



## **APPLICATION OF LAC DYE BY SCREEN-PRINTING ON MULBERRY AND TASAR SILK**

**Sreenivasa\*, S. A. Hipparagi, Brojeswari Das, K. Jaganathan, S. P. Purushothama  
and M. K. Ghosh**

Central Silk Technological Research Institute, Central Silk Board, Bengaluru 560068, India.

\*E-mail: [srinivasacsb@gmail.com](mailto:srinivasacsb@gmail.com)

### **ABSTRACT**

Environmental awareness throughout the world now seems to rescue the total 'fall' of natural dyes. Hazards of chemical industries and dyes in particular have forced environmentalists to think in terms of natural products. Hence, the trends of greater use of synthetic substitutes of natural substances have been reserved. This actually started when people throughout the world in general and west in particular preferred pure cotton clothes and dress material in place of clothes made from synthetic yarn. After the restoration of the cotton, natural dyes including lac dye await their turn. Studies on application of lac dye on mulberry and non-mulberry silk have been extensive. As natural dyes are less practiced in screen-printing units, an attempt was made here to print mulberry and non mulberry silk fabric using lac dye and screen-printing method. Using a few mordants along with lac dye, an appropriate printing recipe was formulated for the printing process. Wash, light, rubbing and perspiration fastness properties of the printed fabrics were tested using standard methods. Physical properties such as tensile strength, bending, and drape were also tested before and after processing. Techno economics of printed fabric was optimized and the process package for printing on non mulberry silk fabric with lac dye and by screen-printing method was finalised. Further, the effect of Mordanting on depth of shade and colourfastness was also studied. It was observed that most of the post mordanted fabrics possessed better wash and light fastness properties. The lac dye printed silk fabrics had acceptable performance in pre and post mordanted conditions. The colour fastness properties of mulberry and tasar silk fabric samples were within acceptable range.

**Key words:** Lac dye, mulberry, screen printing, tasar silk fabric.