SRI LANKA STANDARD 632:1984
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SPECIFICATION FOR
PADDY

BUREAU OF CEYLON STANDARDS

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SLS 632:1984

Gr. 5

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Sri Lanka

SRI LANKA STANDARD
SPECIFICATION FOR PADDY

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Bureau of Ceylon Standards on 1984-01-12, after the draft, finalized by the Drafting Committee on Paddy and Rice, had been approved by the Agricultural and Food Products Divisional Committee.

In general, the term rice may refer to the grain of *Oryza sativa* L. in various stages of process:

a) with husk (paddy);

b) with the husk removed (brown rice);

c) with both husk and part or whole of the bran removed (milled rice).

In the preparation of this specification consideration has been given to aflatoxin in rice and paddy. A limit for aflatoxin has not been specified as adequate data was not available on this subject. This will be considered for inclusion in subsequent revision of the specification when adequate data is available.

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 standard is complied with the final value, observed or calculated, expressing the result of a test or an 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 standard.

In the preparation of this standard, the assistance obtained from the publications of the China Association for Standardization, the Standards and Industrial Research Institute of Malaysia, the Central Agricultural Research Institute of the Department of Agriculture, Sri Lanka and the Rice Processing Research and Development Centre of the Paddy Marketing Board, Sri Lanka is gratefully acknowledged.

1 SCOPE

1.1 This specification prescribes the requirements and methods of sampling and test for paddy (*Oryza sativa* L.)

2 REFERENCES

CS 102 Presentation of numerical values

SLS 448 Analysis of food grains

Part 1 Moisture

Part 2 Refractions

SLS 528 Sampling of food grains

3 DEFINITIONS

3.1 **paddy** : Unhusked grains of *Oryza sativa* L. after threshing, that is: rice grain with the glumes enclosing the kernel. This term therefore denotes rice in the husk or hull and is synonymous with rough rice.

3.2 **brown rice** : Husked grain of *Oryza sativa* L. that is: rice kernels without the husk or hull, but with the bran intact.

3.3 **milled rice** : Whole or brown kernels of *Oryza sativa* L. from which the husk and part or whole of the bran have been removed by milling.

3.4 **husk (hull)** : Glumes enclosing the rice kernel.

3.5 **rice bran** : The outer covering of brown rice that is removed during the polishing processes. It is composed of the pericarp, seed coat, aleurone layer and germ (bran may also contain parts of the outer endosperm).

3.6 **red rice** : Kernels having red pericarp.

3.7 **white rice** : Kernels having a white or cream coloured pericarp.

3.8 **damaged grain** : Kernels which are distinctly identified as having been visibly affected by insects, heat, water, disease or any causative agent other than those caused by the milling process. Such grains could have a substantial discolouration and include stained, spotted and yellow grains. This includes *Madi paddy* (heat damaged and discoloured).

3.9 **immature grain** : Incompletely filled grain which are shrivelled and normally greenish in colour.

3.10 **commercially objectionable foreign odour** : Odours which are entirely foreign to rice and which, because of their presence, render rice unfit for its normal commercial usage.

3.11 insect infestation : Presence of live insects or their larval stages.

3.12 foreign matter : All matter other than rice (whether whole or broken) or paddy. Foreign matter includes such things as sand, stones, seeds of weed, fragments of paddy stalk, husk including completely unfilled grain and dust.

4 TYPES

4.1 Paddy shall be classified into the following types on the basis of the length of the kernels and colour of the pericarp. The basis of classification is as follows :

a) Long red (LR) - red pericarped rice having a grain length above 6.0 mm.

b) Long white (LW) - white pericarped rice having a grain length above 6.0 mm.

c) Medium red (MR) - red pericarped rice having a grain length between 4.5 mm and 6.0 mm.

d) Medium white (MW) - white pericarped rice having a grain length between 4.5 mm and 6.0 mm.

e) Short white (SW) or *Samba* - white pericarped rice having a grain length less than 4.5 mm.

f) Mixed type - mixed paddy which contains less than 90 per cent by mass of any one of the above types.

