



**PRODUCT MANUAL FOR
GLASS FEEDING BOTTLES
ACCORDING TO IS 5168:2018**

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.

1.0	Product		IS 5168:2018
	i Title		Glass Feeding Bottles
	ii No. of amendments		NIL
2.0	Sampling guidelines		
	a) Raw Material		Material of the glass bottle shall conform to Clause 5.1
	b) Grouping Guidelines		Please refer Annex-A
	c) Sample Size		20 numbers. The minimum wall thickness shall be declared by the firm.
3.0	List of Test Equipment		Please refer Annex-B
4.0	Scheme of Inspection and Testing		Please refer Annex-C1 and Annex-C2 for the SITs for Units not manufacturing glass bottles in-house and for units manufacturing glass bottles in-house, respectively.
5.0	Possible Test in day		Please refer Annex-D
6.0	Scope of the Licence		
	Licence is granted to use standard Mark as per IS: 5168:2018 with following scope :		
	Name of Product		Glass Feeding Bottles

ANNEXURE - A
Grouping Guidelines

The standard permits any capacity and design based on market demand (Clause 5.3&5.4). Hence scope may not be restricted for capacity and dimensions. Any one capacity and design of bottle may be tested for grant of licence.

Applicants/licensees shall submit the drawing of all the sizes of glass feeding bottles and minimum declared value of wall thickness for sizes to be included.

BO shall ensure the dies, moulds and required manufacturing and testing facilities for the sizes to be included and obtain the declaration in the prescribed formats.

Samples of all sizes/types/varieties covered in the scope of the licence shall be drawn in rotation to ensure that all the sizes/types/varieties get tested during the operation of the licence.

ANNEXURE - B
List of Test Equipment

Major test equipment required to test as per requirements of Indian Standard.

Clause	Test	Equipment
5.1	Material	XRF Analyzer
5.3	Capacity	Measuring jars
5.4	Type, Dimension, Wall thickness	Vernier calipers, Micrometer
5.5	Scale and Graduations	Sterilization setup
5.5	Permanency of Pigment	Apparatus: Stainless steel tank with temp controller and stirrer, Water cooled diamond cutter saw, Glassware such as measuring flasks etc. Reagents: Sodium Hydroxide, Trisodium Phosphate, Distilled water
5.6	Limit of Alkalinity	Apparatus: Balance, Burettes, Pipettes, One Mark Volumetric Flasks, Conical Flasks, Boiling Flasks, Beakers, Weighing Bottles, Desiccators, Hammer 0.5kg, Mortar and Pestle, Magnet, Mechanical Sieve-shaker or sieving machine, Sieves 500 μ m, 300 μ m, 600-1000 μ m, Ball mill, Ultrasonic cleaner (lab type), Drying Oven, Thermometer 90-100 °C \pm 0.2°C, Heating Bath, thermostatically controlled Reagents: Grade 2 water, Grade 3 water, Hydrochloric Acid, Methyl Red, Acetone
5.7	Thermal Shock Resistance	Apparatus: Cold water bath (> 8 litre capacity) with thermostatic control, thermometer and circulation facility, Hot water bath (> 8 litre capacity) with temp controller and circulation facility, wire net baskets
5.8	Migration of Heavy and Toxic Elements	Apparatus: Water Bath — Able to maintain the temperature of the test mixture at 37 \pm 2°C., pH Meter — With an accuracy of \pm 0.2 pH Reagents: Hydrochloric Acid Solution, Distilled Water

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

Annexure C1

**SCHEME OF INSPECTION AND TESTING
FOR CERTIFICATION OF GLASS FEEDING BOTTLES
ACCORDING TO IS 5168:2018**

For assembly units not producing glass bottles in-house

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.

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. **LABELLING AND MARKING**-The Standard Mark as given in Schedule of the license and Licence Number (i.e. CM/L) shall be incorporated, and the marking and packing and instructions for use shall be done/given as per the provisions of the Indian Standard, provided always that the product thus marked and packed conforms to all the requirement of the specification.

The following labeling and marking requirements in addition to the requirements of the Indian Standard shall be given as per clause 6.2 of IS 5168:2018.

- a) BIS License CM/L-.....
- b) For BIS marks license details, visit the website www.bis.gov.in

4. **CONTROL UNIT**-In any consignment all the glass feeding bottles of the same type, pattern and nominal capacity belonging to the same batch of manufacture shall be separated in groups of 1 000 bottles or less. Each such group shall constitute a control unit. Samples shall be tested from each control unit, for ascertaining the conformity of the bottles to the requirements of the specification.

5. **LEVELS OF CONTROL** - The tests, as indicated in Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the entire production of the factory which is covered by this scheme and appropriate records maintained in accordance with paragraph 2 above.

All production which conforms to the Indian Standard and covered in the licence should be marked with Standard mark.

6. **RAW MATERIALS** - The raw material used for manufacturing the Glass Feeding Bottles excluding hood, cap, ring, teats and sealing disc (if, any) etc. shall be in accordance with clause 5.1 of IS 5168:2018. In order to ensure that the quality of glass bottle being procured is in line with the requirements of Indian Standard, only ISI marked glass bottles to be procured from manufacturing units holding a BIS licence for IS 5168 with necessary Test Certificate.

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. A separate record providing the detailed information regarding the rejected control unit and mode of their disposal shall be maintained. Such material shall in no case be stored together with that conforming to the specification. The Standard Mark (if already applied) on rejected material should be defaced.

