



उत्पाद मानुयल

**EQUIPMENT FOR MANUFACTURE OF FORTIFIED RICE KERNEL –SPECIFICATION
IS 17853: 2023 के अनुसार**

**PRODUCT MANUAL FOR
EQUIPMENT FOR MANUFACTURE OF FORTIFIED RICE KERNEL –SPECIFICATION
ACCORDING TO IS 17853:2022**

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम 2018 की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरणके प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेन्स धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेन्स/प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification license/certificate.

1.	उत्पाद Product	:	IS 17853:2022
	शीर्षक Title	:	Equipment for manufacture of Fortified Rice Kernel –Specification
	संशोधन संख्या No. of Amendments	:	Nil
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:	:	One Unit
a)	कच्चा माल Raw material	:	The equipment shall be made of stainless steel as per table 1, 2 and 3 of IS 17853:2022. Manufacturer to ensure that the stainless steel used for manufacture of Hopper, grinding chamber, screen, cyclone, pipes and fittings, supporting frame and structure, mixing chamber, cover/lid, shaft, paddle, helical ribbon, cutter and body cover shall be ISI marked as per IS 6911; the stainless steel used for manufacture of hammer shall be ISI marked as per IS 7283. The stainless steel used for manufacture of die shall be ISI marked as per IS 6911/ 3748 and gasket shall be ISI marked as per IS 7466. The raw material for barrel extruder screw and die head shall be wearing, abrasion and corrosion resistant, food grade Nitriding steel of grade

			EN41B or 38CrMoAl or any other similar material having chemical composition as per Annex C of IS 17853
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	i) Each model to be declared by the manufacturer with details of the components used. Each model has to be tested for covering the same under the scope of licence. ii) The manufacturer is required to submit undertaking/declaration w.r.t. constructional requirements of the Hopper, Grinding Chamber, Hammer, Cyclone, Control Panel as per provisions of Clause 4.2.1 of IS 17853:2022, for blower and electric motor as per provisions of Clause 4.2.2 of IS 17853:2022, Mixing unit as per provisions of Clause 4.3 of IS 17853:2022, Extruder as per provisions of Clause 4.4 and 4.4.5 of IS 17853:2022 and Dryer as per provisions of Clause 4.5 of IS 17853:2022. The manufacturer is also required to declare the magnetic-separator arrangement as per Cl. 4.5.6 of IS 17853:2022.
c)	नमूनेका परिमाण Sample Size	:	No sample of the product to be drawn for independent testing. Compliance to the Standard requirement to be verified on FT basis as Sample is Bulky in nature. However, sample of raw material (Stainless Steel sheet) used to manufacture Hopper/grinding chamber/screen/cyclone/pipes and fittings/supporting frame and structure/mixing chamber/cover/lid, shaft/ paddle/helical ribbon/cutter/body cover to be drawn during factory surveillance, for ensuring its conformity to the chemical composition as specified in IS 6911. Similarly, sample of hammer to be drawn during factory surveillance, for ensuring its conformity to the chemical composition as specified in IS 7283. Sample of gasket maybe drawn during factory surveillance, for ensuring its conformity as specified in IS 7466
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-ए देखें Please see Annex – A
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	कृपया Annex-B देखें Please see Annex – B
5.	एक दिन में संभावित परीक्षण Possible tests in a day :		
	i) Performance requirements (Cl. 4.2.3) a) Size of rice flour b) Free from metal or foreign impurities		

