and above	18

A.3.3 The containers shall be selected at random. In order to ensure randomness of selection, table of random numbers as given in **SLS 428** shall be used.

A.4 NUMBER OF TESTS

A.4.1 Each container selected as in **A.3.2** shall be examined for packaging and marking requirements.

A.4.2 Five subsamples, each comprising two containers, shall be drawn from the containers selected as in **A.3.2** and each subsample so selected shall be tested for microbiological requirements given in **5.3.3**.

A.4.3 The contents of each of the remaining containers shall be examined for physical requirements given in **5.3.1**.

A.4.4 After examining as in **A.4.3**, a sufficient quality of material shall be drawn from each of these containers and mixed to form a composite sample. The composite sample thus obtained shall be tested for the requirements given in **5.3.2**

APPENDIX B
DETERMINATION OF TOTAL SOLIDS CONTENT

Immerse the container in a water bath and heat till the fat layer disperses. Cool and mix thoroughly before taking the sample. Take for testing, about 500 g of the prepared sample. Proceed as given in **4.3** of **SLS 735**: **Part 5**.

APPENDIX C
STERILITY TEST

C.1 STERILITY TEST

C.1.1 Pre-incubation

a) Incubate one unopened container at 30±1 °C for 7 days; and

b) Incubate the other unopened container at 55±1 °C for 7 days.

C.1.2 Procedure

Plate 0.1 ml of undiluted product in each of 2 petri dishes using milk agar and incubate at 30±1 °C 1 °C for 72 hours in the case of **C.1.1(a)** and at 55°C±1 °C for 72 hours in the case of **C.1.1(b)**. Count colonies on duplicate plates and record counts.

C.1.3 Expression of results

Report the colony count per 0.1 ml of the product.

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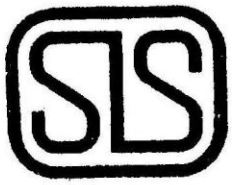
SLS CERTIFICATION MARK

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

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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.

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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.

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