



उत्पाद मानुयल
LABORATORY GLASSWARE -ONE MARK VOLUMETRIC FLASKS
IS 915:2012 के अनुसार

PRODUCT MANUAL
FOR
LABORATORY GLASSWARE -ONE MARK VOLUMETRIC FLASKS
ACCORDING TO IS 915:2012

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरण के प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेन्स धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेन्स/प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग 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 Product	:	IS 915:2012
	शीर्षक Title	:	LABORATORY GLASSWARE -ONE MARK VOLUMETRIC FLASKS
	संशोधन संख्या No. of Amendments	:	Nil
2.	नमुनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	Volumetric flasks shall be made from glass of hydrolytic class not lower than HGB3 in accordance with ISO 719 with a coefficient of thermal expansion not exceeding 3.3×10^{-6}

			6°C^{-1} .
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	Please refer ANNEX – <u>A</u>
c)	नमूने का परिमाण Sample Size	:	2 No.s
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer ANNEX – <u>B</u>
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – <u>C</u>
5.	एक दिन में संभावित परीक्षण/ Possible tests in a day :		
	(i) Dimensions (ii) Neck (iii) Stopper (iv) Shape (v) Accuracy (vi) Capacity (vii) Graduation line (viii) Marking and Designation (ix) Visibility of graduation line, figures and marking		
6.	लाइसेन्स का कार्यक्षेत्र/Scope of the Licence :		
	IS 915:2012 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है “Licence is granted to use Standard Mark as per IS 915:2012 with the following scope:		
	Name of the product	LABORATORY GLASSWARE -ONE MARK VOLUMETRIC FLASKS	
	Type	Wide and/or Narrow Neck (as applicable)	
	Accuracy Class	A and/or B	
	Shape	Pear and/or Conical Shape and/or any other shape as admissible	
	Capacity (in ml)	1, 2, 5,10.....100,.....1000....5000 , any other capacity as per requirement	
	Any other aspect required as per the Standard	For use with and without Stopper	

**ANNEX A
TO THE
PRODUCT MANUAL
FOR LABORATORY GLASSWARE -
ONE MARK VOLUMETRIC FLASKS
AS PER IS 915:2012**

GROUPING GUIDELINES

Volumetric flasks covered under this standard are classified as below:

- Accuracy Class A & B
- Capacities ranging from 1ml to 5000ml and other capacities as per requirement
- Shape- Pear/conical shaped or any other shapes as admissible
- Type - Wide necked and narrow necked flasks.

For purpose of GOL/inclusion:

- One sample of Flask of each shape & type (wide necked or narrow necked) ,intended to be covered under the scope of the licence, shall be tested to cover flasks with all shapes and types in the scope of the licence.
- However, the above samples shall include samples of lowest and highest capacity (in ml) of the flasks intended to be covered in the licence to cover the entire range of capacities in the scope of the licence.
- If the above samples includes a sample of Flask of Higher **Accuracy Class** , then lower **accuracy class** may also be covered in the licence i.e. if sample of Flask of Accuracy Class A is tested and found passing, accuracy class B can automatically be covered in the licence.
- If the above samples include a sample of a flask for use with stopper and is found passing, flasks for use without stopper may also be covered in the licence.
- Firm shall declare the varieties of the flasks they intend to cover in the licence and the scope of licence shall be restricted based on the manufacturing and testing capabilities of the manufacturer.
- **During the operation of the licence, samples of each variety covered in the scope of licence, shall be drawn by rotation.**

**ANNEX B
TO THE
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AS PER IS 915:2012**

List of Test Equipment

Major test equipment required to test as per the Indian Standard

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Capacity and Accuracy as per Cl 10	• Weighing Balance • Thermometer • Hygrometer • Air Conditioner • Barometer • Calibration liquid (Distilled or Ionized Water) • Conical Flask with Ground Joint • Volumetric Flask • Measuring Cylinder • Pipettes with clamp set • Plastic Tube • Burette
2	Shape as per Cl 8.3	• Inclined Rest
3	Neck as per Cl 8.4	• Vernier Calipers, Micrometers
4	Dimensions as per Cl 8.6	• Vernier Calipers, Micrometers
5	Graduation line as per Cl 9	• Vernier Calipers, Micrometers

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

**ANNEX C
TO THE
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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 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 the Schedule of the licence shall be inscribed on each volumetric flask by either ceramic glass transfer or etched, or printed on the label applied to the flask, as the case may be, provided always that each flask to which this mark is applied conforms to every requirement of the specification.

