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# Testing Women's Athletic Shirts: Which is Better?

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## Testing Women's Athletic Shirts: Which is Better?

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The purpose of this project was to compare similar athletic shirts from three brands at different price points to determine if there are differences based on textile properties.

A dimensional stability test was performed by measuring and marking ten inches in the length and width on the front and back of each shirt using tacks. If ten inches was not reached, we measured to the seam without crossing it and recorded the original measurements. The shirts were washed according to recommended care instructions and calculated by measuring between the tacks, after one wash, three washes and after ten washes appearance retention was evaluated using AATCC appearance retention scales. Colorfastness to bleach and non-chlorine bleach were tested by placed a drop of each onto the fabric and rated the color change. Colorfastness to crooking was tested using a crook meter and AATCC test method on the non-laundered shirt and the laundered shirt. Colorfastness to perspiration was tested by using a mixture of vinegar, salt and water to stimulate perspiration. Wickability was tested by holding a strip of the sample and barely dipped it in a glass of water for five minutes and measured how fast the water moved up and through the fabric. The colorfastness to laundering was tested using a multi-fabric strip and fabric sample placed in water with detergent and water for five minutes, stimulating a washing machine. Resistance to staining was tested by applying multiple foods in strips on a sample. The sample dried over night and was laundered according to care instructions. The specimens were evaluated according to the AATCC resistance to stain scale.

Danskin Now and Academy had the least dimensional stability, both ranging out of industry standards, when compared to Under Armor, which mostly maintained its shaped, even after 10 washes. Across the board, each garment shared similar results when it comes to resistance to staining, wickability, colorfastness to perspiration, and colorfastness to laundering.

Performance across women's athletic shirts was quite consistent across the brands, with minor discrepancies among them. Under Armor had the best results in most of the tests. Despite being a lighter fabric, compared to Danskin, Under Armor's appearance retention held better, which might have something to do with the higher thread count. And although it is more expensive, it is the better buy overall.