

Investigation of Comfort Properties of Bed Sheet Fabrics Using Different Weft Materials and Weave Structures

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Abstract:

Bed sheet is one of the most important items of interior furnishings, these bed sheet fabrics need to ensure the comfort level of the human and needs to be manufactured with a high comfort property. Recently, the requirements in terms of comfort properties are widely linked to the use of new cellulosic fibers. Therefore, this research aims to investigate the relationship between different weft materials, weave structures and the comfort properties of produced bed sheet fabrics. For this objective, six bed sheet samples were produced varying in weave structure (basket 2/2 & Piqué) and three different weft materials (bamboo, Tencel & viscose pcm). Comfort properties, porosity, horizontal wicking rate, stiffness and air permeability of all the fabric samples were determined. Our finding showed that there is a direct relationship between horizontal wicking rate and packing factor of produced fabrics, while the fabric porosity affects on the rate of air volume flowing through fabric, the fabric stiffness was influenced by the areal density of produced fabrics. The best sample performance evaluated by radar chart is sample (S6) manufactured with Bamboo material for wefts & Piqué weave structure, with the quality factor percentage reached to (82.4%)

Keywords

*Bed Sheet,
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