3.1 Packing and Marking shall be done as per the provisions of the Indian Standard. In addition, the following shall be marked on each package:

- i) BIS Licence Number CM/L –
- ii) Details of BIS Website i.e. For details of BIS certification please visit www.bis.gov.in

4. CONTROL UNIT – For the purpose of this scheme, each control unit shall be as follows manufactured continuously, not exceeding a day's production:

- 400 Flasks or part thereof of 1 ml to 10 ml each
- 200 Flasks or part thereof of 25 ml to 50 ml each
- 100 Flasks or part thereof of 100 ml each
- 50 Flasks or part thereof of 250 ml each
- 25 Flasks or part thereof of 500 ml each
- 10 Flasks or part thereof of 1000 ml each
- 5 Flasks or part thereof of 2000 ml to 5000 ml each

4.1 Description regarding conformity or otherwise of a control unit to the requirements of the standards shall be taken on the basis of the test results as follows:

4.1.1 Each flask shall be examined for requirement as given in Table 1 and it shall satisfy the relevant requirements. If any of the flasks fails in any of these requirements it shall be rejected.

4.2 Stoppers: Each lot (see note) or consignment of stoppers shall be covered by a test certificate from the manufacturer of supplied guarantying.

NOTE – If stoppers are made in the licensee's factory, every 100 stoppers or part thereof, manufactured continuously in a day, shall be treated as one lot. Each such lot be subjected to testing.

4.2.1 For ascertaining limit of alkalinity of glass of which stoppers are made, one test shall be carried out on a lot or consignment. For this the requisite number of stoppers which will be crushed to powder (to give 100 g of powder) and tested in accordance of ISO 719 or IS 2303 (Pt.1/Sec 1) . If the test reports failure of the material, the lot or consignment shall be rejected.

4.2.2 If the lot or consignment passes, or accepted on the basis of the certificate in the case of stoppers made of inert plastics 8 stoppers shall be taken at random from the lot or consignment and examined for visual and other requirements as given in 8.5 of IS 915:2012.

4.2.3 A stopper failing in one or more of these requirements shall be considered as defective. The lot or consignment shall be accepted if not defective is found in these 8 stoppers and rejected if two or more defectives are found.

4.2.4 If, however, one defective is found in the 8 stoppers, another 8 stoppers shall be taken at random from the lot or consignment and examined as in 9.1. The lot or consignment will be accepted if no defective is found among these, and rejected if even one defective is found.

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. 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			No. of Sample	Frequency	Remarks
		Clause	Reference				
5	Capacity	5&6	IS 915 IS/ISO 4787	R	Each Flask		
7	Accuracy	10 Table 1 & 2	IS 915 IS/ISO 4787	R	Each Flask	-----	
8.1	Material	8.1	IS 915 ISO 719	S	Each Consignment	Adequate visual inspection of each flask to be carried out in-house	
8.2	Wall Thickness	8.2	IS 915	R	Each Flask	Adequate visual inspection	
8.3	Shape	8.3 Table 1 & 2	IS 915	R	Each Flask	-----	
8.4	Neck	8.4 Table 1 & 2	IS 915	R	Each Flask		
8.5	Stopper	8.5 Table 1 & 2	IS 915	R	Each lot or consignment	The stopper, if provided, shall be a good fit in the flask neck and may be of glass, solid or hollow-blown, or of a suitably inert plastics material.	
8.6	Dimensions	8.6 Table	IS 915	R	Each Flask	-----	

		1 & 2					
9	Graduation line	9	IS 915	R	Two	Each Control Unit	-----
11	Marking & Designation	11	IS 915	R	Two	Each Control Unit	-----
12	Visibility of graduation line, figures and marking	12	IS 915	R	Two	Each Control Unit	-----

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.