



PRODUCT MANUAL FOR TRAYS, INSTRUMENTS ACCORDING TO IS 3993: 1993

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.	Product	:	IS 3993:1993
	Title	:	Trays, Instruments
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	As per clause 4 of IS 3993:1993
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	Two Trays
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day	:	All Tests
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 3993 : 1993 with the following scope:		
	Name of the product	Trays, Instruments	
	Material	Stainless Steel/Enamelled Iron/Glass	
	Size		

ANNEX A

Grouping Guidelines

1. The following parameter shall be considered for the purpose of grouping of Instrument Trays:

Material:

- Stainless Steel
 - Enamelled Iron
 - Glass
2. Considering the above, one sample with any dimension shall be tested to cover trays with all dimensions for the particular material tested.
 3. The Firm shall declare the varieties of various trays they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
 4. During 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***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Shape and Dimensions (Clause 5)	(i) Coat meter (ii) Measuring Tape, Steel scale (iii) Micrometer (iv) Vernier calliper (v) Weighing Balance
2	Tests on Enamelled Iron Trays (Clause 7.1)	(i) Distilled water (ii) Citric Acid Solution (10% or 6% (m/m)) (iii) Stopwatch (iv) Graduated measuring cylinder (v) Pipette (vi) Filter paper (vii) White towel (viii) Pencil (conventional graphite HB pencils) (ix) Watch glass (x) Balance (xi) Electric lamp – 40 W (xii) Acetone or Trichloroethylene (xiii) Bunsen Burner (xiv) Measuring Scale (xv) Reflux Condenser (xvi) Thermometer (xvii) Synthetic rubber washer (xviii) Packing rings (xix) Heater- 500 W (xx) Heat Control Device (xxi) Hot air oven (xxii) Desiccator (xxiii) Beakers
3	Tests on Glass Trays (Clause 7.2)	(i) Distilled water (ii) Large vessel with a steam vent (iii) Gas Stove (iv) LPG (v) Thermometer (vi) Stopwatch

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

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 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 – As per the requirement of IS 3993: 1993.

4. CONTROL UNIT – The control units shall be as follows:

- a) For Stainless Steel Trays- Trays manufactured in a day from one consignment of SS sheet and manufactured in a day.
- b) For Enamelled Iron Trays- Trays enamelled and heat treated at a time.
- c) For Glass Trays –Trays manufactured out of one consignment of glass moulded at a time

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

(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				
4	Materials	4.1, 4.2, 4.3	IS 3993 : 1993	S	One	Each consignment	Please see Note 1
5	Shape and Dimensions	5.1, 5.1.1, 5.1.2, 5.1.3, 5.2, 5.2.1 (Fig. 1, 2, 3 & Table 1)	IS 3993 : 1993	R	One	Each control unit	---
6	Manufacture, Workmanship and Finish	6.1, 6.2, 6.3, 6.4	IS 3993 : 1993	R	One	Each control unit	---
7.1	Citric Acid Spot Test (for Enamelled Iron Trays)	7.1.1	IS 3993 : 1993	R	One	Each control unit	---
7.2	Boiling and Thermal Shock (for Glass Trays)	7.2.1	IS 3993 : 1993	R	One	Each control unit	---

Note-1: Materials as per clause 4.1 and 4.2 shall be ISI marked. For material as per clause 4.3, no further testing is required, if accompanied with test certificate or ISI marked

Note-2: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-3: 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.