



उत्पाद मैनुअल

मत्स्य आहार (भाग 1 कार्प आहार )

16150: भाग 1: 2023 के अनुसार

**PRODUCT MANUAL FOR  
FISH FEED – SPECIFICATION PART 1 CARP FEED ACCORDING  
TO IS 16150 (PART 1): 2023**

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। दस्तावेज़ 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 (IS)<br>Product (IS)                 | : | IS 16150 (Part 1): 2023                                                                                                                                                                                                                                                                                                             |
|    | शीर्षक<br>Title                             | : | मत्स्य आहार भाग 1 कार्प आहार - विशिष्ट<br>Fish Feed : Part 1 Carp Feed – Specification                                                                                                                                                                                                                                              |
|    | संशोधनों की संख्या<br>No.of amendments      | : | Nil                                                                                                                                                                                                                                                                                                                                 |
| 2. | नमूना दिशानिर्देश<br>Sampling Guidelines    |   |                                                                                                                                                                                                                                                                                                                                     |
| a) | कच्चा माल<br>Raw material                   | : | No specific test for raw materials however, the ingredients listed in Annex B of IS 16150 (Part 1) shall only be used for manufacturing carp feed and no antibiotics or pharmacologically active substances shall be incorporated in Carp fish feed. (Manufacturers declaration may be obtained for compliance to this requirement) |
| b) | समूहीकरण दिशानिर्देश<br>Grouping Guidelines | : | Samples of each type shall be tested                                                                                                                                                                                                                                                                                                |
| c) | नमूने का आकार<br>Sample Size                | : | 1 kg (Aflatoxin B1 content may be tested only in factory samples and not in market samples)                                                                                                                                                                                                                                         |

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|----|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 3. | परीक्षण उपकरणों की सूची<br>List of Test Equipment                                                                            | :                                                                                                                                                                               | Please see Annex – A |
| 4. | निरीक्षण और परीक्षण की स्कीम<br>Scheme of Inspection and Testing                                                             | :                                                                                                                                                                               | Please see Annex – B |
| 5. | एक दिन में संभावित परीक्षण<br>Possible tests in a day                                                                        |                                                                                                                                                                                 |                      |
|    | a) Description<br>b) Moisture, percent by mass<br>c) Feed Form and Size<br>d) Water Stability of Pellets<br>e) Crude Protein |                                                                                                                                                                                 |                      |
| 6. | लाइसेंस का दायरा /Scope of the Licence:                                                                                      |                                                                                                                                                                                 |                      |
|    | “Licence is granted to use Standard Mark as per 16150 (Part 1): 2023 with the following scope:                               |                                                                                                                                                                                 |                      |
|    | Name of the product                                                                                                          | Fish Feed (Carp Feed)                                                                                                                                                           |                      |
|    | Types                                                                                                                        | a) Carp Larval Feed (CLF)<br>b) Carp Nursery Feed (CNF) —<br>c) Carp Starter Feed (CSF)<br>d) Carp Grower Feed (CGF)<br>e) Carp Finisher Feed (CFF)<br>f) Carp Brood Feed (CBF) |                      |

