

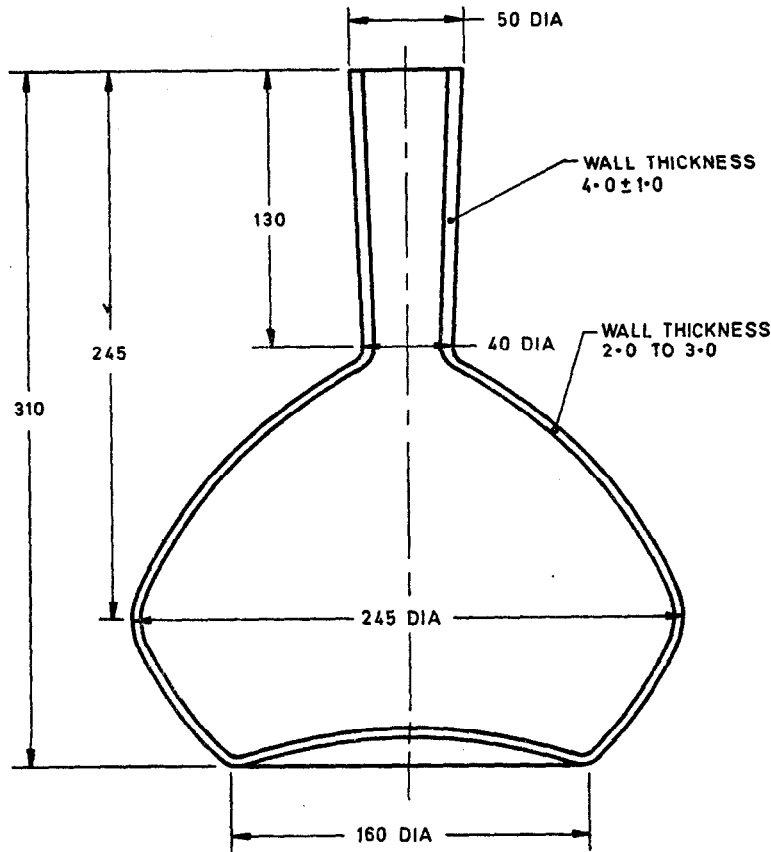


Indian Standard

(Reaffirmed 2001)

## SPECIFICATION FOR FLASK, CULTURE, HAFKINE

1. **Scope** — Prescribes dimensional and other requirements of Haffkine's culture flask of 4 litres capacity.
2. **Material** — The flask shall be made from clear, neutral glass free from appreciable tinge (for definitions, see IS : 1382-1961 Glossary of terms relating to glass industry). The glass shall pass the alkalinity test prescribed in IS : 2303-1963 'Method of grading glass for alkalinity' as type 1 glass.
3. **Shape and Dimensions** — As shown in Fig. 1.

Tolerance  $\pm 2.0$  except on wall thickness

All dimensions in millimetres.

FIG. 1 FLASK, CULTURE, HAFKINE, 4 LITRES NOMINAL CAPACITY

### 4. Workmanship and Finish

- 4.1 The flask shall be well annealed, and shall be substantially free from blisters, bubbles, striae, stones, moulding marks and other visible defects (for definitions see IS : 1382-1961). It shall be reasonably free from internal strains.
- 4.2 The flask shall be regular in shape.
- 4.3 There shall be a uniform distribution of glass all over the walls and the base.
- 4.4 The flask shall be finished smooth. The edges shall be rounded in the flame or ground.
- 4.5 It shall not rock when placed on a level surface and it shall not topple over on a surface inclined at an angle of  $10^\circ$  to the horizontal.
- 4.6 The capacity of the flask up to the neck shall be minimum 4.2 litres.

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**5. Tests**

**5.1 Thermal Shock Test** — The flask shall be boiled in water for 30 minutes and then immediately transferred to water at about 20°C. It shall not show any chipping or cracking.

**5.2 Dry Heat Test** — The flask shall be subjected to a dry heat test in a sterilizing oven at  $180 \pm 2^\circ\text{C}$  for 30 minutes. The flask shall not show deterioration in any way.

**5.3 Autoclaving Test** — The flask shall be autoclaved at a steam pressure of 140 kN/m<sup>2</sup> (1.4 kgf/cm<sup>2</sup>) for half an hour. It shall not crack or show any sign of damage.

**6. Marking** — The flask shall be marked with the name of the manufacturer, initials or recognized trademark and the nominal capacity in litres.

**6.1 ISI Certification Marking** — Details available with the Indian Standards Institution.

**7. Packing** — As agreed to between the purchaser and the supplier.