

## IS 5022 : 1989 Sterilizers, Instruments (Table Model)

This standard defines the technical and operational requirements for a table model sterilizer, a vital device in healthcare used to sterilize instruments and prevent infections. The compact design is suited for smaller facilities or specialized departments like dental clinics, offering flexibility and efficiency in maintaining sterile environments.

Key material requirements include the use of stainless steel (04Cr18Ni10) for corrosion resistance, hygiene, and durability. A 2B/2D surface finish enhances smoothness, simplifying cleaning and sterilization. The shell and tray are dimensioned to strict tolerances ( $\pm 2\%$ ) to ensure compatibility and functionality. Minimum material thickness is specified to prevent warping or mechanical failure under heat and load stresses.

Operational features include heat sources such as electricity (1-2 kW), gas, or kerosene, providing versatility in diverse settings. Thermostatic control ensures precise boiling water regulation with a differential of  $\pm 5^\circ\text{C}$ . Electrical models comply with stringent safety parameters, including maximum leakage current of 300  $\mu\text{A}$  and high-voltage testing at 1000 V, as per IS 302:1979.

The standard mandates rigorous **testing protocols**:

- **Electrical Safety:** Insulation and high-voltage tests protect operators.
- **Load Testing:** Trays and lids must withstand specified loads without buckling or deformation.
- **Thermostat Accuracy:** Ensures reliable temperature control for effective sterilization.

Additional features like seamless construction minimize steam leakage, and thermally insulated handles enhance operator safety. The standard emphasizes a polished finish to reduce bacterial adherence and clear markings for identification and safe use. Together, these specifications ensure the sterilizer's reliability, efficiency, and compliance with healthcare hygiene standards.