NOTE - Short red type has not been included in this specification, as it is not cultivated widely in Sri Lanka. The Department of Agriculture of Sri Lanka has discontinued the production of seed paddy of this type.

5 GRADES

Paddy shall be classified into the following four grades as prescribed in Table 1.

a) Grade 1,

b) Grade 2,

c) Grade 3, and

d) Grade 4.

6 REQUIREMENTS

6.1 Paddy shall be free from commercially objectionable odour and insect infestation when examined as prescribed in Appendix A.

6.2 Paddy shall not contain pesticide residues in excess of the limits laid down under the Food Act No. 26 of 1980.

NOTE - It is not necessary to carry out this determination as a routine for all the samples. This should be tested in case of dispute and when required by the purchaser or vendor.

6.3 Paddy shall also conform to the requirements specified in Table 1 when tested by relevant methods given in Column 7 of the table.

TABLE 1 - Requirements for paddy

Sl. No.	Characteristics	Grades				Methods of test, (Ref. to)
		1	2	3	4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i	Moisture, per cent by mass, max.	14.0	14.0	14.5	15.0	SLS 448: Part 1
ii	Foreign matter, per cent by mass, max.	0.5	1.0	1.0	2.0	SLS 448: Part 2
iii	Type admixture, per cent by mass, max.	1.0	3.0	7.0	10.0	Appendix B
iv	Damaged grain, per cent by mass, max.	0.5	2.0	5.0	7.0	Appendix B
v	Immature grain, per cent by mass, max.	0.5	2.0	3.0	4.5	Appendix B

7 PACKAGING AND MARKING

7.1 Packaging

Paddy shall be packed in clean jute bags, woven polypropylene bags or coarse cloth bags. The mouth of each bag shall be securely stitched.

7.2 Marking

Each bag shall be marked legibly and indelibly or a label shall be attached to the bag, with the following information.

a) Name and address of the producer or trader;

b) Trade mark, if any;

c) Type;

d) Grade;

e) Net mass in kg; and

f) Month and year of harvest.

NOTE - When bags are being reused, the existing markings shall be crossed out with indelible ink or dye.

8 SAMPLING

Sampling shall be carried out as prescribed in **SLS 528.**

9 METHODS OF TEST

Tests shall be carried out as prescribed in the appropriate Appendices and **SLS 448.**

10 CONFORMITY TO STANDARD

A lot shall be declared as conforming to the requirements of this specification, if all the test samples (see **SLS 528**) satisfy the relevant specification requirements.

APPENDIX A

VISUAL EXAMINATION

A.1 PROCEDURE

Take 500 g of the test sample and examine as a whole as given in **SLS 448:Part 2** for its general conditions including odour and infestation and report whether the sample is wholesome, clean, dry and in sound marketable condition. Examine the sample for any deleterious material hazardous to human health and/or rendering the grain inedible.

APPENDIX B

DETERMINATION OF TYPE ADMIXTURE, DAMAGED GRAIN AND IMMATURE GRAIN

B.1 APPARATUS

B.1.1 *"Satake" laboratory grain huller,* or similar device.

B.1.2 *Balance,* of sensitivity 1 mg.

B.1.3 *Magnifying glass*, with a handle of about 75 mm in length and having a magnification of 10.

B.1.4 *Forceps*, of about 100 mm in length.

B.2 PROCEDURE

Take the paddy sample which has been freed from foreign matter (refer **SLS 448:Part 2**). Dehull using a *satake* laboratory grain huller or similar device. Mix well the resulting brown rice sample and take three 100 g representative samples. Using each of the samples visually separate,

a) grain belonging to other types;

b) damaged grain; and

c) immature grain.

Calculate the percentage of each by mass.

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