

**PRODUCT MANUAL FOR  
CLINICAL THERMOMETERS – SOLID STEM TYPE  
ACCORDING TO IS 3055 (Part 1) : 1994**

*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.	<b>Product</b>	:	IS 3055 (Part 1) : 1994	
	<b>Title</b>	:	Clinical Thermometers – Solid stem Type	
	<b>No. of Amendments</b>	:	5	
2.	<b>Sampling Guidelines:</b>			
a)	<b>Raw material</b>	:	Glass Tubing	IS 4529:1968 (except for ‘stability of bulb tube’ & ‘limit of alkalinity’)
b)	<b>Grouping guidelines</b>	:	Standard covers two patterns only.	
c)	<b>Sample Size</b>	:	10 pieces	
3.	<b>List of Test Equipment</b>	:	Please refer <a href="#">ANNEX – A</a> .	
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer <a href="#">ANNEX – B</a> .	
5.	<b>Possible tests in a day :</b>			
	(i) Construction as per Cl. 7.3 (ii) Dimensions as per Cl. 7.4 (iii) Graduation and numbering as per Cl. 7.5 (iv) Appearance as per Cl. 8.1 (v) Influence of immersion time as per Cl. 8.3			
6.	<b>Scope of the Licence :</b>			
	“Licence is granted to use Standard Mark as per IS 3055 (Part 1): 1994 with the following scope:			
	Name of the product	Clinical Thermometers		
	Type	Solid stem, Mercury-in-glass, Oral/ Rectal type		
	Range			

**ANNEX A****List Of Test Equipment***Major test equipment essentially required to test as per the Indian Standard*

<b>S. No.</b>	<b>Tests used in with Clause Reference</b>	<b>Test Equipment</b>
1.	Materials- Bulb as per Cl. 7.2.2	a) Special test thermometers b) Temperature controlled test bath (liquid bath or metal block type oven) c) Ice bath
2.	Materials- hydrolytic resistance of glass as per Cl. 7.2.3	a) Standard Lab chemicals and apparatus b) Ball mill c) Sieving-machine d) Ultrasonic cleaner e) Drying Oven f) Thermometer g) Heating Bath
3.	Hardness of maximum indicating device as per Cl. 7.3.2.1	a) Centrifuge b) Stopwatch c) Temperature controlled water bath
4.	Dimension as per Cl. 7.4	a) Vernier Callipers b) Micrometer
5.	Ageing and Accuracy as per Cl. 8.2	a) Comparator water bath b) Reference Thermometer
6.	Influence of immersion time as per Cl. 8.3	a) Temperature controlled water bath b) Stopwatch c) Reference Thermometer

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

**ANNEX B**

**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. LABELLING AND MARKING** – As per the requirements of IS 3055 (Part 1): 1994.

**4. CONTROL UNIT** – All the clinical thermometers of the same pattern manufactured in a day shall constitute a control unit.

**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.

**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. Glass piece of rejected thermometers may be scrapped after recovering the mercury.

**TABLE 1**

<b>(1)</b>				<b>(2)</b>	<b>(3)</b>		
<b>Test Details</b>				<b>Test equipment requirement</b> R: required (or) S: Sub-contracting permitted	<b>Levels of Control</b>		
Cl.	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
7.2	<b>Materials</b>		IS 3055 (Pt 1)		Every consignment received	#	
	Glass tubing	7.2.1		S			
	Bulb	7.2.2		S			
	Glass	7.2.3		S	One from every batch of glass used for maximum device, capillary tube & bulb received.	#	
	Thermometric liquid	7.2.4		-	-	Test certificate from supplier	
7.3	Construction	7.3.1 – 7.3.6	IS 3055 (Pt 1)	R	Each thermometer		
7.4	Dimensions	7.4 & Table 1	IS 3055 (Pt 1)	R	Each thermometer		
7.5	Graduation Numbering and	7.5.1-7.5.7	IS 3055 (Pt 1)	R	Each thermometer		
	Permanency Marking of	7.5.8			1% with min. 5 thermometers	Each control unit	

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
8.1	Appearance	8.1	IS 3055 (Pt 1)	R	Each thermometer		
8.2	Ageing Accuracy and	8.2	IS 3055 (Pt 1)	R	1% with min. 5 thermometers	Each control unit	
8.3	Influence of immersion time	8.3	IS 3055 (Pt 1)	R	1% with min. 5 thermometers	Each control unit	

# No further testing is required if consignment/ batch is accompanied with a Test Certificate from supplier.

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: The control unit and levels of control as decided by the Bureau are obligatory to which the licensee shall comply with.