

ECOFRIENDLY CREASE RESISTANT FINISH AND ITS EFFECT ON PHYSICAL PROPERTIES AFTER APPLICATION AND LAUNDERING CYCLES

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ABSTRACT

The study was conducted to see the effect of crease resistant finish on an antibacterial property of cotton. For the application of crease resistant finish the chitosan, citric acid, silicon softener and catalyst were used. Before application of finish the different condition such as drying time, drying temperature, curing time, curing temperature and concentrations of chemicals along with M: L ratio were standardized. The optimized concentrations and conditions were the 4% chitosan, 10% citric acid, 6% catalyst, and 6% silicon softener, 4 minute drying and curing time, treatment time 15 minute, 100 °C drying temperature, 170 °C curing temperature,. The finish was applied on the scoured cotton fabric with optimized proportion of chemicals maintaining the 1:20 m: l ratio by using the padding mangle. Assessment of the crease recovery properties and antibacterial property was done. It was found that there was increase in the crease recovery angle and fabric crease recovery in addition to it the crease resistant finish showed good bacterial percent reduction. The finish is safe and non toxic for use. The treated fabrics will not only provide health benefits to the common masses but will also benefit the workers who are engaged in finish sector of textile industries. Crease resistant finish with antibacterial property will add value to cotton so the cultivation, production and export of cotton will also boost

KEYWORDS: Crease Resistant Finish, Chitosan, Citric Acid