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Textile Properties Effects on the Serviceability of Women's Chinos

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The purpose of this project was to compare three different women's chino pants from Faded Glory, Lauren Ralph Lauren, and H&M to determine if there are 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.

Faded Glory women's chinos had the most shrinkage after three and ten launderings, and exceeded the industry standard allowed for shrinkage. Lauren Ralph Lauren and H&M were significantly below the industry standard allowed for shrinkage. The appearance retention among all three brands were very similar. Faded Glory performed the best with resisting color rub off during dry and wet crocking. Lauren Ralph Lauren and H&M women's chinos performed well during dry crocking, but showed average color rub off during wet crocking. H&M performed the worst for resistance to staining. Due to the darker fabric of Faded Glory, less stains were shown.

The test results for women's chinos in this project reported that all three brands were very much alike. Though the Faded Glory chinos are the cheapest, the H&M pants would be the best for meeting serviceability and consumer expectations. The H&M chinos performed almost exactly the same as the Lauren Ralph Lauren chinos, but the H&M chinos are more affordable.