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## ANNEX – A

## 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.      | Feed Form and Size (CI4.2.1)                  | Sieves - 100µm, Micrometer or Vernier Calliper (0 to 25mm, LC 0.1mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.      | Water Stability of Pellets (CI 4.2.2)         | Oven, Nylon Mesh, Sieve (2.4 mm), Analytical Balance of least count 0.1g, Glass Beaker (1 litre), Stop Watch, Distilled Water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3.      | Moisture percent by mass CI 4.3, Table 1      | <p><b>Apparatus for determination of moisture percent as per IS/ISO 6496:1999</b></p> <ul style="list-style-type: none"> <li>Analytical Balance of least count 1 mg,</li> <li>Container, of non-corrodible metal or glass, provided with a sufficiently tight-fitting lid, and having a surface allowing the test portion to be spread to about 0.3 g/cm<sup>2</sup></li> <li>Electrically heated Oven, well ventilated, capable of being maintained at a temperature of 103 ±2°C</li> <li>Electrically heated vacuum oven, capable of being maintained at a temperature of 80 ±2°C, and capable of producing a pressure below 13 kPa,</li> <li>Desiccator, provided with an efficient desiccant.</li> <li>Sand, acid-washed.</li> </ul> <p>Or</p> <p><b>Apparatus for determination of moisture as per 4 of IS 7874 (Part 1):1975</b></p> <ul style="list-style-type: none"> <li>Analytical balance of least count 1 mg</li> <li>Aluminium dish with cover having a diameter of at least 50 mm and depth of 40 mm</li> <li>Air oven capable of being maintained at 135 ±2°C</li> <li>Dessicator</li> </ul> |
| 4.      | Crude protein Percent by mass CI 4.3, Table 1 | <p><b>Apparatus/reagents for determination of crude protein content using Kjeldahl method as per IS/ISO 5983 (Part 1)</b></p> <p>Usual laboratory apparatus including Kjeldahl assembly and analytical balance, digestion, distillation and titration apparatus</p> <p>Reagents: Potassium Sulphate, catalyst: Copper (II) oxide or Copper (II) sulphate pentahydrate, sulphuric acid, paraffin wax, saccharose, standard materials: acetanilide or tryptophan, sodium hydroxide solution, collecting liquid, sulphuric acid, boric acid, solutions for titration: sodium</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|  |  | <p>hydroxide, sulphuric acid, methyl red, methylene blue, ethanol, boiling aids such as granulated pumice stone, glass beads or carborundum chips.</p> <p>OR</p> <p><b>Apparatus/reagents for determination of crude protein content using Block digestion and steam distillation as per IS/ISO 5983 (Part 2)</b></p> <ul style="list-style-type: none"> <li>• Usual laboratory apparatus and, in particular, the following.</li> <li>• Analytical balance, capable of weighing to the nearest 0.1 mg, with a readability of 0.1 mg.</li> <li>• 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 <math>420\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}</math>.</li> <li>• Digestion tubes, of capacity 250 ml, suitable for use with the digestion block (6.2).</li> <li>• Exhaust manifold, suitable for use with the digestion tubes</li> <li>• centrifugal scrubber apparatus, filter pump or aspirator, constructed of acid-resistant material, for use with mains water supply.</li> <li>• Automatic pipettes (dispensers), capable of delivering portions of up to 25 ml,</li> <li>• Graduated measuring cylinders, capacity 50 ml.</li> <li>• Distillation unit, capable of steam distilling, manual or semi-automatic, suitable to accommodate the digestion tubes and the conical flasks or capable of steam distillation and autotitration.</li> <li>• Conical flasks, of capacity 250 ml.</li> <li>• Burette, capacity 25 ml or other suitable capacity, with at least a readability of 0,05 ml, ISO 385 class A. Alternatively, an automatic burette, ISO 8655-3, fulfilling the same requirements, may be used. Automatic titrator, with a pH meter calibrated in the range pH 4 to pH 7.</li> </ul> <p>Reagents</p> <p>Kjeldahl catalyst tablets, comprising 3,5 g of potassium sulfate and 0,4 g of copper(II) sulfate pentahydrate per tablet. (These tablets are commercially available. Other types of tablet may be used provided that: a) they contain a quantity of potassium sulfate such that 7 g of potassium sulfate and 0,8 g of copper(II) sulfate pentahydrate can be dispensed using an integral number of whole tablets; and b) they do not contain salts of toxic metals such as selenium or mercury), Sulfuric acid, Hydrogen peroxide solution, Antifoaming agent, Sodium hydroxide (NaOH)</p> |
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|    |                              | <p>solution, methyl red or bromocresol green, ethanol/methanol, Concentrated and dilute boric acid solution, Hydrochloric acid standard volumetric solution, Ammonium sulfate, Ammonium iron(II) sulfate, Standard materials: Tryptophan or Acetanilide, Sucrose</p> <p>OR</p> <p><b>Apparatus/reagents for determination of crude protein as per 5 of IS 7874 (Part 1)</b></p> <p>Apparatus: Kjeldahl flask (500 ml capacity), Distillation assembly</p> <p>Reagents: Potassium Sulphate or Anhydrous Sodium Sulphate, Copper Sulphate, Concentrated Sulphuric Acid, Sodium Hydroxide Solution, Standard Sodium Hydroxide Solution, Methyl Red, rectified spirit, Boric Acid, Magnesium Oxide - carbonate free, freshly ignited.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5. | Crude fat<br>CI 4.3, Table 1 | <p><b>Apparatus/reagents for determination of fat content as per IS/ISO 6492</b></p> <p>Apparatus: Usual laboratory apparatus and, in particular, the following.</p> <ul style="list-style-type: none"> <li>• Extraction thimbles, free from fats and oils, ether-washed.</li> <li>• Soxhlet-type extractor, with syphoning volume of about 100 ml, or other recirculation extractor.</li> <li>• Heating apparatus, with temperature control, not liable to act as an ignition source.</li> <li>• Drying oven, capable of being maintained at <math>(103 \pm 2)^{\circ}\text{C}</math></li> <li>• Electrically heated vacuum oven, capable of being maintained at <math>(80 \pm 2)^{\circ}\text{C}</math> and of reducing the pressure to</li> <li>• less than 13.3 kPa, fitted with a device for the introduction of dry air or containing a desiccant, for example calcium oxide.</li> <li>• Desiccator, containing an efficient desiccant.</li> </ul> <p>Reagents:</p> <ul style="list-style-type: none"> <li>• Water, complying with at least grade 3 in accordance with ISO 3696.</li> <li>• Sodium sulfate, anhydrous.</li> <li>• Light petroleum, consisting mainly of hydrocarbons with six carbon atoms, boiling range <math>400^{\circ}\text{C}</math> to <math>600^{\circ}\text{C}</math>. The bromine value shall be less than 1. The evaporation residue shall be less than 20 mg/l. alternatively, technical hexane maybe used having an evaporation residue of less than 20 mg/l.</li> </ul> |

