

**Study of Thermochromic Finish on Cotton Inspired by Hibiscus
Flowers for Home Textile Applications**



by

Deerak Minhaj

ID. 14024089002

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Certificate of Submission

Thesis titled “Study of Thermochromic Finish on cotton Inspired by Hibiscus Flowers for Home Textile Applications” is being approved for submission for completion of MS Textile degree from School of Textile and Design, University of Management and Technology, Lahore, Pakistan.

Name of Student: Deerak Minhaj

Student ID: 14024089002

Supervised by: _____

Date: _____

Faiza Anwar

(Lecturer)

Declaration

I, Ms. Deerak Minhaj ID: 14024089002 student of MS Textiles in the subject area of Fashion Design, hereby declare that the matter printed in the thesis title “Study of Thermochromic Finish on Cotton through Dyeing Inspired by Hibiscus Flowers for Home Textiles” is my own work and has not been printed, published, and submitted as research work, thesis or publication in any form in any university, research institution, etc. in Pakistan or abroad.

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Signature of Deponent

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Abstract

This work mainly addresses thermochromic (color changing by heat) textiles inspired by Hibiscus Flowers that changes color when the temperature changes. Similarly, the thermochromic finishes when applied to other materials also change colors with the change in temperature. One of the areas of this research is to explore the possibilities of this new surface design as a material. Besides exploring other possible options for the application of thermochromic textiles other the one most commonly used. Incorporating thermochromic inks / finishes in dyeing cotton fabric and yarn for weaving and knitting. Blending techniques for new outcome of designs like dyed cotton yarn and knitted fabric, etc were the bullet points. The idea behind conducting research in this section was to utilize thermochromic ink / finish in dyeing that has not been explored before. Using thermochromic inks / finishes for dyeing cotton fabric and cotton yarn and constructing knitted and woven structures with that dyed yarn by giving the fabrics water resistant surface and constructing a product by using that fabric is objective for this research.

Key words: Thermochromic Finish, Hibiscus, temperature change, design, dyeing techniques, cotton yarn and fabric, textile surface, water repellent finish, home textile

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Chapter 1

INTRODUCTION

1.1 Background of the Study

In technology oriented fashion and textiles world, where there is tough competition everywhere the artists and designers tends to work in more innovative and novel pattern to get fame and to come up in market's limelight. Studying, experimenting and developing new ideas based on research is helping the market growing rapidly, where the technology is working as a catalyst that fastens up the speed for quick implementation of ideas and there results. The technology oriented fashion and textiles industry giving pump to new ideas that just not only amazes the artists and designers but also astounds the common people.