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उत्पाद मैनुअल

शहद - विशिष्ट

IS 4941:1994 के अनुसार

**PRODUCT MANUAL
FOR Extracted Honey - Specification
ACCORDING TO IS 4941:1994**

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 4941:1994
	शीर्षक Title	:	Extracted Honey - Specification
	संशोधनों की संख्या No. of amendments	:	1
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Honey shall not contain any food additives such as colour, vitamins, minerals and saccharin (Cl. 5.4). Manufacturer shall submit an undertaking stating that no food additives have been used in production of honey.
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Each grade to be tested to cover in the scope of licence

c)	नमूने का परिमाण Sample Quantity	:	250 gm 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 (incase of market surveillance, effort may be made to procure therequired quantity of product sample, as far as possible since raw material sample may not be available in market)
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer to Annex-A
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to Annex-B
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	All tests except the Sucrose percentage by Mass 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 ready reference 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 4941:1994 with the following scope:		
	Name of the product	Extracted Honey	
	Grades	Special/Grade A/Standard	

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN,9, BAHADUR SHAH ZAFAR MARG,
NEW DELHI-110002

ANNEX – A

LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests Used In With Clause Reference	Test Equipment/Chemical
1	General Characteristics, Cl. 5.1	Double layer cheese cloth (150 microns) Conditioning chamber capable of being maintained at 70°C
2	Specific Gravity at 25°C, Cl. 5.5	Thermostatically Controlled Water-Bath Specific Gravity Bottle Weighing machine 0.1 mg LC Distilled water Air conditioner
3	Moisture, Cl. 5.5	Oven Drying Method Flat Bottom Dish Sand 500 micron IS Sieve, 180 micron IS Sieve Hydrochloric Acid Vacuum Oven capable of being maintained at 60-70°C and pressure of 50 mm of mercury equipped with temperature indicator and Mercury Pressure gauge Relative humidity indicator Heater Stirrer Desiccator Weighing machine Glassware Water bath Analytical Balance Or Refractometer Method Refractometer Thermometer (Temperature indicator)
4	Total reducing sugar, Cl. 5.5	Soxhlet Modification of Fehling's solution: 1. Copper sulfate solution/crystals 2. Distilled water 3. Weighing machine 4. Glass wool/filter paper 5. Setup for filtration 6. Pipettes (0.1 ml accuracy atleast 5 ml capacity) 7. Conical flask (250 ml) 8. Bunsen burner 9. Cylinder 10. Standard invert sugar solution 11. Burette 12. Methylene blue

		13. Stop watch Potassium sodium tartrate (salutation/crystals) Sodium Hydroxide Distilled water Standards invert sugar or (Sucrose, distilled water, Hydrochloric acid, sodium carbonate, methylene blue indicator, weighing machine Volumetric flask, 250 ml Pipette, burette, porcelain dish Bunsen burner, cylinder Asbestos gauze
5	Sucrose, Cl. 5.5	Hydrochloric acid Heater Sodium carbonate
6	Fructose-glucose ratio, Cl. 5.5	Iodine solution Sodium hydroxide solution Sulphuric acid solution Standards sodium thiosulphate solution 250 ml stoppered flask Weighing machine
7	Ash, Cl. 5.5	Silica or platinum crucible Olive oil Burner Muffle furnace Desiccator Weighing machine
8	Acidity, Cl. 5.5	Sodium hydroxide solution 0.05 N Phenolphthalein indicator Ethyl alcohol Titration set up 100 ml flask Weighing machine
9	Fiehe's test, Cl. 5.5	Porcelain crucible Mortar and pestle Diethyl ether – sulphuric ether Resorcinol solution Hydrochloric acid
10	Hydroxymethyl furfural, Cl. 5.5	Barbituric acid p-Toluidine Solution 100 ml volumetric flask Hot water bath Isopropanol Glacial acetic acid Distilled water Nitrogen gas Spectrophotometer to read at 550 nm Hydroxymethyl furfural hehyde (HMF) standard solution of hydroxymethyl furfural dehyde (HMF) standardized by dissolving commercial or laboratory prepared HMF spectrophotometrically where E = 16.830, at 284 nm using 0.300 0 micro gram standards.

11	Total count of pollens and plant elements/g of honey, Cl. 5.5	Weighing machine 1 mg LC Beakers with stoppers 100 ml Distilled water Centrifuge 0.5% alcohol basic fuchsin solution Haemocytometer
12	Optical density, Cl. 5.5	Weighing machine Distilled water 10 ml measuring cylinder Colorimeter Cuvets Standard samples for calibration of colorimeter

ANNEX B

SCHEME OF INSPECTION AND TESTING

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: Entire quantity of honey of the same grade extracted at one time using the same extractor shall constitute a control unit.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as “R” or other tests which can be subcontracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each container 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 Indian Standard.

3.2 **Additional Marking requirements:** The material shall also be marked with the following additional requirement on each container

a) “For BIS certification details please visit www.bis.gov.in”

4. HYGIENIC CONDITIONS – Honey shall be produced and packed under hygienic conditions.

5. REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. 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
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or)S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test MethodsClause Reference			No. of Sample	Frequency	Remarks
5.1	General Characteristics	5.1		R	Manufacturer shall put in place adequate inspections and in-process controls to ensure that material conforms to the requirements of the standard		
5.2	Freedom from foreign matter	5.2		R	Manufacturer shall put in place adequate inspections and in-process controls to ensure that material conforms to the requirements of the standard		
5.3	Colour	5.3		R	Manufacturer shall put in place adequate inspections and in-process controls to ensure that material conforms to the requirements of the standard		
5.4	Freedom from additives	5.4		R	Manufacturer shall put in place adequate inspections and in-process controls to ensure that no additives are used in production		
5.5 Table 1	Requirements for extracted honey						
i.	Specific Gravity at 25°C		Annex A	R	One	Each control unit	
ii.	Moisture		Annex B	R	One	Each control unit	
iii.	Total reducing sugar		Annex C	R	One	Each control unit	
iv.	Sucrose		Annex C	R	One	Each control unit	

v.	Fructose-glucose ratio		Annex C	R	One	Each control unit	
vi.	Ash		Annex D	R	One	Each control unit	
vii.	Acidity		Annex E	R	One	Each control unit	
viii.	Fiehe's test		Annex F	R	One	Each control unit	
ix.	Hydroxymethyl furfural		Annex F	R	One	Each control unit	This test should be carried out when Fiehe's test is positive
x.	Total count of pollens and plant elements/g of honey		Annex G	R	One	Each control unit	
xi.	Optical density		Annex H	R	One	Each control unit	