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|    |                                | <ul style="list-style-type: none"> <li>• Silicon carbide chips or glass beads.</li> <li>• Acetone.</li> <li>• Hydrochloric acid</li> <li>• Filtration aid, for example diatomaceous earth (Kieselguhr), hydrochloric acid,</li> <li>• Drying oven</li> </ul> <p>OR</p> <p>Apparatus for determination of crude fat as per 7 of IS 7874 (Part 1)</p> <p>Apparatus:</p> <ul style="list-style-type: none"> <li>• Analytical balance</li> <li>• Tared aluminium dish with cover</li> <li>• Air oven capable of being maintained at <math>135 \pm 2^\circ\text{C}</math></li> <li>• Dessicator</li> <li>• Soxhlet or other suitable extractor</li> <li>• Steam bath</li> </ul> <p>Reagents:</p> <ul style="list-style-type: none"> <li>• Petroleum ether of boiling range 40 to <math>60^\circ\text{C}</math></li> <li>• Hexane, Food Grade conforming to IS 3470</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6. | Crude fibre<br>CI 4.3, Table 1 | <p>Usual laboratory apparatus and, in particular, the following.</p> <ul style="list-style-type: none"> <li>• Grinding device, capable of grinding the sample so that it passes completely through a sieve with 1 mm apertures.</li> <li>• Analytical balance, with accuracy of at least 0.1 mg.</li> <li>• Filter crucibles, of quartz, porcelain or hard glass, with fused sintered filter plate with a pore size of 40 to 100 <math>\mu\text{m}</math> (porosity grade P 100 according to ISO 4793:1980) or Stainless-steel crucibles with stainless-steel sieve plates with an aperture size of 90 <math>\mu\text{m}</math> of identical performance characteristics may be used as an alternative.</li> <li>• Porcelain sieve plates.</li> <li>• Incineration dishes.</li> <li>• Beakers or conical flasks, of 500 ml capacity, provided with a suitable cooling device, for example a condensor or a dish.</li> <li>• Drying oven, electrically heated and ventilated, capable of being maintained at a temperature of <math>(130 \pm 2)^\circ\text{C}</math>.</li> <li>• Desiccator, containing blue silica gel as desiccant, provided with perforated plate, preferably of aluminium or stainless steel, of thickness 2 mm to 3 mm.</li> <li>• Muffle furnace, electrically heated, provided with air circulation and temperature control capable of</li> </ul> |

