

EFFECTS OF BLEACHING AGENTS IN DETERGENTS ON SOIL REMOVAL AND PROPERTIES OF DYED FABRICS. Kim H.S., Chung H.W., Kim S.R.*, Shin S.H.**, Department of Clothing and Textiles, Inha University, Incheon, *Department of Clothing and Textiles, Seoul National University, Seoul, **Household & Personal Care Products R&D Institute, LG Chem, Daejeon, Korea

To maintain reflectance of the white clothes many kinds of additives are introduced in the detergent powers. Bleaching agents increases the whiteness of fabrics. Effects of soil and stain removal, decoloration and the tensile strength losses of dyed fabrics by bleaching agents in detergents were studied.

Sodium perborate(PB) and sodium percarbonate(PC) were used as bleaching agents and tetraacetythylenediamine(TAED) was for bleaching activator. Y values of artificially soiled (oily and particulate soils) cotton fabrics and cotton cloth stained with red wine were measured before and after washing. Cotton cloth was treated with reactive red dyes in different shades. Dyed fabrics were washed repeatedly and L, a, b, dE and tensile strength were measured.

Soil removal increased with temperature, but soil removal by addition of bleaching agents was same as that with detergent only.

Stain removal was increased with the addition of bleaching agents and with temperature, especially in hard water(200ppm). At lower temperatures, 25C and 40C, stain removal was a little increased with addition of bleaching activator.

Decoloration of dyed fabrics was increased with repeating washing cycles, the color was not heavily changed by the addition of the bleaching agents than by detergent only.

Tensile strength decreased as the washing cycle repeated and decreased in the following order : detergent only > detergent + PB + TAED > detergent + PB.

With the addition of TAED to PB, mild and activated at low temperature organic peracid was liberated.

Detergents containing PB with TAED perform well for stained fabrics.