



उत्पाद मानुयल

मत्स्य आहार (भाग 2) कैटफिश आहार 16150 (Part 2) : 2014 के अनुसार

**PRODUCT MANUAL
FOR FISH FEED PART 2 CATFISH FEED AS PER IS 16150 (PART 2) : 2014**

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरण के प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेंस धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेंस/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 licence/certificate.

1.	उत्पाद Product	:	IS 16150 (Part 2) : 2014
	शीर्षक Title	:	मत्स्य आहार (भाग 2) कैटफिश आहार Fish Feed Part 2 Catfish Feed – Specification
	संशोधन संख्या No. of Amendments	:	0
2.	नमुनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	No testing required for raw materials however, the ingredients listed in Annex B of IS 16150 (Part 2) shall only be used for manufacturing catfish feed.
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	Not applicable each type requires separate testing due to its unique characteristics.
c)	नमूने का परिमाण Sample Size	:	1 kg (Aflatoxin B ₁ content may be tested only in factory samples and not in market samples)
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-A 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 :		
	a) Description		
	b) Moisture, percent by mass		

	c) Feed Form and Size d) Water Stability of Pellets e) Crude Protein	
6.	लाइसेन्स का कार्यक्षेत्र/ Scope of the Licence :	
	IS 16150 (Part 2) : 2014 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 16150 (Part 2) : 2014 with the following scope:	
	उत्पाद का नाम Name of the product	Fish Feed Part 2 Catfish Feed
	Type (s)	a) Catfish Larval Feed (CLF) and/ b) Catfish Fry Feed (CFF) and/ c) Catfish Grow-out Feed (CGF) and/ d) Catfish Brood Feed (CBF).

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

ANNEX – A
TO PRODUCT MANUAL FOR
FISH FEED PART 2 CATFISH FEED AS PER IS 16150 (PART 2) : 2014

LIST OF TEST EQUIPMENTS

Major test equipment required to test as per the Indian Standard

Sr. No.	Tests used in with Clause Reference	Test equipment
1.	Moisture Cl 4.2, Table 1	Analytical Balance of least count 0.0001g, Hot Air Oven of range at least from ambient to 250°C and least count of 1°C, Desiccator with moisture absorbent like silica gel, Aluminium dish with a cover, having a diameter of at least 50 mm and a depth of about 40 mm.
2.	Crude protein Cl 4.2, Table 1	Analytical Balance of least count 0.0001g, Source of Heat (Bunsen Burner, Spirit Lamp or Heating Mantle), Kjeldahl Flask or Kjeldahl assembly, Distillation Assembly (not required if Kjeldahl assembly is available), Potassium Sulphate or Anhydrous Sodium Sulphate, Copper Sulphate, Concentrated Sulphuric Acid, Sodium Hydroxide, Methyl Red Indicator, Boric Acid, Magnesium Oxide, Pumice stone.
3.	Crude fat Cl 4.2, Table 1	Analytical Balance of least count 0.0001g, Desiccator with moisture absorbent like silica gel, Source of Heat (Bunsen Burner, Spirit Lamp or Heating Mantle), Soxhlet or other suitable extractor, Thimble of Whatman Filter paper (commercially available thimbles may also be used), Petroleum Ether (40°C to 60°C boiling point), Hexane, Food Grade, Steam bath.
4.	Crude fibre Cl 4.2, Table 1	Analytical Balance of least count 0.0001g, Hot Air Oven of range at least from ambient to 250°C and least count of 1°C, Desiccator with moisture absorbent like silica gel, Source of Heat (Bunsen Burner, Spirit Lamp or Heating Mantle), Soxhlet or other suitable extractor, Thimble of Whatman Filter paper (commercially available thimbles may also be used), Reflux water condenser, Dilute sulphuric acid, Sodium Hydroxide solution, Petroleum Ether (40°C to 60°C boiling point), Hexane, Food Grade, Sodium hydroxide, Gooch crucible, Muffle furnace capable of maintaining 600±20°C.
5.	Acid Insoluble ash	Analytical Balance of least count 0.0001g, Hot Air Oven of range at least from ambient to 250°C and least