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|    |                                       | <p>maintaining the temperature around the crucibles to the nearest 25 °C at temperatures of 475 °C to 525 °C.</p> <ul style="list-style-type: none"> <li>• Cold-extraction device, provided with <ul style="list-style-type: none"> <li>— a support for the filter crucible;</li> <li>— a discharge pipe with a tap to the vacuum and liquid outlet; and</li> <li>— connecting rings for connecting the filter crucible</li> </ul> </li> <li>• Heating device (for manual method), provided with a suitable cooling device capable of maintaining the volume constant during boiling.</li> <li>• Heating device (for the semi-automatic method) for acid and alkaline digestion, provided with <ul style="list-style-type: none"> <li>— a support for the filter crucible</li> <li>— a discharge pipe with a tap to the vacuum and liquid outlet;</li> <li>— a boiling cylinder of at least 270 ml capacity, with a reflux condenser;</li> <li>— connecting rings for connecting the heating device to the filter crucible and the boiling cylinder and</li> <li>— optionally, provision for compressed air.</li> </ul> </li> </ul>                                                                                                                                                               |
| 7. | Acid Insoluble ash<br>CI 4.3, Table 1 | <p><b>Apparatus/reagents for acid insoluble in hydrochloric acid as per procedure A of IS 14826:2021</b></p> <p>Usual laboratory apparatus and, in particular, the following.</p> <ul style="list-style-type: none"> <li>• Analytical balance, capable of weighing to the nearest 0.001 g.</li> <li>• Muffle furnace, electrically heated, thermostatically controlled, and provided with a pyrometer.</li> <li>• Drying oven, capable of being controlled at <math>(103 \pm 2)</math> °C.</li> <li>• Hot-plate or gas burner</li> <li>• Boiling water bath</li> <li>• Incineration dishes, of platinum or platinum-gold alloy (e.g. 10 % Pt, 90 % Au) or of other material unaffected by the conditions of the test, preferably rectangular, with a surface area of about 20 cm<sup>2</sup> and a height of about 2.5 cm.</li> <li>• For samples which are inclined to swell on carbonization, use dishes with a surface area of about 30 cm<sup>2</sup> and a</li> <li>• height of about 3 cm.</li> <li>• Desiccator, provided with an effective desiccant.</li> </ul> <p>Reagents: Dilute hydrochloric acid, Trichloroacetic acid solution, Trichloroacetic acid solution</p> <p>OR</p> <p><b>Apparatus/reagents for determination of acid insoluble ash as per 10 of IS 7874 (Part 1)</b></p> |

