



उत्पाद मानुयल

पशु आहार घटक के रूप में सरसों और तोरिया के बीज की खली

IS 1932:2022 के अनुसार

**PRODUCT MANUAL FOR
MUSTARD AND RAPE SEED OILCAKE AS LIVESTOCK FEED INGREDIENT
ACCORDING TO IS 1932: 2022**

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना- I के तहत प्रमाणन के संचालन में अभ्यास और पारदर्शिता के संचालन में पारदर्शिता सुनिश्चित करने के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज का उपयोग बीआईएस प्रमाणन लाइसेंस/प्रमाणपत्र प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी 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 licence/certificate.

1.	उत्पाद Product	:	IS 1932: 2022
	शीर्षक Title	:	Mustard and Rape Seed Oilcake as Livestock Feed Ingredient
	संशोधन संख्या No. of Amendments	:	Nil
2.	नमुनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	Manufacturer to submit declaration/undertaking in compliance to Cl. 4.1 of IS 1932:2022
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	Not applicable
c)	नमूने का परिमाण Sample Size	:	500 gms
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer ANNEX – A
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – B

5.	एक दिन में संभावित परीक्षण Possible tests in a day:	
	(i) Moisture (ii) Crude Protein (iii) Crude Fat (iv) Crude Fibre (v) Total ash (vi) Acid Insoluble Ash (vii) Castor Husk (viii) Mahua Cake	
6.	लाइसेन्स का कार्यक्षेत्र / Scope of the Licence:	
	“Licence is granted to use Standard Mark as per IS 1932: 2022 with the following scope:	
	उत्पाद का नाम Name of the product	Mustard and Rape Seed Oilcake as Livestock Feed Ingredient
	Type	a) Hydraulic or Expeller or Rotary Pressed Oilcake

BUREAU OF INDIAN STANDARDS
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ANNEX - A
TO PRODUCT MANUAL
FOR MUSTARD AND RAPE SEED OILCAKE AS LIVESTOCK FEED INGREDIENT
ACCORDING TO IS 1932: 2022
LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Moisture Cl. 4.2, Table 1 {clause 4 of 7874 (Part 1)}	Analytical balance-0-200g, LC 0.01 mg, 1.00-mm IS Sieve/ ASTM Sieve 18/ BS Sieve 16 or Tyler Sieve 16, Stoppered glass bottle, Hot air oven (capable of operating at 100°C), Aluminium Dish (Dia 50mm min, Depth 40mm), Desiccator.
2	Crude Protein Cl. 4.2, Table 1 {IS/ISO 5983 (Part-1) or IS 5983 (Part 2)}	<u>Method as per IS/ISO 5983 (Part-1)</u> Potassium sulfate, Catalyst like Copper(n) oxide (CUO) or Copper(n) sulfate pentahydrate (CUS045H20), Sulfuric acid, Paraffin wax, Saccharose, Acetanilide, Tryptophan, Sodium hydroxide solution, Collecting liquid, Boric acid, Sodium hydroxide, Mixed indicator (methyl red and methylene blue and ethanol), pH indicator paper, Boiling aids (granulated pumice stone, or glass beads of diameter 5 mm to 7 mm or Carborundum chips), Analytical balance, Digestion, distillation and titration apparatus <u>Method as per IS/ISO 5983 (Part-2)</u> Kjeldahl catalyst tablets, Sulfuric acid, Hydrogen peroxide solution, Antifoaming agent, Sodium hydroxide (NaOH) solution, Indicator solution(methyl red and Bromocresol green), boric acid, Hydrochloric acid, Ammonium sulfate, Ammonium iron(II) sulfate, Tryptophan, Acetanilide, Sucrose, Analytical balance, Digestion block, aluminium alloy block or equivalent block, fitted with an adjustable temperature control and device for measuring block temperature, capable of being maintained at 420 °C ± 5 °C, Digestion tubes, of capacity 250 ml, Exhaust manifold, Centrifugal scrubber apparatus, Automatic pipettes (dispensers), Graduated measuring cylinders, Distillation unit, Conical flasks of capacity 250 ml, Burette, Automatic titrator, with a pH meter
3	Crude Fat Cl. 4.2, Table 1 (IS/ISO 6492)	Sodium sulfate, Light petroleum, Silicon carbide chips or glass beads, Acetone, Hydrochloric acid, Filtration aid, Extraction thimbles, Soxhlet-type extractor, Heating apparatus, Drying oven, Electrically heated vacuum oven, Desiccator
4	Crude Fibre Cl. 4.2, Table 1 (IS/ISO 6865)	Hydrochloric acid, Sulphuric Acid - 0.255 N, Potassium hydroxide solution, Acetone, Filter aid: sea sand , Antifoam agent, Light petroleum, boiling range 40 °C to 60 °C, Grinding device, Analytical balance, Filter crucibles, Porcelain sieve plates, Incineration dishes, Beakers or conical flasks, Drying oven,

