To study the change in properties of cotton and polyester fabrics after the application of conventional (chemical finish), natural & nano finishes.

By

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School of Textile and Design

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Statement of submission

To study the change in properties of cotton and polyester fabrics after the application of conventional (chemical finish), natural & Nano finishes ‘is being submitted for completion of BTTM (Hons) from School of Textile & Design, University of Management And Technology, Lahore, Pakistan.

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DECLARTION

I, Mobeen Fatima bearing Roll # 14026035001 and a student of BTTM (Hons) Textile Technology and Management, for the session 2014-2017.my thesis title is "**To study the change in properties of cotton and polyester fabrics after the application of conventional (chemical finish), natural & Nano finishes**" 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. either in Pakistan or abroad.

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Date: 27 April 2018

DEDICATION

I dedicate my this project to ***Almighty Allah subhan Wa Tallah*** and after that to my untiring and incessant handwork and my motivation which kept me going even at difficult times as during these four years there came a time when I stumped down but due to sheer help of Almighty Allah and the courage which He invoked in myself made me to complete this thesis in time.

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ABSTRACT

This study focused on **To study the change in properties of cotton and polyester fabrics after the application of conventional (chemical finish), natural & Nano finishes'** for this purpose applied zinc Nano particle ,Chitosan, RUCA-BAC were applied on cotton and polyester to achieved antimicrobial and comfort properties .Undertaken various tests like Tensile strength, air permeability, anti-bacterial activity. To confirm the presence of Zinc oxide Nano particles SEM analysis was performed. The percentage contribution of chemicals were confirmed by EDX analysis.

After that several tests were conducted which include, tensile strength, air permeability and antibacterial activity.

KEY WORDS: Zinc Oxide, Chitosan, RUCA-BAC, Tensile Strength, Anti-bacterial, Air permeability, SAM Analysis, (EDX) energy dispersation X-ray

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Introduction

In past time , for wound healing topical treatment has focused on infection covered by the use of this system but, few years ago multifunctional Nano systems has been developed by the researchers they provide comprehensive effects with great potential. Nanoparticles called as a Nano carriers for over a decade nanoparticles use in biomedical applications as antibacterial agent.