|    |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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|    |                                 | <p>Apparatus:</p> <ul style="list-style-type: none"> <li>Analytical balance</li> <li>Tared porcelain, silica or platinum dish</li> <li>Meker Burner</li> <li>Muffle furnace capable of being maintained at <math>550\pm 20^{\circ}\text{C}</math></li> <li>Electric Air Oven at <math>135\pm 2^{\circ}\text{C}</math></li> <li>Water bath</li> <li>Watch Glass</li> <li>Whatman filter paper</li> <li>Dessicator</li> </ul> <p>Reagents: Dilute Hydrochloric Acid</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 8. | Gross Energy (cl. 4.3, Table 1) | <p>Adiabatic Bomb Calorimeter, Pellet Press, Metallic Crucible Hot Air Oven, Balance (LC-0.01g), Fuse Wire, Cotton Thread, Beaker, Burette, Pipette, Whatman Filter Paper No. 1, Benzoic Acid (Calorimeter Grade, Gross Energy Content 6318 cal/g), Distilled Water, Oxygen Gas, Barium Hydroxide, Sodium Carbonate, Hydrochloric Acid, Methyl Red Indicator, Phenolphthalein Indicator</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 9. | Aflatoxin B1                    | <p><b>Apparatus/reagents for determination of Aflatoxin B1 as per IS 18143 : 2023/ISO 17375 : 2006</b></p> <p>High-performance liquid chromatograph (HPLC) as well as Usual laboratory apparatus and, in particular, the following.</p> <ul style="list-style-type: none"> <li>Vertical or horizontal shaker, adjustable.</li> <li>Filter paper, of diameter 24 cm, prefolded (e.g. cellulose for fine precipitates).</li> <li>Erlenmeyer flask, with screw top or glass stopper.</li> <li>Glass microfibre filter paper, of diameter 5 cm (e.g. 1,6 <math>\mu\text{m}</math> retention).</li> <li>Reservoir, 75 ml with Luer tip connector for IAC.</li> <li>Hand pump, 20 ml syringe with Luer lock or rubber stopper for IAC.</li> <li>Volumetric flasks, of 5 ml, 10 ml and 20 ml capacity, with an accuracy of at least 0.5 %</li> </ul> <p>Reagents: Immunoaffinity column (IAC) containing antibodies specific to aflatoxin B 1, Water (complying with grade 3 in accordance with ISO 3696:1987), Phosphate buffer saline (PBS), pH 7.4, Pyridinium hydrobromide perbromide, Potassium bromide, HPLC-grade acetonitrile, HPLC-grade methanol, Acetone, HPLC grade water, HPLC mobile phase solvent A, HPLC mobile phase solvent B, Post-column reagent, Toluene/acetonitrile, Aflatoxin B 1 standard material, Calibration stock solutions for HPLC</p> <p>OR</p> |

|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|  |  | <p><b>Apparatus/reagents for determination of aflatoxin B1 content of mixed feeding stuffs - Method using high-performance liquid chromatography as per IS 14718</b></p> <p>High-performance liquid chromatograph (HPLC) as well as Usual laboratory apparatus and, in particular, the following.</p> <ul style="list-style-type: none"> <li>• Solvent filtration system, suitable for PTFE membrane filters with a pore size of 0.45 µm.</li> <li>• Ultrasonic bath.</li> <li>• Microsyringe, of capacity 100 µl for preparation of calibration solutions,</li> <li>• Glass-stoppered calibrated tubes, of capacity 10 ml</li> <li>• Spectrometer, suitable for measurements in the UV region of the spectrum, provided with quartz cuvettes of optical path length 10 mm ± 0.1 mm.</li> <li>• Conical flask, of capacity 500 ml, made of borosilicate glass, with a wide neck and a glass stopper or a screw cap fitted with a PTFE liner.</li> <li>• Mechanical shaker, horizontal rotation or reciprocating, with frequency 250 rein-l to 300 rein-l.</li> <li>• Fluted filter paper, of diameter 24 cm,</li> <li>• Luer® chloroform-resistant threeway stopcock,</li> <li>• Chemically resistant syringe, 10 ml, with Luer® connector</li> <li>• Glass column, with internal diameter 10 mm to 15 mm, length about 30 cm to 50 cm, equipped with a Luer® tip</li> <li>• Rotary vacuum evaporator, equipped with a 150 ml to 250 ml round-bottomed flask</li> </ul> <p>Reagents: Water, demineralized or deionized, with resistivity of at least 10 Mµcm, or water of at least equivalent purity, Concentrated sulfuric acid, control sample of about 2 kg of compound feed with an aflatoxin B1 content of about 5 µg/kg, Acid-washed Celite® 545, or product of equivalent quality, Florisil® Sep-Pak style cartridge, Waters No. 51960, or product of equivalent quality, C<sub>18</sub> Sep-Pak style cartridge, Waters No. 51910, or product of equivalent quality, Acetone, Methanol, Acetonitrile, Chloroform, Concentrated nitric acid, Potassium bromide, source of inert gas, Sodium hypochlorite solution (household quality), Aflatoxin B1 standard material</p> |
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**Note 1 - For routine analysis, Crude Protein, Crude fat, Crude fibre and Acid insoluble Ash may be tested by near infrared-analyzer.**

