

Apr 12th, 8:30 AM - 11:30 AM

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Recommended Citation

Aulds, Sydney; Clark, Emerald; Stewart, Torie; and Heiden, Kathleen, "Textile Properties of Men's Athletic Pants" (2018). *ANS Research Symposium*. 11.
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Textile Properties of Men's Athletic Pants

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The purpose of this research project was to test the performance of three different brands of men's athletic pants from Nike, BCG, and Russell to determine if there are any differences based on textile properties.

The general construction of each of the pants was evaluated including; yarn structure, weave structure, method of coloration, fabric weight, and thread count. To test the dimensional stability, one garment of each brand was marked with four 10 inch squares, two being horizontal and two being vertical. The marks were measured after being laundered one time, three times, and then ten times to measure dimensional stability. Each garment's stain resistance was measured by putting peanut butter, apple sauce, grape jelly, butter, red wine, oil, ketchup, mustard, and ranch dressing, letting the stains dry and then washing the garments. The stains were rated using the AATCC Staining Scale. Colorfastness of the fabric was tested for chlorine and non-chlorine bleach, home laundering, and crocking. The colorfastness tests were rated using the AATCC Gray Scale for Staining. Wickability was tested by holding a 10- inch strip of each fabric in a glass of water for 5 minutes and then measuring the distance the water traveled in the allotted time.

Russell had the greatest shrinkage after the first laundering exceeding the minimum industry standard allowed for shrinkage. The appearance retention of BCG and Russell were very similar after laundering both having minimal wrinkles. Nike performed the worst among the three brands in appearance retention, colorfastness to laundering, colorfastness to perspiration and wickability. All brands resisted staining but the only stain that wasn't resisted was the ketchup stain on the Nike brand. Russell had the best performance in colorfastness to laundering with perfect scores while Nike and BCG not meet perfect scores on a few laundering tests.

The performance of BCG and Russell athletic pants proved exceptional compared to Nike. Since BCG performed the same as or better than Russell, it is the best buy for product in terms of quality and performance.