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उत्पाद मानुषल
चक्का और श्रीखंड – विशिष्टि
IS 9532:2023 के अनुसार

**PRODUCT MANUAL FOR
CHAKKA AND SHRIKHAND - SPECIFICATION
ACCORDING TO IS 9532: 2023**

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 9532: 2023
	शीर्षक Title	:	Chakka and Shrikhand - Specification
	संशोधनों की संख्या No. of amendments	:	01
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	a) Manufacturer to submit declaration/ undertaking for the raw materials, in compliance to Clause 5.1 of IS 9532:2023. However, for Potable water, manufacturer to maintain test reports conforming to IS 10500(for Potable water). b) In case the manufacturer opts for addition of any Permitted Ingredients as per provisions of Cl. 5.2 of IS 9532:2023, undertakings/declaration in compliance to clause 5.2(a), (c), (d) and (e) of IS 9532:2023 to be submitted. However, for addition of Sugar (<i>in case of Shrikhand</i>), manufacturer to maintain test reports conforming to IS

		5982. c) In case, the manufacturer opts for addition of any Food Additives, it is required to submit declaration/undertaking in compliance to Cl. 5.3 of IS 9532:2023. d) Manufacturer to maintain test reports as per IS 1479(Part-1) for the milk used for preparation of Chakka, in compliance to Clause 6.1.1 of IS 9532:2023 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	: कृपया Annex-A देखें Please refer ANNEX <u>A</u>
c)	नमूने का परिमाण Sample Quantity	: 2 × 500 g in original packaging 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)
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	: Type
3.	परीक्षण उपकरणों की सूची List of Test Equipment	: कृपया Annex-B देखें Please refer ANNEX – B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	: कृपया Annex-C देखें Please refer ANNEX – C
5.	एक दिन में संभावित परीक्षण Possible tests in a day	
	i. Appearance and colour ii. Odour and Flavour iii. Texture and Consistency iv. Total Solids v. Milk fat (on dry basis) vi. Milk protein (on dry basis) vii. Titratable acidity viii. Sugar (Sucrose) (<i>only for Shrikhand</i>) vii. Total ash 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.	लाइसेन्स का कायिक्षेत्र / Scope of the Licence:	

	Licence is granted to use Standard Mark as per IS 9532: 2023 with the following scope:		
	उत्पाद का नाम Name of the product	Chakka / Shrikhand (as applicable)	
	Types	Chakka	Shrikhand
		a) Skimmed Milk Chakka, and/or b) Chakka, and/or c) Full cream Chakka	a) Shrikhand, and/or b) Full cream Shrikhand, and/or c) Fruit Shrikhand.

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ANNEX A
TO PRODUCT MANUAL FOR
CHAKKA AND SHRIKHAND - SPECIFICATION
ACCORDING TO IS 9532: 2023

GROUPING GUIDELINES

1. Chakka has been classified into following 3 types (clause 4.1):

(i)	Skimmed Milk Chakka
(ii)	Chakka
(iii)	Full cream Chakka

2. Shrikhand has been classified into following 3 types (clause 4.2):

(i)	Shrikhand
(ii)	Full cream Shrikhand
(iii)	Fruit Shrikhand

3. The manufacturer shall declare the type of Chakka and/or Shrikhand, they intend to cover in the scope of licence.
4. The sample of each type of Chakka and Shrikhand to be drawn and shall be subjected to testing, for considering grant of licence/inclusion of that type.
5. It shall be ensured that the firm is having all the necessary manufacturing and testing facilities for the manufacture and testing of the types to be included in the licence.
6. During the operation of licence, BO shall ensure that all the types of Chakka and/or Shrikhand, covered in the license are drawn for independent testing on rotation over a period of time.

