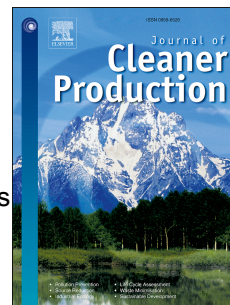


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Abstract

In this comparative study, bamboo viscose fibre was studied as an eco-friendly alternative to cotton fibre in polyester-cellulosic blends. Conventional cotton is not considered eco-friendly because it requires large quantities of water and pesticides during its production. The eco-friendly nature of bamboo viscose is subject to the employed production method. Polyester-bamboo (PB) and polyester-cotton (PC) blended yarns were prepared by employing open-end spinning technique and the said yarns were single jersey weft knitted. The yarn tensile strength, fabric bursting strength, bending length, thermal resistance and moisture management properties were studied. The PB blend outperformed the PC blend in terms of mechanical properties and exhibited lower thermal resistance than the PC blend, which is favourable for summer clothing. However, the moisture management properties of PB blended fabrics were found to be similar to those of PC blended fabrics at higher proportions of bamboo viscose fibre in the PB blend.

Key Words: cotton, bamboo viscose, eco-friendly, yarn, fabric, blend

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