

Name of student: Aimen Arif Bajwa  
Name of advisor: Ms. Rafia  
Department: Clothing and textile

Date of submission: 11, Nov, 08  
Session: 2007-08

## ABSTRACT

- TITLE:

Effect of chlorine and non-chlorine bleaches on pure cotton fabric and cotton/polyester blended fabric.

- OBJECTIVES:

- 1: To find out the effect of chlorine and non-chlorine bleaches on strength of pure cotton fabric and cotton/polyester blended fabric.
- 2: To compare the whiteness of pure cotton fabric and cotton/polyester blended fabric before washing and after washing with chlorine and non-chlorine bleaches.
- 3: To see the effect of chlorine and non-chlorine bleaches on colorfastness of a cotton fabric.

- METHODOLOGY:

The research is planned to analyze the strength of plain white cotton fabric and plain white cotton polyester blended fabric after laundering with chlorine and non-chlorine bleaches. This experimental research was carried out at SGS (Society Of General Souvenir) laboratories under the guidance of MR. MUHAMMAD NAEEM MINHAS Senior Executive Officer. SGS is the world's leading inspection, verification, testing and certification company. Three samples of warp and three samples of weft direction and size of 4"x 8" were taken from the specimens that is, pure cotton fabric and polyester/cotton (p/c) blended fabric. These samples were washed thrice with chlorine and non chlorine bleach separately. After each wash the test of tensile strength was done by using titan machine. The test of data color assessment was done to find out the whiteness of pure cotton fabric and p/c blended fabric before washing and after washing with chlorine and non-chlorine bleaches and to compare the results.

- RESULT:

It was observed that the Pure Cotton fabric was most affected by the use of chlorine bleach and it damaged the strength of the fabric while laundering, where as the non-chlorine bleach had less effect on Pure Cotton fabric, while the strength of Polyester/Cotton (p/c) fabric was less affected after laundering with chlorine and non-chlorine bleaches as compared to Pure Cotton fabric. Similarly the tear strength of pure cotton fabric is most affected by the use of chlorine bleach while laundering as compared to non-chlorine bleach and the tear strength of p/c fabric was less affected after laundering with chlorine and non-chlorine bleach as compared to pure cotton fabric. Through the comparative study it was observed that the whiteness of a pure cotton fabric and p/c fabric was decreased after laundering with chlorine bleach whereas, it was increased after laundering with non-chlorine bleach of both fabrics. So by doing this study it was observed that non-chlorine bleach is good for laundering both specimens as it increases the whiteness and has less adverse effect on tensile and tear strength of pure cotton and p/c fabric.