**Note 2 - The above list is indicative only and may not be treated as exhaustive**

**ANNEX – B****SCHEME OF INSPECTION AND INSPECTION**

**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 Carp 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 and Marking shall be done as per the Indian Standard. In addition, the following details shall be mentioned on each bag of carp 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](http://www.bis.gov.in)”

In addition, each bag of carp feed 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 1).

**4. CONTROL UNIT** – For the purpose of this scheme, the entire quantity of carp 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 Standard and covered by the licence should be marked with Standard Mark.

**6. 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                                                                                                                                                                                                                     |                    |                                                                                |
| Cl.          | Requirements               | Test Method Cl. ref. | Test Method IS                            |                                                                          | No of Samples                                                                                                                                                                                                                         | Frequency          | Remarks                                                                        |
| 4.1          | Description                | 4.1                  | Visual examination and Sensory evaluation | R                                                                        | Firm to have adequate in-process controls to check compliance of this parameter as per the requirements given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity |                    |                                                                                |
| 4.1.1        | Ingredients                | Annex B              | IS 16150 (Part 1)                         | -                                                                        | -                                                                                                                                                                                                                                     | Every consignment  | Records to be maintained indicating the test results, the quantity added, etc. |
| 4.2.1        | Feed Form and Size         | 4.2.1                | IS 16150 (Part 1)                         |                                                                          | Firm to have adequate in-process controls to check compliance of this parameter as per the requirements given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity |                    |                                                                                |
| 4.2.2        | Water Stability of Pellets | Annex C              | IS 16150 (Part 1)                         | R                                                                        | One                                                                                                                                                                                                                                   | Every Control Unit |                                                                                |

|                |                                  |         |                                                                       |   |                                                                                                                                                                                                                                      |                           |                                                                      |
|----------------|----------------------------------|---------|-----------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------|
| 4.3<br>Table 1 | i) Moisture                      | -       | Cl. 4 of IS 7874(Part 1) or IS/ISO 6496                               | R | One                                                                                                                                                                                                                                  | Every Control Unit        | Composite sample of three samples taken at equal intervals           |
|                | ii) Crude Protein                | -       | Cl. 5 of IS 7874 (Part 1) or IS/ISO 5983:Part 1 or IS/ISO 5983:Part 2 | R | One                                                                                                                                                                                                                                  | Each Control Unit         |                                                                      |
|                | iii) Crude fat                   | -       | Cl. 7 of IS 7874 (Part 1) or IS/ISO 6492                              | R | One                                                                                                                                                                                                                                  | Each Control Unit         |                                                                      |
|                | iv) Crude Fibre                  | -       | IS/ISO 6865                                                           | R | One                                                                                                                                                                                                                                  | Each Control Unit         |                                                                      |
|                | v) Acid Insoluble Ash            | -       | Cl. 10 of IS 7874 (Part 1) or IS 14826                                | R | One                                                                                                                                                                                                                                  | Each seventh control unit | -                                                                    |
|                | vi) Gross Energy                 | Annex D | IS 16150 (Part 1)                                                     | S | One                                                                                                                                                                                                                                  | Once in a month           | It is also to be tested whenever there is change of any raw material |
| 4.4            | Antibiotics and additives        | 4.4     | IS 16150 (Part 1)                                                     | R | Firm to have adequate in-process controls to check compliance of this parameter as per the requirement given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity |                           |                                                                      |
| 4.5            | Aflatoxin B <sub>1</sub> content | -       | IS 18143* or IS 14718 (*IS 14826 is withdrawn)                        | S | One                                                                                                                                                                                                                                  | Once in a month           | It is also to be tested whenever there is change of any raw material |

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.