

**Effect of Enzymes and Swelling Agents on Colour Strength (K/S)
Property of *Khadi* Cotton Fabric Dyed With Sandalwood Dye:
An Eco-friendly Approach**

Sunita Dixit* and Shahnaz Jahan**

**Department of Clothing and Textiles, Faculty of Home Science, Kamla Nehru Institute of Physical and Social Sciences, Sultanpur, Uttar Pradesh, India*

***Department of Clothing and Textiles, College of Home Science, G.B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, India*

KEYWORDS Acid Cellulase. Ethylenediamine. Neutral Cellulase. Sodium Hydroxide. Zinc Chloride

ABSTRACT Cellulase and swelling agents are known to be effective in improving the colour strength of cotton. Nowadays, the handloom fabrics are much preferred due to development of innovative designs and their comfort in wearing. Interests in natural dyes are also growing throughout the world and people are becoming more aware of the need for eco-friendly materials to come up and dominate the harmful synthetic dyes. But, *khadi* cotton has some major shortcomings like less dyeability. Keeping in view that the pretreatment of *khadi* cotton with cellulases, swelling agents and combination of cellulases and swelling agents before dyeing improves the colour strength properties, the present study was planned. It was found that for all the enzyme treated (acid and neutral cellulase) as well as swelling agents treated (Sodium hydroxide, Ethylenediamine and Zinc chloride) samples, the colour strength was increased in comparison to the untreated samples