



उत्पाद मैनुअल

MALTED MILK FOODS- SPECIFICATION 1806 : 2018 के अनुसार

Product Manual For Malted Milk Foods- Specification According to IS 1806 : 2018

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता 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 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 uniformity 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.

1.	मानक संख्या IS No.	:	IS 1806: 2018
	शीर्षक Title	:	Malted Milk Foods- Specification
	संशोधनों की संख्या No. of amendments	:	01
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	NA. Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence/Factory Surveillance.
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	None
c)	नमूने का परिमाण Sample Quantity	:	2 X 500 g. Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (in case of market surveillance, effort may be made to procure the required quantity of product sample, as far as possible since raw material sample may not be available in market)

d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request		Type Note: Apart from the above, any other requirements/parameters may also be declared as per the standard, as applicable.
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer ANNEX – <u>A</u>
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – <u>B</u>
5.	Possible tests in a day :		
	(i) Description (ii) Total Fat (iii) Solubility (iv) Moisture (v) Total Protein (vi) Total Ash. (vii) Test for Starch Note: This section is for the guidance of BIS Certification Officers/Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide readyreference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	लाइसेंस का दायरा /Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 1806: 2018 with the following scope:		
	Name of the product	Malted Milk Foods	
	Type	Type I (Without Cocoa Powder) Type II (With Cocoa Powder)	

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ANNEX A

List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Moisture, percent by weight [Cl. 4.3, Table 1, Sl no (i)]	Flat Bottom Moisture Dish with cover, Vacuum Oven, Weighing Balance (with LC 0.1 mg), Desiccator.
2	Total protein ($N \times 6.25$) (on dry basis), percent by weight [Cl. 4.3, Table 1, Sl no (ii)]	Kjeldahl Flasks (500-800 ml capacity), Heating Device (Gas/Electric), Boiling Chips/Glass Beads, Distillation Flask with rubber Stopper, 500 ml Erlenmeyer Flask, Concentrated Sulphuric Acid, Mercuric Oxide/ Metallic Mercury, Potassium Sulphate/ Anhydrous Sodium Sulphate, Zinc Granules, Sulphite/Thiosulphate Solution, Sodium Hydroxide Pellets, HCl/H ₂ SO ₄ Standard Solution- 0.1 N or 0.5 N, NaOH Standard Solution- 0.1 N, Methyl Red Indicator, Weighing Balance.
3	Total fat (on dry basis), percent by weight [Cl. 4.3, Table 1, Sl no (iii)]	Ammonia solution, containing a mass fraction of NH ₃ of approximately 25 %, Ethanol (C ₂ H ₅ OH), or ethanol denatured by methanol, containing a volume fraction of ethanol of at least 94%, Indicator solution (optional), Bromocresol purple solution, Patent blue V, Diethyl ether, free from peroxides, Light petroleum, with any boiling range between 30 °C and 60 °C, Analytical balance (capable of weighing to the nearest 1 mg, with a readability of 0.1 mg), Centrifuge (capable to produce a radial acceleration of around 80g to 90g at the outer end of the flasks or tubes), Distillation or evaporation apparatus, Drying oven (electrically heated, with ventilation port(s) fully open, capable of being maintained at a temperature of 102 °C ± 2 °C throughout its working space. The oven shall be fitted with a suitable thermometer.), Water bath (capable of being maintained at a temperature of 37,5 °C ± 2,5 °C, 50 °C ± 5 °C, 65 °C ± 5 °C and at boiling point), Fat-extraction flasks: ○ Mojonner-type fat-extraction flasks ○ Extraction tubes-type fat extraction flask ○ Stoppers

		Rack, Wash bottle, Fat-collecting vessels, Measuring cylinders or delivering systems, Pipettes or delivering systems, Tongs, Blender, Boiling aids
4	Total ash (on dry basis), percent by weight [Cl. 4.3, Table 1, Sl no (iv)]	Flat- Bottom Dish, Muffle Furnace, Drying Oven, Desiccator, Weighing Balance.
5	Acid insoluble ash (on dry basis) (in dilute HCl), percent by weight [Cl. 4.3, Table 1, Sl no (v)]	Dilute Hydrochloric Acid- 5N, Water-Bath, Whatman filter paper No. 42, Other Requirements same as Total Ash.
6	Solubility, percent by weight [Cl. 4.3, Table 1, Sl no (vi)]	Silicone anti-foaming agent, Thermometers- Capable of measuring a temperature of 24°C/ 50°C, Water- Bath, Mixing Jar- 500 ml, Electric Mixer, Measuring Cylinder- 100 ml, Balance (with LC- 0.01 g), Scoop, Brush, Spoon Spatula, Centrifuge Tubes, Centrifuge, Stop-watch, Siphon Fitting/ Suction Tube attached to Water Pump, Stirring Rod, Magnifying Lens.
7	Test for starch [Cl. 4.3, Table 1, Sl no (viii)]	0.1 % Iodine solution in Potassium Iodide
8	Bacterial Count, per gram, [Cl. 4.3, Table 1, Sl no (ix)]	Plate Count Agar (PCA), Overlay Medium, Oven, Autoclave, Incubator (Capable of operating at 30°C ± 1°C), Petri Dishes (90 mm to 100 mm in diameter), Pipettes of nominal capacity 1 ml, Water bath (Capable of operating at 44°C to 47°C), Colony-counting equipment, pH-meter, Test tubes, flasks or bottles.

