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**उत्पाद मैनुअल
ग्लास टेबलवेयर – विशिष्टि
IS 1961: 1968 के अनुसार**

**PRODUCT MANUAL
SPECIFICATION FOR GLASS TABLEWARE
ACCORDING TO IS 1961: 1968**

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना-I के तहत प्रमारण 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। इस दस्तावेज़ के उपयोग बीआईएस प्रमारण 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 Product	:	IS 1961: 1968
	शीर्षक Title	:	GLASS TABLEWARE
	संशोधनों की संख्या No. of Amendments	:	03
2.	नमूना दिशानिर्देश Sampling Guidelines:	:	
a)	कच्चा माल Raw material	:	No specific requirement
b)	समूहीकरण दिशानिर्देश Grouping guidelines	:	Please refer <u>ANNEX – A</u>
c)	नमूने का परिमाण Sample Size	:	1 Set (6 pieces)
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	1. Type of tableware 2. Wall Thickness 3. Nominal Capacity (for tumbler and jug) 4. with/without handle (for applicable glass tableware) 5. with/without spouts (for applicable glass tableware)

Note: This section indicates declared values to be specified against a

			parameter (to be specified in Test Requests) to enable testing of sample against the requirement and determine its conformity. 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 <u>ANNEX – B</u>
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer <u>ANNEX – C</u>
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	All Tests
6.	लाइसेंस का दायरा /Scope of the Licence:		
	आईएस 1961 : 1968 के अनुसार मानक चिह्न का उपयोग करने के लिए लाइसेंस प्रदान किया गया है। “Licence is granted to use Standard Mark as per IS 1961 : 1968”		
	उत्पाद का नाम Name of the Product	Glass Tableware	
	Type of tableware with item name, its wall thickness, nominal capacity (as applicable) and handles	1. Flat tableware Plates (wall thickness upto 2 mm/above 2 mm upto 3 mm/above 3 mm), Saucers (wall thickness upto 2 mm/above 2 mm upto 3 mm/above 3 mm), etc. 2. Glass tableware other than flatware (item (s)) a) Cups (wall thickness upto 2 mm/above 2 mm upto 3 mm/above 3 mm, with/without handle, with/without spouts), b) Mugs (wall thickness upto 2 mm/above 2 mm upto 3 mm/above 3 mm, with/without handle, with/without spouts), c) Jugs (Nominal capacity, wall thickness upto 2 mm/above 2 mm upto 3 mm/above 3 mm, with/without handle, with/without spouts), d) Tumbler (Nominal capacity, wall thickness upto 2 mm/above 2 mm upto 3 mm/above 3 mm, with/without handle, with/without spouts), e) etc. (nominal capacity to be declared)	

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Annex – A
Grouping Guidelines

1. The IS provides for the following type of Glass Tableware as per IS 1961: 1968:
 - a) Flat tableware (e.g. Saucers, Plates, etc.).
 - b) Glass tableware other than flatware (e.g. Tumblers, Cups, Mugs, Jugs, Bowls, etc.)
2. The IS also provides for each of the Glass Tableware
 - a) Wall thickness
 - b) Nominal Capacity (applicable for Tumbler and Jugs).
3. Considering the above, the following grouping guidelines for GoL/CSoL Shall be followed.
 - a) One sample of flat tableware of highest and lowest wall thickness shall be drawn and tested for all requirements to cover all the items under the flat glass tableware for all the declared thickness in the range (range upto 2 mm/above 2 mm upto 3 mm/above 3 mm).
 - b) In case of other than flatware, one sample each of lowest and highest wall thickness from each item of any capacity shall be drawn and tested for all requirements to cover the item with all declared wall thickness in the range (range upto 2 mm/above 2 mm upto 3 mm/above 3 mm) and all capacities. If glass tableware item with handle is tested, the tableware without handle may also be covered in the scope of license. Similarly, if glass tableware with spout is tested, tableware without spouts may also be included in the scope of Licence
4. The Firm shall declare the varieties intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
5. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX – B
List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with Clause Reference		Test Equipment
	Tests	Cl. Ref.	
1.	Workmanship (Wall thickness)	3.2.2	• Micrometer • Vernier Caliper • Digital wall thickness meter
2.	Tolerance on Nominal Capacity	3.3	• Graduated Measuring cylinder • Graduate Pipette
3.	Thermal shock test	3.4	• Tongs with asbestos covered tips • Stopwatch • <u>For flat tableware</u> • Electrical air oven (for flat tableware) • Water Sprayer as per A – 1.1.2 • <u>For other than flatware</u> • Hot water bath (for other than flatware) • Cold water bath • Wire net basket
4.	Grading glass for Alkalinity	3.5	• Test water as per Cl. 5.1 of IS 2303 (Part 1/Sec 1): 2021 • 0.01 M HCl • 1 M HCl • Methyl red indicator solution • Acetone • Purified water as per Cl. 5.6 of IS 2303 (Part 1/Sec 1): 2021 • Weighing Balance • Burettes • Pipette (25 ml) • One-mark volumetric flask (50 ml) • Conical flasks (100 ml) • Boiling Flasks (1000 ml) • Beaker (100 ml) • Desiccator • Hammer (mass approx. 0.5 kg and made of tempered magnetic steel) • Mortar and pestle as per Cl. 6.11 of IS 2303 (Part 1/Sec 1): 2021 • Permanent Magnet • Sieves (300, 500 and 720 μm aperture) • Ball mill • Sieving machine • Ultrasonic cleaner (Laboratory Type) • Drying oven • Thermometer (range 90 – 100 Deg C and L.C. – 0.2 Deg C) • Heating bath • Warm plate

ANNEX C**SCHEME OF INSPECTION AND TESTING FOR GLASS TABLEWARE
ACCORDING TO IS 1961: 1968****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: ~~Each~~ glass tableware of the same variety manufactured under similar conditions of production in a day.

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/empaneled 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 glass tableware provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per Cl. 4 of IS 1961: 1968.

3.2 Additional Marking requirements: The glass tableware or its packaging shall also be marked with the following additional requirement:

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

4. 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 to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Clause	Requirements	Test Method		Test equipment requirement R: required (or) S: Sub-contracting permitted	No of Samples	Frequency	Remarks
		Clause	Ref.				
3.1	Quality of glass tableware	-	IS 1961	R	Firm to have adequate in- process controls to check compliance of this parameter given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
3.2.1	Workmanship	-	IS 1961	R			
3.2.2	Workmanship (Wall thickness)	-	IS 1961	R			
3.3	Tolerance on nominal capacity	-	IS 1961	R			
3.4	Thermal Shock	Appendix - A	IS 1961	R	One	Each Control Unit	
3.5	Alkalinity	9	IS 2303 (Part 1/Sec 1): 2021	R	One	Once a week	