ANNEX - B
LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with Clause Reference	Test Equipment/Chemical
1.	Total solids; Cl. 6.1.6, Table 1 and Cl. 6.2.6, Table 3	Flat-Bottomed Dishes of appropriate material (stainless steel, nickel or aluminum), Quartz sand or sea sand - which passes through 500-micron IS Sieve and is retained by 180-micron IS Sieve, Well-Ventilated Oven (capable of being maintained at 102 ± 1 -degree C), Analytical balance (0-200 grams/0.1 mg), Desiccator, Boiling water bath, Water bath capable of being controlled at 30° to 40° C. Short Glass Stirring rods, Hydrochloric acid, Distilled water
2.	Milk fat (on dry basis) Cl. 6.1.6, Table 1 and Cl. 6.2.6, Table 3	Analytical balance (capable of weighing to the nearest 1 mg, with a readability of 0,1 mg), Centrifuge (capable of spinning at a rotational frequency of 500 min ⁻¹ to 600 min ⁻¹), Distillation or evaporation apparatus, drying oven (electrically heated, with ventilation port(s) fully open, capable of being maintained at a temperature of $102 \text{ }^{\circ}\text{C} \pm 2 \text{ }^{\circ}\text{C}$), water bath (capable of being maintained at a temperature of between 30 °C and 40°C, and 40 °C and 60 °C), Mojonnier-type fat- extraction flasks, rack, wash bottle, Fat-collecting vessels (such as boiling flasks (flat-bottomed), of capacities 125 ml to 250 ml, conical flasks, of capacity 250 ml, or metal dishes), boiling aids, measuring cylinders, pipettes, tongs, 100 ml one-mark volumetric flask, Ammonia solution, Ethanol or ethanol denatured by methanol, Congo red solution, Diethyl ether (free from peroxides), Light petroleum, (with any boiling range between 30 °C and 60 °C) or as equivalent pentane (with a boiling point of 36 °C), mixed solvent (equal volumes of diethyl ether and light petroleum).
3.	Milk protein (on dry basis): Cl. 6.1.6, Table 1 and Cl. 6.2.6, Table 3	Potassium sulfate (K ₂ SO ₄) nitrogen free, Copper (II) sulfate pentahydrate solution, Sulfuric acid (H ₂ SO ₄), Sodium hydroxide (NaOH) solution, methyl red, ethanol, bromocresol green, Boric acid solution, Hydrochloric acid, Ammonium sulfate, Tryptophan or lysine hydrochloride, Water Bath, Analytical balance, Burette or automatic pipette, Graduated measuring cylinders, Digestion flasks (Kjeldahl), of 500 ml or 800 ml capacities, Boiling aids, e.g. hard pieces of porcelain or high-purity amphoteric alundum (i.e. carbarundum) granules, Digestion apparatus, Distillation apparatus, Digestion block and Digestion tubes, Exhaust manifold, Centrifugal scrubber apparatus or filter pump or aspirator, Distillation unit, Automatic titrator provided with a pH meter, Filter paper, Illuminated magnetic stirrer plate
4.	Titratable acidity; Cl. 6.1.6, Table 1 and Cl. 6.2.6, Table 3	White Porcelain Basin (hemispherical, 60 ml capacity), Pipette (10 ml), Burette with soda-lime guard-tubes, Weighing balance (0-200 grams/0.1 mg), Sodium Hydroxide solution - approximately 0.1 N, Phenolphthalein indicator solution, Rosaniline Acetate Solution

