

Development of Knitted Seersucker Fabric for Improved Comfort Properties

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Abstract : Seersucker is a popular lightweight fabric widely used in men's and women's suiting, casual wear, children's clothing, house robes, bed spreads and for spring and summer wear. The puckered effect generates air spaces between body and the fabric, keeping the wearer cool in hot conditions. The aim of this work was to develop knitted seersucker fabric on single cylinder weft knitting machine using plain jersey structure. Core spun cotton yarn and cotton spun yarn of same linear density were used. Core spun cotton yarn, contains cotton fiber in the sheath and elastase filament in the core. The both yarn were fed at regular interval to feeders on the machine. The loop length and yarn tension were kept constant at each feeder. The samples were then scoured and bleached. After wet processing, the fabric samples were washed and tumble dried. Parameters like loop length, stitch density and areal density were measured after conditioning these samples for 24 hours in Standard atmospheric condition. Produced sample has a regular puckering stripe along the width of the fabric with same height. The stitch density of both the flat and puckered area of relaxed fabric was found to be different. Air permeability and moisture management tests were performed. The results indicated that the knitted seersucker fabric has better wicking and moisture management properties as the flat area contact, whereas puckered area held away from the skin. Seersucker effect in knitted fabric was achieved by the difference of contraction of both sets of courses produced from different types of yarns. The seer sucker fabric produce by knitting technique is less expensive as compared to woven seer sucker fabric as there is no need of yarn preparation. The knitted seersucker fabric is more practicable for summer dresses, skirts, blouses, shirts, trousers and shorts.

Keywords : air permeability, knitted structure, moisture management, seersucker

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