Journal of Natural Fibers, 12:505–517, 2015

The Effect of Fabric Structural Parameters and Fiber Type on the Comfort-Related Properties of Commercial Apparel Fabrics

Marguerite Ester Stoffberg,[1] Lawrance Hunter,[1,2] and Anton Botha[2]

[1]*Nelson Mandela Metropolitan University, Port Elizabeth, South Africa*
[2]*The Council for Scientific and Industrial Research (CSIR), Port Elizabeth, South Africa*

The effect of fabric structural parameters and fiber type on the comfort-related properties, namely water vapor resistance and thermal resistance, of commercial apparel (suiting) fabrics, containing both natural and man-made fibers have been studied using a Permetest. The effects of the various fabric parameters on the comfort-related properties were determined and quantified using multiple regression analyses and best fit regression equations. It was found that the fabric parameters, mass and thickness in particular, had a much greater effect on the comfort-related properties, than did the fiber type or blend, or fabric structure.