5.	Sugar; Cl. 6.2.6 & Table 3	Routine method (Polarimetric method) Analytical balance (capable of weighing to the nearest 0.01 g), Glass beaker-100ml, Volumetric flasks- 50 ml and 200 ml, graduated pipettes of varying capacities, graduated measuring cylinders-25 ml, filter funnel (of diameter 8 cm to 10 cm, and folded medium-grade), filter paper (of diameter 15 cm), polarimeter tube (exactly 2 dm long), Polarimeter or saccharimeter, Thermostatic water baths, Zinc acetate solution, Potassium hexacyanoferrate(II) solution, Dilute hydrochloric acid, Ammonium hydroxide solution, Dilute acetic acid, Reference method [Volumetric (Lane-Eynon) method]: Sodium hydroxide solution -0.1 N, Sucrose, watch glass, Volumetric flask-1 litre, concentrated Hydrochloric acid, litmus paper, methylene blue indicator solution, copper sulphate, concentrated sulphuric acid, potassium sodium tartarate (Rochelle salt), Sodium hydroxide, zinc acetate solution, potassium ferrocyanide solution, Concentrated Hydrochloric acid, Concentrated ammonia solution, acetic acid solution, Burette-50 ml, Pipette, Flask-300 ml, Heating arrangement, wire gauze.
6.	Total ash (on dry basis); Cl. 6.1.6, Table 1 and Cl. 6.2.6, Table 3	Flat-bottom dish (of stainless steel, porcelain, silica or platinum), Muffle Furnace (capable of maintaining a temperature of $550 \pm 20^{\circ}\text{C}$), Desiccator, Drying Oven, Analytical Balance (0-200 grams/0.1 mg)
7.	Coliform count; Cl. 6.1.6 & 6.2.6 and Table 3	Bacteriological Incubator (capable of operating at $30^{\circ}\text{C} \pm 1^{\circ}\text{C}$ or $37^{\circ}\text{C} \pm 1^{\circ}\text{C}$), Water Bath (capable of operating at 44°C to 47°C or at 100°C), pH meter, Autoclave, Hot air oven, Test tubes, Durham tubes, Bottles or flasks, Loop, VRBL Agar, Brilliant green lactose bile broth, colony counter, Refrigerator.
8.	<i>Staphylococcus aureus</i> (Coagulase positive); Cl. 6.1.6 & 6.2.6 and Table 3	Diluent, Baird-parker Agar Medium, Potassium Tellurite solution, Egg Yolk Emulsion, Sulfamethazine, Brain-heart infusion broth, Rabbit Plasma, Apparatus for dry sterilization (oven) or wet sterilization (autoclave), Incubator, Drying cabinet or incubator, Water bath, Test tubes, flasks or bottles with screw caps, Petri dishes, Straight wire, Pasteur pipette, Total-delivery graduated pipettes, Spreaders, pH meter
9.	Yeast and Mould count; Cl. 6.1.6 & 6.2.6 and Table 3	Bacteriological Incubator (Capable of being maintained at $25 \pm 1^{\circ}\text{C}$), Water Bath (Capable of being maintained at $45 \pm 1^{\circ}\text{C}$), pH meter, Autoclave (capable of operating at $121 \pm 1^{\circ}\text{C}$), Hot air oven (capable of operating at 170 to 175°C), pH Meter (having an accuracy of calibration of ± 0.1 pH unit at 25°C), Culture Bottles or Flasks, Graduated Pipettes, Petri dishes, Microscope, Spreaders, Binocular magnifier, Peptone water broth, Dichloran-rose bengal chloramphenicol agar (DRBC), Chlortetracycline hydrochloride(optional), Tergitol(optional), $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ (optional), $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ (optional)

10.	<i>Escherichia coli</i> ; Cl. 6.1.6 & 6.2.6 and Table 3	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.	<i>Salmonella sp.</i> ; Cl. 6.1.6 & 6.2.6 and Table 3	Buffered peptone water, Rappaport-Vassiliadis medium with soya (RVS broth) or Modified Semi-solid Rappaport-Vassiliadis (MSRV) agar and Muller-Kauffmann tetrathionate-novobiocin broth (MKTT) broth, Xylose Lysine Deoxycholate agar (XLD agar), Apparatus for dry sterilization (oven) or wet sterilization (autoclave), Drying cabinet or oven, Incubator, Water bath, Refrigerator, Freezer Sterile loops, pH-meter, Sterile tubes, bottles, or flasks, Sterile Petri dishes
12.	<i>Listeria monocytogenes</i> ; Cl. 6.1.6 & 6.2.6 and Table 3	Acridine and nalidixic acid, Fraser broth, Listeria Agar, Apparatus for dry sterilization (oven) or wet sterilization (autoclave), Drying cabinet, Incubators, Water bath, Sterile loops, pH meter, Graduated pipettes or automatic pipettes, Petri dishes, Microscope, Refrigerator

ANNEX – C
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 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 marked on the container of Chakka and Shrikhand or printed on the labels applied to it, as the case may be, provided always that material so marked conform to requirements of the specification.

