Effective Wash Method for Removing Cosmetic Stains from Clothing
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Abstract
Make-up stains on clothing causes consumer’s daily stress. These stains commonly occur at the cuffs and collar of a shirt. Make-up stains cause discoloration to the fabric if not washed out immediately, however these stains tend to stay on a consumer’s clothing for days. When it is time to wash, the stains remain one must (1) Identify the most successful washing agents for removing week-old makeup stains from the 100% cotton samples. (2) Develop a model to capture a realistic scenario of makeup rubbing off on clothing. (3) Assess the effectiveness of common stain removing agents and detergent found in stores. A mixed method of research was employed in this study: a qualitative method for identifying users’ most common methods through the AATCC Wash Method 135 and a quantitative method by using the X-Rite Spectra-Light Box for comparing results. This study determined which common washing agents are the most effective in removing a week-old makeup stain from a 100% cotton shirt. The goal is to help consumers and/or brands become aware of convenient washing agents used to remove tough make-up stains from cotton garments.

Procedure
1. Prepare six 100% cotton knit interlock samples.
2. Apply 0.40 grams of L’Oreal® foundation to each sample.
3. After 1 week of letting the foundation sit on fabric, we began testing the bleaching methods.
4. Sample 1, pretreatment with 10 ml of shout and wash with 30 ml of Tide®. Wash on 130 °F.
5. Sample 2, pretreatment with 10 ml of Oxi-clean®, and 30 ml of Tide®. Wash on 130 °F.
6. Sample 3, Pretreatment with 5.30 grams of Baking Soda® and 10 ml of Dawn® Dish Soap, then wash with 30 ml of Tide®. Wash on 130 °F.
7. Sample 4, Pretreatment with 10 ml Shout® stain remover, then wash with 30 ml Persil®. Wash on 130 °F.
8. Sample 5, Pretreatment with 10 ml Oxi-clean® stain remover, then wash with 30 ml Persil®. Wash on 130 °F.
9. Sample 6, Pretreatment with 5.30 grams of Baking Soda® and 10 ml of Dawn® Dish Soap and wash with 30 ml Persil®. Wash on 130 °F.
10. Once all samples dried, we analyzed and compared them using the X-Rite-Spectra-Light Box.

Results
It has been found that Sample 6, pre-treated with Dawn® dish soap & Baking Soda® washed with Persil detergent, wicked the concealer around the surface of the fabric the most. The stain did not completely disappear.

Conclusion
It is believed that a specific detergent that will lift the oil out of the fabric during the washing cycle should be produced in order to improve the performance of tested pre-treatment agents. It is also recommended for further research into different pre-treatments.

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Hypothesis
Out of our pretreatments and detergent combinations:
• Shout® with Tide®
• Shout® with Persil®
• Oxi-clean® with Tide®
• Oxi-clean® with Persil®
• Baking Soda®/Dawn® with Tide®
• Baking Soda®/Dawn® with Persil®

Hypothesis: Using Baking soda® and dawn® soap as the pretreatment with Persil®, as a detergent, will be most effective when removing the make-up stain because of Dawn’s® degreasing properties, Baking soda’s® ability to absorb moisture and Persil’s® ability to remove stains 2% better than Tide®.