		Desiccator, Muffle furnace, Cold-extraction device, Heating device (provided with a suitable cooling device capable of maintaining the volume constant during boiling), Heating device (provided with — a support for the filter crucible, a discharge pipe with a tap to the vacuum and liquid outlet, boiling cylinder of at least 270 ml capacity, with a reflux condenser, connecting rings for connecting the heating device to the filter crucible and the boiling cylinder and optionally, provision for compressed air)
5	Total ash Cl. 4.2, Table 1 {clause 9 of IS 7874 (Part 1)}	Porcelain, silica or platinum dish, Meker burner, Muffle furnace at $(550 \pm 20^{\circ}\text{C})$, Weighing balance (LC- 1mg), Desiccator.
6	Acid-insoluble ash Cl. 4.2, Table 1 (Annex A of IS 1712 or IS 14826)	Dilute Hydrochloric Acid- approximately 5 N, Porcelain, silica or platinum dish, Meker burner, Muffle furnace at $(550 \pm 20^{\circ}\text{C})$, Weighing balance (LC- 1mg), Desiccator, Whatman filter paper No. 42 or its equivalent, Air-oven $(135 \pm 2^{\circ}\text{C})$, Silver nitrate solution <u>Method as per IS 14826</u> Dilute hydrochloric acid, Trichloroacetic acid solution, Analytical balance, Muffle furnace, Drying oven, Hot-plate or gas burner, Boiling water bath, Incineration dishes of platinum or platinum-gold alloy, Desiccator
7	Castor Husk Cl. 4.2, Table 1 {clause 11 of IS 7874 (Part 1)}	White Photographic Dish, Sodium Hydroxide Solution, Dilute Hydrochloric Acid, Bleaching Powder Solution
8	Mahua Cake Cl. 4.2, Table 1 {clause 12 of IS 7874 (Part 1)}	Extraction Tube (150 X 13 mm with a taper tip having an internal diameter 1.5 mm), Antimony Trichloride Solution, Rectified Spirit (95 percent)
9	Aflatoxin B ₁ Cl. 4.2, Table 1 {IS/ISO 14718 OR ISO 17375 or AOAC 2003.02}	<u>Method as per IS/ISO 14718</u> Concentrated sulfuric acid, Sulfuric acid, Acid-washed Celite@ 545 or product of equivalent quality, Florisil@ Sep-Pak style cartridge, Waters No. 51960, or product of equivalent quality, C ₁₈ Sep-Pak style cartridge- Waters No. 51910 or product of equivalent quality, Acetone, Methanol, Acetonitrile, Chloroform stabilized with ethanol, Mixture of acetone and water, Mixture of methanol and water, Concentrated nitric acid, Potassium bromide, Mobile phase for HPLC, Saturated iodine solution for HPLC with iodine derivatization, Sodium hypochlorite solution, Inert gas e.g. nitrogen, Aflatoxin B ₁ standard material, Chromatographic test solution, Solvent filtration system, suitable for PTFE membrane filters with a pore size of 0.45 µm, Ultrasonic bath, Microsyringe, Glass-stoppered calibrated tubes, Spectrometer, Conical flask, Mechanical shaker, Fluted filter paper of diameter 24 cm, Glass