9	Coliform Count, per gram, [Cl. 4.3, Table 1, Sl no (x)]	Crystal Violet Neutral Red Bile Lactose (VRBL) Agar, Brilliant Green Lactose Bile Broth (Confirmatory Media), Durham Tubes, Loop, Other requirements same as Bacterial Count.
10	<i>E. coli</i> , per 0.1 g [Cl. 4.3, Table 1, Sl no (xi)]	Diluent, Lauryl sulfate broth, EC broth, Peptone water (indole free), Indole reagent (Kovacs' reagent), Apparatus for dry sterilization (oven) or wet sterilization (autoclave), Incubator (capable of operating at 37 °C ± 1 °C and 44 °C ± 1 °C), Water bath (capable of being maintained at 44 °C ± 1 °C), Test tubes, of dimensions approximately 16 mm × 160 mm and 18 mm × 180 mm or 20 mm × 200 mm, Sampling loops, made of platinum/iridium or nickel/chromium, approximately 3 mm in diameter, or approximately 10 µl sterile disposable sampling loops, Durham tubes, Total-delivery pipettes, having nominal capacities of 1 ml and 10 ml, pH-meter, Microscope, Refrigerator
11	Yeast and mould count, per 0.1 g [Cl. 4.3, Table 1, Sl no (xii)]	Diluent (0.1 % (mass concentration) peptone water broth), Culture medium (Dichloran 18 % (mass concentration) glycerol agar (DG18)), Incubator (capable of operating at 25°C±1°C), Total delivery pipettes, Water bath (capable of operating at 44 °C to 47 °C), pH meter, Bottles, flasks and tubes, Petri dishes (sterile, in glass or plastic, with a diameter 90 mm to 100 mm), Microscope (magnification 250 to 1000 times)), Spreaders (made of glass or plastic of diameter less than 2 mm and length 80 mm), Binocular magnifier

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

Note 1- The list does not cover the following requirements, as these parameters are got to be tested from outside BIS approved lab;

- i) *Salmonella*,
- ii) *Shigella*,
- iii) *Vibrio cholerae* and *V. parahaemolyticus*,
- iv) *Faecal streptococci* and *Staphylococcus aureus*.

ANNEX B

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 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 the Schedule of the licence shall be incorporated legibly and indelibly on each container of Malted Milk Foods, provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and marking shall be done as per the provision of the Indian Standard. In addition, the following details shall be mentioned on each container 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 quantity of each type of Malted Milk Foods manufactured during 24 hours under similar conditions of manufacturing, 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. HYGIENIC CONDITIONS– The factory should be maintained in a clean and hygienic condition as given in IS 2491. All the processing equipment should be properly cleaned and care should be taken to prevent infestation.

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	Malted Milk Foods without cocoa powder	4.1	IS 1806, IS 15347	R	One	Every four hours	
4.2	Malted milk foods with cocoa powder	4.2	IS 1806	R	-do-	-do-	
4.3, Table 1, Sl no (i)	Moisture, percent by weight	Annex A	IS 1806	R	One	Every eight hours	If the samples fails in any of these parameters, the material be reprocessed till it conforms to ISS. Subsequently each control units shall be tested for these characteristics and when all such seven successive control unit conform to the ISS, the original frequency restored. Appropriate records to be maintained.
4.3, Table 1, Sl no (ii)	Total protein ($N \times 6.25$) (on dry basis), percent by weight	-	IS 7219	R	Two	Each control unit	
4.3, Table 1, Sl no (iii)	Total fat (on dry basis), percent by weight	-	IS 19396	R	-do-	-do-	
4.3, Table 1, Sl no (iv)	Total ash (on dry basis), percent by weight	Annex B	IS 14433	R	-do-	-do-	
4.3, Table 1, Sl no (v)	Acid insoluble ash (on dry basis) (in dilute HCl), percent by weight	Annex C	IS 14433	R	-do-	-do-	
4.3, Table 1, Sl no (vi)	Solubility, percent by weight	-	IS 12759	R	-do-	-do-	

4.3, Table 1, Sl no (vii)	Cocoa powder (on dry basis), percent by weight	-	See Note 1 under Table 1	R	-do-	-do-	
4.3, Table 1, Sl no (viii)	Test for starch	Annex B	IS 1806	R	-do-	-do-	
4.3, Table 1, Sl no (ix)	Bacterial count, per gram,	-	IS 5402 (Part 1)	R	One	Each control unit	
4.3, Table 1, Sl no (x)	Coliform count, per gram,	-	IS 5401 (Part 1)	R	-do-	-do-	
4.3, Table 1, Sl no (xi)	<i>E. coli</i> , per 0.1 g	-	IS 16424	R	-do-	-do-	
4.3, Table 1, Sl no (xii)	Yeast and mould count, per 0.1 g	-	IS 16069 (Part 2)	R	-do-	-do-	
4.3, Table 1, Sl no (xiii)	<i>Salmonella</i> , per 0.1 g	-	IS 5887 (Part 3/Sec 1)	S	One	Once in a month	
4.3, Table 1, Sl no (xiv)	<i>Shigella</i> , per 0.1 g	-	IS 16429	S	-do-	-do-	
4.3, Table 1, Sl no (xv)	<i>Vibrio cholerae</i> and <i>V. parahaemolyticus</i> , per 0.1 g	-	IS 5887 (Part 5/Sec 1)	S	-do-	-do-	
4.3, Table 1, Sl no (xvi)	<i>Faecal streptococci</i> and <i>Staphylococcus aureus</i> , per 0.1 g	-	IS 5887 (Part 8/Sec 1* or Sec 2)	S	-do-	-do-	See Note 4 under Table 1

Note-1: As there is no suitable and easily workable method for determining cocoa powder content, the manufacturers would be required to maintain a record showing the quantity of cocoa powder added to each control unit of malted milk foods with cocoa powder (Type II).

Note-2: 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-3: 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.

Note-4: In case of dispute, the method indicated by ‘*’ shall be the referee method.