	ii) Performance requirements (Cl.4.3.12) a) Uniform blend of iron, folic acid and vitamin B₁₂ b) Uniform moisture distribution without lumps c) Free from metal impurities iii) Performance requirements (Cl. 4.4.3) Uniformity in size and weight of FRK iv) Performance requirements (Cl. 4.5.5) a) Moisture b) Free from fissures c) Change of colour d) Free from metal impurities or foreign matter	
6.	लाइसेन्स का कार्यक्षेत्र / Scope of the Licence:	
	IS 17853:2022 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है “Licence is granted to use Standard Mark as per 17853: 2022 with the following scope:	
	उत्पाद का नाम Name of the product	Equipment for Manufacture of Fortified Rice Kernel
	Model no.	The manufacturer shall declare the model nos. of the Equipment being manufactured. For each model no. the following information regarding components shall be declared (as applicable): a) Type of blender of Mixing unit i.e. Single/ Twin Shaft Blender/ Double Helical Ribbon Blender b) Type of Paddle with mixing unit i.e. Square/ Rectangle/ Triangle Paddle c) Type of Mixing Chamber i.e. U-Shaped for single shaft/W-shaped for twin shaft d) Type of Barrel with Extruder i.e. Square / Circular Barrel e) Type of Screw for the Extruder i.e. Single/Twin Screw f) Type of Screw for the Extruder Feeder i.e. Single/Twin Screw

BUREAU OF INDIAN STANDARDS
Manak Bhawan,
9, Bahadur Shah Zafar Marg,
New Delhi – 110002

ANNEX-A
TO THE PRODUCT MANUAL FOR
EQUIPMENT FOR MANUFACTURE OF FORTIFIED RICE KERNEL –SPECIFICATION
ACCORDING TO IS 17853:2022

List of Test Equipment

Major test equipment required to test as per the Indian Standard:

S. No.	Test Clause	Test Equipment
1.	4.2.3	Size of Sieve 100, 120, 150, 250, 275 microns.
2.	4.2.3, 4.3.12, 4.5.5	Pan, Powerful Magnet, Polythene Sheet
3.	4.5.5	Weighing Balance, Hot Temperature Oven, Glass Dish, Grinding Mill, Desiccator, Stopwatch

The above list is indicative only and may not be treated as exhaustive.

ANNEX-B
TO THE PRODUCT MANUAL FOR EQUIPMENT FOR MANUFACTURE OF
FORTIFIED RICE KERNEL –SPECIFICATION
ACCORDING TO IS 17853:2022

Scheme of Inspection and Testing

1. **LABORATORY** - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.
 - 1.1 The manufacturer shall prepare and implement a calibration plan for the test equipment.
2. **TEST RECORDS** – The manufacturer shall maintain test records for the tests carried out to establish conformity.
3. **PACKING AND MARKING** – The Standard Mark, as given in the Schedule of the licence, shall be incorporated legibly and indelibly on each piece provided always that material so marked conform to requirements of the specification.
 - 3.1 **MARKING** - Each piece shall be legibly and indelibly marked, so as to give the information as per the requirements laidout in clause 5.1 of IS 17853:2022. In addition, the following shall be incorporated on each piece:
 - a) BIS Licence Number CM/L-and
 - b) BIS website details i.e. —”For details of BIS certification please visit www.bis.gov.in”
4. **CONTROL UNIT** – For the purpose of this scheme, equipment manufactured/assembled from the same cast of raw material (stainless steel as per IS 6911) shall constitute one control unit.
5. **LEVELS OF CONTROL** - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.
 - 5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.
6. **REJECTIONS** – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

Table 1
Levels of Control
(Para 5 of Scheme of Inspection and Testing)

Sl. No.	(1)				(2)	(3)		
	Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
	Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
			Clause	Reference				
1	4.2.3	Performance requirements a) Size of rice flour b) Free from metal or foreign impurities	4.2.3	IS 17853	R	01	Every Piece	
2	4.3.12	Performance requirements a) Uniform blend of iron, folic acid and vitamin B12 b) Uniform moisture distribution without lumps c) Free from metal impurities	a)4.3.12 b) 4.3.12 c)Annex B	IS 17853	R	01	Every Piece	
3	4.4.3	Performance requirements Uniformity in size and weight of FRK	4.4.3	IS 17853	R	01	Every Piece	
4	4.5.5	Performance requirements- a) Moisture b) Free from fissures c) Change of colour d) Free from metal impurities or foreign matter	4.5.5	IS 17853	R	01	Every Piece	

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Subcontracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit /batch/lot and submit his own levels of control in Column 3 with proper justification for approval of BO Head.