SRI LANKA STANDARD 670:1984
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SPECIFICATION FOR
RICE BRAN FOR ANIMAL FEEDS

SRI LANKA STANDARDS INSTITUTION

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SLS 670:1984

Gr. 5

SRI LANKA STANDARDS INSTITUTION
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Sri Lanka

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

SRI LANKA STANDARD
SPECIFICATION FOR RICE BRAN FOR ANIMAL FEEDS

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1984-12-20, after the draft, finalized by the Drafting Committee on Animal Feeds had been approved by the Agricultural and Food Products Divisional Committee.

Rice bran now finds extensive application as an ingredient in compounded livestock feeds as well as in poultry feeds. This specification prescribes the limits for important quality characteristics of rice bran which should be required for the production of compounded feeds.

All standard values given in this specification are 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 an analysis shall be rounded off in accordance with CS 102. The number of significant figures to be retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this specification, valuable assistance derived from the publications of the Indian Standards Institution is gratefully acknowledged.

1 SCOPE

1.1 This specification prescribes the requirements and the methods of sampling and test for rice bran used for animal feeds.

2 REFERENCES

CS 102 Presentation of numerical values

SLS 428 Random sampling methods

SLS 626 Tests for animal feeds

3 DEFINITIONS

For the purpose of this specification, the following definition shall apply:

3.1 rice bran : The material obtained from the pericarp or bran layer and germ of rice with varying amounts of husk and also of chipped or broken rice.

4 TYPES AND GRADES

4.1 Types

Rice bran shall be of the following two types:

4.1.1 De-fatted rice bran

4.1.2 Un-de-fatted rice bran

4.2 Grades

Un-de-fatted rice bran shall have the following grades:

4.2.1 Grade 1

4.2.2 Grade 2

5 REQUIREMENTS

5.1 The material shall be free from musty and stale odour, dirt and extraneous matter. The material shall also be free from fungal growth and insect infestation. The material may be of pellet or powder form.

5.2 The material shall also conform to the requirements prescribed in Table 1.

TABLE 1 - Requirements for rice bran

Sl. No.	Characteristic	Requirement			Method of test Ref. to Clause No. of SLS 626
		De-fatted rice bran	Un-de-fatted rice bran		
			Grade 1	Grade 2	
(1)	(2)	(3)	(4)	(5)	(6)
i	Moisture, per cent by mass, max.	10	10	10	5
ii	Crude protein, (nitrogen x 6.25), per cent by mass, min.	14	12	10	6
iii	Crude fat, per cent by mass	2 max.	15 min.	12 min.	7
iv	Crude fibre, per cent by mass, max.	16	8	10	8
v	Acid insoluble ash, per cent by mass, max.	5	5	8	10

NOTE - The requirement for items ii, iii, iv *and* v *are on moisture free basis.*

6 PACKAGING

6.1 Unless otherwise agreed to between the purchaser and the vendor, the material shall be packed in sound jute bags. The mouth of each bag shall be either machine stitched or rolled over and hand stitched with strong jute twine.

7 MARKING

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

a) Type and grade of the material;

b) Name and address of the manufacturer or supplier;

c) Batch or code number;

d) Net mass in kg; and

e) Date of packaging.

8 SAMPLING

8.1 Lot

The quantity of rice bran, of same type and grade obtained under similar conditions of manufacture or belonging to one batch of supply shall constitute a lot.

8.2 General requirements of sampling

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

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

8.2.2 The sampling instrument shall be clean and dry when used.

8.2.3 Precautions shall be taken to protect the samples, the material being sampled, the sampling instrument and the containers for samples from adventitious contamination.

8.2.4 The samples shall be placed in clean and dry glass containers or any other suitable sample containers.

8.2.5 Each container shall be air tight after filling and marked with necessary details of sampling.

8.2.6 Samples shall be stored in such a manner that there is no deterioration of the material.

8.3 Sampling instruments

8.3.1 *Scoop*

8.3.2 *Sampling tube*

8.4 Scale of sampling

8.4.1 Samples shall be tested for each lot for ascertaining conformity of the material to the requirements of this specification.

8.4.2 The number of bags to be selected from the lot shall be in accordance with Table 2.

TABLE 2 - Scale of sampling

Number of bags in the lot	Number of bags to be selected
Up to 50	02
51 to 100	03
101 to 300	04
301 to 500	05
501 to 1 000	07
1 001 and above	10

8.4.3 The bags shall be selected at random. In order to ensure randomness of selection random number tables as given in **SLS 428** shall be used.

8.5 Preparation of samples

8.5.1 *Individual samples*

8.5.1.1 Equal quantities of material shall be drawn from top, middle, bottom and sides of each bag selected, using an appropriate sampling instrument. All the portions of material of same bag shall be thoroughly mixed and reduced, using a coning and quartering method or any other appropriate method to form an individual sample of not less than 0.25 kg which represents that particular bag sampled.

8.5.2 *Composite sample*

8.5.2.1 Equal quantities of material shall be drawn from top, middle, bottom and sides of each of the bags selected using an appropriate sampling instrument. All the portions of material so obtained shall be thoroughly mixed and reduced, using a coning and quartering method or any other appropriate method to get a composite sample of not less than 0.25 kg.

8.6 Reference sample

8.6.1 If reference samples are required the sizes of the individual samples and the composite sample shall not be less than 0.75 kg. The individual samples so obtained shall be divided into three sets in such a way that each set has a sample representing each selected bag. One of these sets shall be marked for the purchaser, another for the vendor, and the third for reference. The composite sample shall be divided into three equal parts. One of these parts shall be marked for the purchaser another for the vendor and the third for reference.

8.7 Number of tests

8.7.1 Each bag selected as in 8.4.2 shall be examined for packaging and marking requirements. (This may be done at the place of inspection).

8.7.2 Each individual sample prepared as in 8.5.1 shall be examined for requirements given in 5.1 and tested for acid insoluble ash.

8.7.3 The composite sample prepared as in 8.5.2 shall be tested for the requirements given in Table 1 other than acid insoluble ash.

9 METHODS OF TEST

9.1 The tests shall be carried out by appropriate methods referred to in Column 6 of Table 1.

10 CONFORMITY TO STANDARD

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

10.1 Each bag examined as in 8.7.1 satisfies the relevant requirements.

10.2 Each individual sample examined as in 8.7.2 satisfies the requirements given in 5.1.

10.3 The value of the expression $(\bar{X} \pm 0.4\ R)$ calculated using test results on acid insoluble ash is less than or equal to the requirements for acid insoluble ash specified in Table 1.

10.4 The composite sample tested as in 8.7.3 satisfies the relevant requirements.

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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.

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.

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