



उत्पाद मैनुअल

COTTONSEED OILCAKE AS LIVESTOCK FEED INGREDIENT
IS 1712:2022 के अनुसार

PRODUCT MANUAL
FOR COTTONSEED OILCAKE AS LIVESTOCK FEED INGREDIENT
ACCORDING TO IS 1712:2022

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम 2018 की स्कीम-I के तहत यह उत्पाद मानुष्यल 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

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 1712 :2022
	शीर्षक Title	:	Cottonseed Oilcake as Livestock Feed Ingredient
	संशोधन संख्या No. of Amendments	:	Nil
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	For compliance to clause 3.1 declaration shall be obtained from the manufacturer
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	कृपया Annex-ए देखें Please see Annex – A
c)	नमूनेका परिमाण Sample Size	:	500g
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-B देखें Please see Annex – B
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	कृपया Annex-C देखें Please see Annex – C

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 vi. Castor Husk vii. Mahua Cake	
6.	लाइसेन्स का कार्यक्षेत्र / Scope of the Licence:	
	IS 1712 :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 1712 :2022 with the following scope:	
	उत्पाद का नाम Name of the product	Cottonseed Oil Cake as Livestock Feed Ingredient
	Varieties/Type/Grades etc.	Type: a) Decorticated cottonseed oilcake and/or Type: b) Undecorticated cottonseed oilcake

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ANNEX – A
TO THE PRODUCT MANUAL FOR
COTTONSEED OILCAKE AS LIVESTOCK FEED INGREDIENT
ACCORDING TO IS 1712:2022
GROUPING GUIDELINES

1. Cottonseed Oil Cake as Livestock Feed Ingredient have been classified into following 2 types (clause 3):

Sl. No.	Types
i.	Decorticated cottonseed oilcake
ii.	Undecorticated cottonseed oilcake

2. The manufacturer shall declare the Type of Cottonseed Oil Cake as Livestock Feed Ingredient, they intend to cover in the scope of licence. The sample of each type to be drawn and shall be subjected to testing for considering grant of licence/inclusion of that type
3. The manufacturer shall submit an undertaking for free-gossypol content as per provisions of Clause 4.2 of IS 1712:2022.
4. It shall be ensured that the firm is having all the necessary manufacturing and testing facilities for the manufacture and testing of the Grades to be included in the licence.
5. During the operation of licence, BO shall ensure that all the types of Cottonseed Oil Cake as Livestock Feed Ingredient, covered in the license are drawn for independent testing on rotation over a period of time.

ANNEX – B
TO THE PRODUCT MANUAL FOR
COTTONSEED OILCAKE AS LIVESTOCK FEED INGREDIENT
ACCORDING TO IS 1712:2022
LIST OF TEST EQUIPMENT

Major test equipment required to test as per requirements of Indian Standard.

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Moisture Cl 4.2, Table 1, Sl. No. (i)	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, Sl. No. (ii)	<u>Method as per IS/ISO 5983 (Part-1)</u> Potassium sulfate, Catalyst like Copper(n) oxide (CUO) or Copper(n) sulfate pentahydrate (CUSO₄5H₂O), 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, Sl. No. (iii)	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, Sl. No. (iv)	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	Acid-insoluble ash Cl 4.2, Table 1, Sl. No. (v)	Dilute Hydrochloric Acid- approximately 5 N, Porcelain, silica or platinum dish, Meker burner, Muffle furnace at (550 ± 20°C), Weighing balance (LC- 1mg), Desiccator, Whatman filter paper No. 42 or its equivalent, Air-oven (135 ± 2°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
6	Castor husk, oil cake Cl 4.2, Table 1, Sl. No. (vi)	White Photographic Dish, Sodium Hydroxide Solution, Dilute Hydrochloric Acid, Bleaching Powder Solution
7	Mahua oilcake Cl 4.2, Table 1, Sl. No. (vii)	Extraction Tube (150 X 13 mm with a taper tip having an internal diameter 1.5 mm), Antimony Trichloride Solution, Rectified Spirit (95 percent)
8	Aflatoxin B ₁ Cl. 4.2, Table 1, Sl. No. (viii)	<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(PBPB), 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 list above is indicative only and may not be taken as exhaustive.

ANNEX-C
TO THE PRODUCT MANUAL FOR
COTTONSEED OILCAKE AS LIVESTOCK FEED INGREDIENT
ACCORDING TO IS 1712:2022
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 RECORD—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 Cottonseed Oilcake or printed on the label applied to it, as the case may be, provided always that the material in each bag, so marked conforms to each 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 1712:2022.

3.2 Marking – Each bag shall be legibly marked or labeled to give the information as per clause 5.2.1 of IS 1712:2022. In addition, the following details shall be mentioned on each bag legibly and indelibly:

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 this Scheme, the entire quantity of material manufactured with the same type and same grade of material, continuously in a day, 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 2.0 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

Sl. No.	(1)				(2)	(3)		
	Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Recommended Levels of Control		
	Cl.	Requirement	Test Method Cl. Ref.	Test Method IS		No. of Sample	Frequency	Remarks
1.	4.1	Description	4.1	IS 1712	R	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
2	4.2, Table 1, Sl. No. (i)	Moisture	4	7874 (Pt 1)	R	One	Each Control unit	
3	4.2, Table 1, Sl. No. (ii)	Crude protein	---	IS/ISO 5983 (Part 1) or IS 5983 (Part 2)	R	--do--	--do--	
4	4.2, Table 1, Sl. No. (iii)	Crude fat	---	IS/ISO 6492	R	--do--	--do--	
5	4.2, Table 1, Sl. No. (iv)	Crude fiber	---	IS/ISO 6865	R	-do-	-do-	
6	4.2, Table 1, Sl. No. (v)	Acid-insoluble ash	Annex A	IS 1712 or IS 14826	R	-do-	-do-	
7	4.2, Table 1, Sl. No. (vi)	Castor husk, Oil cake	11	IS 7874 (Pt 1)	R	-do-	-do-	
8	4.2, Table 1, Sl. No. (vii)	Mahua cake	12	IS 7874 (Pt 1)	R	-do-	-do-	
9	4.2, Table 1, Sl. No. (viii)	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 column3 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.