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Research Paper

APPLICATION OF NEEM LEAF EXTRACT ON SILK AS DYE, PRINT COLOUR AND FINISHING AGENT

S. A. Hipparagi*, Sreenivasa, M. A. Joseph, Abhishek Kumar Singh and Subhas V. Naik
Central Silk Technological Research Institute, Central Silk Board, Bengaluru 560068, India.
*Email: saamhisir@gmail.com

ABSTRACT

Of late, there has been a shift in consumer preference of fabrics, from selections on the basis of colour and motif to their functionality. In this direction, an experiment was worked out to apply neem leaf extract as dye, print colour and finishing agent on mulberry silk. Neem leaf colour was extracted into aqueous media. Dyeing conditions *viz.*, temperature, duration and pH were optimized through different experiments. Optimum colour yield, good performance in response to wash, light, rubbing and perspiration fastness tests were considered for selection of the most ideal ranges of temperature, duration and pH for dyeing experiments. Printing was done using fine neem powder extract mixed with Guar Gum along with solvent and acid media agents. Printed fabric was also treated with post-mordanting agents in order to obtain different shades and better fastness properties. Neem solvent and aqueous extracts along with butanetetracarboxylic acid (BTCA) and sodium hypophosphite (SHP) were used in finishing of silk by pad dry cure method and the products have shown better antimicrobial properties at different washing cycles. By application of neem extract in dyeing, printing and finishing of silk material, creation of special purpose silk goods with enhanced antimicrobial property is possible. This can enhance market share of functional fabrics and marginal share of investment and profit as well, in this sector.

Key words: Antimicrobial properties, fastness properties, mordants, mulberry silk, neem leaf powder.