

पशु आहार घटक के रूप में चावल की
भूसी — विशिष्टि
(दूसरा पुनरीक्षण)

Rice Bran as Livestock Feed
Ingredient — Specification
(Second Revision)

ICS 65.120

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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Animal Feeds and Nutrition Sectional Committee had been approved by the Food and Agriculture Division Council.

This standard was first published in 1966 and revised in 1975. In the first revision, it was considered that milling rice by different techniques results into variation in composition, particularly in its acid insoluble ash content and accordingly, provision was made for two grades of rice bran. Requirements for various characteristics were also reviewed and modified.

In this revision, the standard has been updated considering latest technological developments and manufacturing practices. The following major changes have been incorporated:

- a) Requirement for aflatoxin B₁ has been introduced in the standard;
- b) Requirements of castor husk and *Mahua* oilcake have been introduced in the standard; and
- c) Methods of tests prescribed for determination of crude protein, crude fat, crude fibre and acid insoluble ash has been updated.

The standard IS 3593 cover the requirements for solvent extracted rice bran for livestock feeding has been issued separately.

The composition of the Committee responsible for the formulation of this standard is given in [Annex B](#).

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 analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

RICE BRAN AS LIVESTOCK FEED INGREDIENT — SPECIFICATION

(*Second Revision*)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for rice bran for use as livestock feed ingredient.

2 GRADES

Rice bran shall be of two grades, namely, Grade 1 and Grade 2.

3 REFERENCES

The standards listed in [Annex A](#) contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards.

4 REQUIREMENTS**4.1 Description**

Rice bran is the pericarp or bran layer and germ of rice, with only such quantity of hull fragments, and chipped or broken rice as is unavoidable in the regular milling of edible rice. The material shall be free from adulterants, musty and stale odour, sour or rancid taste and from lumps, dirt and extraneous matter including iron or other metallic pieces. Rice bran shall be free from fungal or insect infestation.

4.2 The material shall also conform to the requirements prescribed in [Table 1](#).

5 PACKING AND MARKING**5.1 Packing**

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

5.2 Marking

5.2.1 Each bag shall be marked with the following information:

- a) Name and grade of the material;
- b) Name and address of the manufacturer;
- c) Batch or code number;
- d) Net mass, in kg;
- e) Date of packing;
- f) Best before date in month and year format; and
- g) Any other requirements as specified under the *Legal Metrology (Packaged Commodities) Rules, 2011*.

5.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

6 SAMPLING

Representative samples of the material for ascertaining conformity to this standard shall be determined according to the method prescribed in Annex D of IS 2052.

7 TESTS

7.1 The tests shall be carried out as prescribed in col (4) of [Table 1](#).

7.2 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070) shall be employed in test.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the test results.

Table 1 Requirements for Rice Bran as Livestock Feed Ingredient(Clauses [4.2](#) and [7.1](#))

SI No.	Characteristic	Requirement(s)		Method of Test, Ref to
		Grade 1	Grade 2	
(1)	(2)	(3)	(4)	(5)
i)	Moisture, percent by mass, <i>Max</i>	10	10	4 of IS 7874 (Part 1)
ii)	Crude protein (N × 6.25), percent by mass, <i>Min</i>	13	11	IS/ISO 5983 (Part 1)* or IS 5983 (Part 2) or ISO 16634-1
iii)	Crude fat, percent by mass, <i>Min</i>	15	12	IS/ISO 6492
iv)	Crude fibre, percent by mass, <i>Max</i>	10	12	IS/ISO 6865
v)	Acid insoluble ash, percent by mass, <i>Max</i>	5	8	Annex A of IS 1712 or IS 14826*
vi)	Castor husk, oil cake	Nil	Nil	11 of IS 7874 (Part 1)
vii)	<i>Mahua</i> cake	Nil	Nil	12 of IS 7874 (Part 1)
viii)	Aflatoxin B ₁ (ppb), <i>Max</i>	20.0	20.0	IS/ISO 14718* or IS 18143 or AOAC 2003.02

NOTES

1 The values specified for requirements at SI No. (ii) to (vii) are on moisture-free basis.

2 In case of dispute, the test methods given above and wherever indicated by '**' shall be the referee method.

3 For crude fibre, the manual method given in IS/ISO 6865 shall be the referee method.

ANNEX A

(Clause 3)

LIST OF REFERRED STANDARDS

<i>IS No./Other Standards</i>	<i>Title</i>	<i>IS No./Other Standards</i>	<i>Title</i>
IS 1070 : 2023	Reagent grade water — Specification (<i>fourth revision</i>)	IS 7874 (Part 1) : 1975	Methods of tests for animal feeds and feeding stuffs: Part 1 General methods
IS 1712 : 2022	Cottonseed oilcake as livestock feed ingredient — Specification (<i>third revision</i>)	IS/ISO 14718 : 1998	Animal feeding stuffs — Determination of aflatoxin B ₁ content of mixed feeding stuffs — Method using high-performance liquid chromatography
IS 2052 : 2023	Compounded feeds for cattle — Specification (<i>fifth revision</i>)	IS 14826 : 2021/ ISO 5985 : 2002	Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid (<i>first revision</i>)
IS/ISO 5983 (Part 1) : 2005	Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content: Part 1 Kjeldahl method	IS 18143 : 2023/ ISO 17375 : 2006	Animal feeding stuffs — Determination of aflatoxin B ₁
IS 5983 (Part 2) : 2021/ISO 5983-2 : 2009	Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content: Part 2 Block digestion and steam distillation method (<i>first revision</i>)	ISO 16634 (Part 1) : 2008	Food products — Determination of the total nitrogen content by combustion according to the Dumas principle and calculation of the crude protein content — Part 1: Oilseeds and animal feeding stuffs
IS/ISO 6492 : 1999	Animal feeding stuffs — Determination of fat content		
IS/ISO 6865 : 2000	Animal feeding stuffs — Determination of crude fibre content — Method with intermediate filtration		

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ANNEX B

(Foreword)

COMMITTEE COMPOSITION

Animal Feeds and Nutrition Sectional Committee, FAD 05

<i>Organization</i>	<i>Representative(s)</i>
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Association of Indian Pet Food Manufacturers, New Delhi	DR AKANKSHA SINGH SHRI GOVIND SURYAWANSHI (<i>Alternate</i>)
Centre for Science and Environment, New Delhi	SHRI AMIT KHURANA
Compound Livestock Feed Manufacturers Association of India, Navi Mumbai	PROF (DR) A. S. RANADE DR R. S. MASALI (<i>Alternate</i>)
CSIR - Central Drug Research Institute, Lucknow	DR RAJDEEP GUHA DR DHANANJAY HANSDA (<i>Alternate</i>)
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