**GLASS FEEDING BOTTLES
ACCORDING TO IS 5168 : 2018
(First Revision)**

**For assembly units not producing glass bottles in-house
TABLE 1**

(1)				(2)	(3)		
Test Details				Test equipment requirement R:required (or) S: Sub -contracting permitted	Recommended Levels of control		
Clause	Requirements	Clause	Test Method Reference		No. of Samples	Frequency	Remarks
5.1	Material	5.1.1	IS 5168:2018	S	Each consignment of glass bottles shall be ISI marked as per IS 5168 : 2018 and accompanied by Test certificate		
		5.1.2	IS 5168:2018	S			
5.2	Description	5.2, 5.2.1	IS 5168:2018	R	See Remarks	Each consignment	No. of samples to be taken as per Annex D of IS 5168 : 2018
5.3	Capacity	5.3	IS 5168:2018	R	1% of consignment	Each consignment	
5.4	Types, Dimensions & Wall thickness	5.4	IS 5168:2018	R	See Remarks	Each consignment	No. of samples to be taken as per Annex D of IS 5168:2018
5.5	Scale and Graduations	5.5	IS 5168:2018	R	1% of consignment	Each consignment	
5.5 (b)	Permanency of pigment	5.5	Annex A of IS 5168 :	R	See Remarks	Each	No. of samples to be taken as per Annex A of IS
5.6	Limit of Alkalinity	5.6	IS 2303 (Part 1/ Sec 1)	R	1% of consignment	Each consignment	

5.7	Thermal Shock Resistance	5.7	Annex B of IS 5168:2018	R	See Remarks	Each consignment	No. of samples to be taken as per Annex D of IS 5168 : 2018
5.8	Migration of Heavy and Toxic elements	5.8	Annex C of IS 5168:2018	S	One bottle	Once in three months	

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 B.O. Head.

ANNEX C2

**SCHEME OF INSPECTION AND TESTING
FOR CERTIFICATION OF GLASS FEEDING BOTTLES
ACCORDING TO IS 5168:2018**

(First Revision)

For manufacturers producing glass bottles in-house

- 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.

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. LABELLING AND MARKING** - The Standard Mark as given in Schedule of the license and Licence Number (i.e. CM/L.....) shall be incorporated, and the marking and packing and instructions for use shall be done/given as per the provisions of the Indian Standard, provided always that the product thus marked and packed conforms to all the requirement of the specification.

The following labeling and marking requirements in addition to the requirements of the Indian Standard shall be given as per clause 6.2 of IS 5168:2018.

- a) BIS License CM/L-.....
- b) For BIS marks license details, visit the website www.bis.gov.in

- 4. CONTROL UNIT** - All the glass feeding bottles of the same type, pattern and nominal capacity manufactured from the same consignment of raw material in a day/shift (if production is in more than one shift in a day) shall be separated in groups of 1 000 bottles or less. Each such group shall constitute a control unit. Samples shall be tested from each control unit, for ascertaining the conformity of the bottles to the requirements of the specification.

The manufacturer shall also provide a test certificate for tests carried out by them in process Quality Control mainly for Design, Shape and Size manufacture, Workmanship, Finish and Appearance, Capacity, Capacity scale, Neck dimension, Wall thickness and Heavy and Toxic elements.

5. **LEVELS OF CONTROL** - The tests, as indicated in Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the entire production of the factory which is covered by this scheme and appropriate records maintained in accordance with paragraph 2 above.

All production which conforms to the Indian Standard and covered in the licence should be marked with Standard mark.

6. **RAW MATERIALS** - The raw material used for manufacturing the Glass Feeding Bottles excluding hood, cap, ring, teats and sealing disc (if, any) etc. shall be in accordance with clause 5.1 of IS 5168:2018.
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. A separate record providing the detailed information regarding the rejected control unit and mode of their disposal shall be maintained. Such material shall in no case be stored together with that conforming to the specification. The Standard Mark (if already applied) on rejected material should be defaced.

**GLASS FEEDING BOTTLES
ACCORDING TO IS 5168:2018
(First Revision)**

For manufacturers producing glass bottles in-house

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R:required (or) S: Sub-contracting permitted	Recommended Levels of Control		Remarks
Clause	Requirements	Clause	Test Method Reference		No. of Samples	Frequency	
5.1	Material	5.1.1	IS 5168:2018	S	One bottle	Each consignment of raw material	
		5.1.2	IS 5168:2018	S	One bottle	Once in three months	
5.2	Description	5.2, 5.2.1	IS 5168:2018	R	See Remarks	Every hour	No. of samples to be taken as per Annex D of IS 5168 : 2018
5.3	Capacity	5.3	IS 5168:2018	R	One bottle	Every hour	
5.4	Types, Dimensions & Wall thickness	5.4	IS 5168:2018	R	See Remarks	Every hour	No. of samples to be taken as per Annex D of IS 5168 : 2018
5.5	Scale and Graduations	5.5	IS 5168:2018	R	One bottle	Each control unit	

5.5 (b)	Permanency of pigment	5.5	Annex A of IS 5168 : 2018	R	See Remarks	Each control unit	No. of samples to be taken as per Annex A of IS 5168 : 2018
5.6	Limit of Alkalinity	5.6	IS 2303 (Part 1/ Sec 1)	R	One bottle	Each control unit	
5.7	Thermal Shock Resistance	5.7	Annex B of IS 5168:2018	R	See Remarks	Each control unit	No. of samples to be taken as per Annex D of IS 5168 : 2018
5.8	Migration of Heavy and Toxic elements	5.8	Annex C of IS 5168:2018	S	One bottle	Once in three months	

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 B.O. Head.

Annex D
Possible Test in a day

5.2	Description
5.3	Capacity
5.4	Types, Dimensions & Wall thickness
5.5	Scale and Graduations (excluding permanency of pigment)
5.7	Thermal Shock Resistance