

Thermal Insulation Value Tester

Background:

The thermal insulation property of textile materials is considerable practical importance, particularly when these materials are used in clothing, winter garments, blanket, quilt, carpet, floor coverings, room insulation etc. Nowadays jute and others natural fibres is used to produce various products either by weaving and knitting and/or by nonwoven technologies. Hard boards from jute stick particles, dust and sticks of other plants of allied fibres are also very much under production. The resistance offered by a textile material to the movement of heat through it, is obviously of critical importance to its comfort. A suitable instrument for measuring the thermal resistance or insulation value of the products is very much essential need of the day. There is no single instrument available so far. An instrument, which can accommodate both thick and thin textile materials and non-textile sheet like products, may need to meet the demand of the present day. In view of the above the instrument has been developed for quick assessment of TIV properties of textile and non-textile materials.:

Technology Details:

In this instrument, the thermal resistance of the material is determined by using two-disc method, an application of Lee's disc apparatus to textiles. Following internationally accepted standards, guarded two plate method has been employed to develop the instrument. The instrument can be used for the products having the thickness of wider range and under the more relaxed atmospheric control.