		column, Rotary vacuum evaporator, General HPLC system. Pump pulse free, HPLC system for HPLC with iodine derivatization <u>Method as per IS/ISO 17375</u> Phosphate buffer saline, Pyridinium hydrobromide perbromide, Potassium bromide, HPLC-grade acetonitrile, HPLC-grade methanol, Acetone(pure), HPLC grade water, Extraction solvent, Nitric acid, Immunoaffinity column, HPLC mobile phase solvent A and B, Post-column reagent, Toluene/acetonitrile, Aflatoxin B₁ standard material, Vertical or horizontal shaker, Filter paper, of diameter 24 cm, Erlenmeyer flask, Glass microfibre filter paper, Reservoir 75ml, Hand pump, HPLC pump, volumetric flasks, Injection system, RP-HPLC column, Analytical balance, Evaporator, Spectrophotometer, Quartz glass cell <u>Method as per AOAC 2003.02</u> Vertical or horizontal shaker, Filter paper(24 cm), Erlenmeyer flask, Glass microfiber filter paper(retention 1.6 µm), Reservoir(75 ml with Luer tip connector for affinity column), Hand pump(20 ml syringe with Luer lock or rubber stopper), volumetric flask, LC pump, Injection system, Reversed phase LC column, Post-column derivatization system, Fluorescence detector, Disposable filter unit, Pipet, Analytical balance, Calibrated microliter syringe/pipet, Immunoaffinity columns specific for aflatoxin B₁ cleanup, PBS, Pyridinium hydrobromide perbromide(PBPP), Potassium bromide, Acetonitrile(LC grade), Methanol(LC grade), Acetone, Toluene, LC grade water, Extraction solvent, Nitric acid water, LC mobile phase solvent A and B, Toluene-acetonitrile, Aflatoxin B₁ standard material, Aflatoxin B₁ stock material
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The above list is indicative only and may not be treated as exhaustive.

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ANNEX - B
SCHEME OF INSPECTION AND TESTING FOR
MUSTARD AND RAPE SEED OILCAKE AS LIVESTOCK FEED INGREDIENT
ACCORDING TO IS 1932: 2022

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 equipments.

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 Schedule of the licence shall be stenciled/printed on each bag of Mustard and Rape Seed Oilcake as Livestock Feed Ingredient or printed on the label applied to the bag, provided always that the material to which this mark is thus applied conforms to every requirement of the specification.

3.1 Packing – The material shall be packed in suitable form of packing as per provisions of Clause 5.1. of IS 1932:2022.

3.2 Marking – The bag of Mustard and Rape Seed Oilcake as Livestock Feed Ingredient shall bear legibly and indelibly the information as mentioned under clause 5.2 of IS 1932:2022. In addition, the following details shall be mentioned on each container:

a) BIS Licence No. CM/L _____

b) BIS website details i.e – “For details of BIS Certification please visit www.bis.gov.in”.

4. CONTROL UNIT – For the purpose of the scheme, the entire quantity of Mustard and Rape Seed Oilcake as Livestock Feed Ingredient manufactured continuously in a day from the same consignment of raw material shall constitute a 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

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method Cl. Ref.	Test Method IS		No. of Sample	Frequency	Remarks
4.2, Table 1	Moisture	4	7874 (Part 1)	R	One	Each control unit	
-do-	Crude protein	---	IS/ISO 5983 (Part-1) or IS 5983(Part2)	R	-do-	-do-	
-do-	Crude fat	--	IS/ISO 6492	R	-do-	-do-	
-do-	Crude fibre	--	IS/ISO 6865	R	-do-	-do-	
-do-	Total ash	9	7874 (Part 1)	R	-do-	-do-	
-do-	Acid-insoluble ash	---	Annex A of IS 1712 or IS 14826	R	-do-	-do-	
-do-	Castor Husk	11	7874 (Part 1)	R	-do-	-do-	
-do-	Mahua cake	12	7874 (Part 1)	R	-do-	-do-	
-do-	Aflatoxin B ₁	--	IS/ISO 14718 or ISO 17375 or AOAC 2003.02	S	-do-	Once in every six months or whenever there is change in raw material, whichever is earlier	

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. Sub-contracting 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 by BO Head.