	Cl 4.2, Table 1	count of 1°C, Desiccator with moisture absorbent like silica gel, Concentrated Hydrochloric acid, Porcelain, silica or platinum dish, Muffle furnace (upto 750°C and LC 10°C), Electric oven capable of maintaining 135±2°C, Watch glass, Water bath, Whatman filter paper No. 42 or equivalent, Silver nitrate solution.
6.	Feed Form and Size (Cl 4.5.1)	Sieves - 100µm, Micrometer or Vernier Calliper (0 to 25mm, LC 0.1mm).
7.	Water Stability of Pellets (Cl 4.5.2)	Nylon Mesh, Sieve (2.4 mm), Analytical Balance of least count 0.1g, Glass Beaker (1 litre), Stop Watch, Distilled Water.

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

ANNEX – B
TO PRODUCT MANUAL FOR FISH FEED PART 2 CATFISH FEED
AS PER IS 16150 (PART 2) : 2014

SCHEME OF INSPECTION AND INSPECTION FOR

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 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 Schedule of the licence shall be suitably marked on each bag of Fish Feed, provided always that the material in each bag to which this mark is thus applied conforms to every requirement of the specification.

3.1 Packing - The material shall be packed in clean, dry and sound, plain or polyethylene-lined jute or laminated paper bags. The mouth of each bag shall be either machine stitched or rolled over and hand-stitched.

3.2 Marking - Each bag of Catfish feed shall be suitably marked so as to give the information mentioned under clause 5.2.1 of IS 16150 (Part 2), legibly and indelibly. In addition, the following details shall be mentioned on each bag of catfish feed 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”

In addition, each bag shall have a label or tag attached to it or contain a leaflet giving the information mentioned under clause 5.2.2 of IS 16150 (Part 2).

4. CONTROL UNIT – For the purpose of this scheme, the quantity of catfish feed of the same type manufactured 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 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. RAW MATERIAL - The ingredients listed in Annex B of IS 16150 (Part 2) shall only be used for manufacturing Catfish feed.

If antibiotics or other additives are incorporated in to the catfish feed, these shall be declared on the label. The use of any of the antibiotics and other Pharmacologically Active Substances mentioned under clause 4.3 of IS 16150 (Part 2) shall be prohibited in any unit manufacturing catfish feed.

7. REJECTION-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		
Clause	Requirements	Test Method Cl. Ref.	Test Method IS		No of Samples	Frequency	Remarks
4.1	Description	4.1	Visual examination and Sensory evaluation	R	One	Every hour	Composite sample for the hour and recorded separately
4.1.1	Ingredients	Annex B	IS 16150 (Part 2)	-	-	Every consignment	Records to be maintained indicating the test results, the quantity added, etc.
4.2, Table 1	i) Moisture	4	IS 7874 (Part 1)	R	One	Every Control Unit	Composite sample of three samples taken in equal intervals
	ii) Crude Protein	5	IS 7874 (Part 1)	R	One	Each Control Unit	
	iii) Crude fat	7	IS 7874 (Part 1)	R	One	Each Control Unit	
	iv) Crude Fibre	8	IS 7874 (Part 1)	R	One	Each Control Unit	
	v) Acid Insoluble Ash	10	IS 7874 (Part 1)	R	One	Each Seventh Control Unit	
	vi) Gross Energy	Annex C	IS 16150 (Part 2)	S	One	Once in a month	It is also to be tested whenever there is change of any raw material
4.4	Aflatoxin B1 content	--	IS 13427 or IS 14718	S	One	--do--	--do--

4.5.1	Feed Form and Size	4.5.1	IS 16150 (Part 2)	R	One	Every control unit	
4.5.2	Water Stability of Pellets	Annex D	IS 16150 (Part 2)	R	One	--do--	

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.