3.1 **Packing** – All the material used for wrapping or packaging the Chakka and Shrikhand shall be of such a nature as to impart no off-flavour or odour, nor in any other way contaminate the product packed under normal conditions of manufacture, storage and use, as per provisions of Clause 7.1 of IS 9532:2023.

3.2 **Marking** – The containers of Chakka and Shrikhand shall be done as per provisions of Clause 7.2 of IS 9532:2023. In addition, the following shall be incorporated on each container:

a) BIS Licence Number 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 the same type of Chakka manufactured and filled continuously in a day, shall constitute a control unit. The entire quantity of the same type of Shrikhand manufactured and filled continuously in a day, shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 & Table 2 and the levels of control in column 3 of Table 1 & Table 2 respectively, 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 material shall be manufactured, packed, stored and distributed under hygienic conditions as per provisions of IS 2491, cross-referred in clause 6.1.5 (for Chakka) of IS 9532:2023 and clause 6.2.5 (for Shrikhand) of IS 9532:2023.

7. 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

(1)				(2)	(3)		
Test Details				Test equipment requirement R:required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method Cl. Ref.	Test Method IS		No. of Sample	Frequency	Remarks
6.1.2	Appearance and Colour	6.1.2	9532	R	Firm to have adequate in-process controls to check compliance of this parameter as per the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
6.1.3	Odour & Flavour	6.1.3	9532	R	Firm to have adequate in-process controls to check compliance of this parameter as per the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
6.1.4	Texture & Consistency	6.1.4	9532	R	Firm to have adequate in-process controls to check compliance of this parameter as per the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
6.1.6 & Table 1 and 6.2.6 & Table 3	Total Solids		IS 11622	R	One	Each Control Unit	<i>For Chakka and Shrikhand</i> -
6.1.6 & Table 1 and 6.2.6 & Table 3	Milk Fat (on dry basis)	-	IS 19396	R	One	Each Control Unit	<i>For Chakka and Shrikhand</i>
6.1.6 & Table 1 and 6.2.6 & Table 3	Milk Protein (on dry basis)	-	IS 11917	R	One	Each Control Unit	<i>For Chakka and Shrikhand</i>

6.1.6 & Table 1 and 6.2.6 & Table 3	Titrateable acidity	12	IS 1479(Part-1)	R	One	Each Control Unit	<i>For Chakka and Shrikhand</i>
6.2.6 & Table 3	Sugar (sucrose)	Annex B	IS 4079	R	One	Each Control Unit	<i>For Shrikhand</i>
6.1.6 & Table 1 and 6.2.6 & Table 3	Total Ash	Annex C	IS 14433	R	One	Each Control Unit	<i>For Chakka and Shrikhand</i>
6.1.6 & 6.2.6 and Table 3	Coliform Count	-	IS 5401 (Part 1)	R	One	Each Control Unit	<i>- For Chakka and Shrikhand</i>
6.1.6 & 6.2.6 and Table 3	<i>Staphylococcus aureus</i> (Coagulase positive)	-	IS 5887 (Part 8/ Sec 1 or Sec 2)	S	One	Once in a month	<i>For Chakka and Shrikhand</i>
6.1.6 & 6.2.6 and Table 3	Yeast & Mould count	-	IS 16069 (Part-1)	R	One	Each Control Unit	<i>For Chakka and Shrikhand -</i>
6.1.6 & 6.2.6 and Table 3	<i>Escherichia coli</i>	-	IS 16424	S	One	Once in a month	<i>For Chakka and Shrikhand</i>
6.1.6 & 6.2.6 and Table 3	<i>Salmonella sp.</i>	-	IS 5887 (Part 3/Sec 1)	S	One	Once in a month	<i>For Chakka and Shrikhand -</i>
6.1.6 & 6.2.6 and Table 3	<i>Listeria monocytogenes</i>	-	IS 14988 (Part 1)	S	One	Once in a month	<i>For Chakka and Shrikhand -</i>

Note-1: Levels of control given in column 3 of Table 1 & Table 2 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-2 : Whether test equipment is required or sub-contracting is permitted in column 2 of Table 1 & Table 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.