STUDY ON EFFECT OF WATER QUALITY ON DYEING OF KNITTED COTTON FABRIC WITH REACTIVE DYES FROM DIFFERENT AREAS AROUND LAHORE AND FAISALABAD

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This report submitted in partial fulfillment of the requirements for the Degree of Bachelor of Science in Textile Engineering.

In

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DEDICATION

I dedicate this research project to my beloved parents who made sacrifices of their wishes, health, wealth, etc. for making me an educated person of this society; especially my brother, Haji Asgher Ali, who, among the poor and under privileged people of the country due to non-availability of opportunities for getting education, always motivated me to get education . He taught me tolerance and peace and how to reach me goal with consistent hard work. Now, I am among the educated persons of the society due to his hectic efforts made for my education.

I pray for my parents' long and prosperous life and forgiveness from my ALLAH ALMIGHTY.

ACKNOWLEDGEMENTS

Countless thanks to GOD ALMIGHTY, who gave us the Holy Prophet (PBUH) and illumines us eternally. All the things in the universe exist due to His perpetual and immortal light. No words are found to thank Him, who is the source of all kinds of knowledge and wisdom for recognizing Him, ourselves and exploration of the secrets of life.

All respect, love and gratitude to the Holy Prophet (PBUH) who showed us the right path, the path of light and success in both the words. And we are living in this world given to us due to Him (SAWAW).

Warm and sincere gratitude to my supervisor, Honorable Associate Professor, Dr. Nabeel Amin for his motivation and sincere guidance to me not only during the research project but also the entire period of degree. Hundreds of hearty thanks to him for instilling the knowledge of textile processing into me and inspiring me to go to the study. I have not enough vocabulary that may express my emotions for his consistent dedication with his student for their future.

Warm and sincere gratitude to my adviser, Honorable Assistant Professor, UmairMukhtar for his inspiration, prudent advice, affectionate guidance to make this project work. We have completed our project work successfully with the help of Mr.AzharRafiq (Processing Manager at Sapphire fiber dyeing unit). We would like to thank our respected teacher, Honorable Dr.AmjadAyyubwho welcome us in PCSIR lab for the testing of water samples.Wearealso grateful to thechemistrydepartment of PCSIR for its facilities, specially its lab facilities.

Over and above, my elder brother Haji Asgher Ali, has always been a source of inspiration for me and the way he patroned me to meet challenges. He financed me physically, mentally and soul as well. Moreover, my brother Dr.Sajjad Ali Bhati and Haji KhadimHussain always wanted me to do in the field of education what they had missed in their life.

Thanks to my seniors and colleagues for their valuable and expert opinion and suggestions. Also thanks for Library Officers, Mr. Muhammad Akram especially the latter two for extending their help to me in using research tools and searching articles.

It is imperative for me to thank those including Uzma Akbar, Asima,Maham, Muhammad Abdullaf, MukaramAli,Muazam Ali, Muhammad Ali, and his friends, etc, who helped me in transcribing the data.

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ABSTRACT

The current study focuses on the quality of water. As the water quality is important for dyeing the fabric . There are a large volume of water are used in textile industries during dyeing respectively. It investigates that at different areas the water quality is different according to their parameters. The main and vital theme of this research project is to know and check the parameters of ground water (TDS, pH, Hardness, Alkalinity, etc.) from different areas around Lahore and Faisalabad and their effect on reactive dye of cellulosic textile material with respect to Light fastness, wash fastness, rubbing fastness and gray scale rating . and their effect on dyeing quality regarding to Croma, Hue, lightness and total difference as well . The water samples are tested in the PCSIR department of chemistry. The sample of water from Lahore has accepted limits of contaminations but in Faisalabad water has large quantity of contaminations . The object of this work is to study the effect of water hardness on knitted cotton fabrics from selected areas water sample by using reactive dyes (PROCION CRIMSON H-EXL and PROCION NAVY H-EXL).Cotton is a natural cellulosic fabric. Reactive dyes are commonly utilize for cotton dyeing due to its wide range of shades dark shades to light shades of cellulosic fabric. The major objective of our work is to evaluate and observe the effect of dyed sample when the quality of water are changed due to different areas. Here five different concentration of dye are conceder 0.5%, 1%, 2%, 3% and 5%. All five samples are processed similarly and the properties of fastness are controlled strictly as color fastness to rubbing, color fastness to wash and light fastness. After that we predict and observe the shade variation with the help of spectrophotometer. For the finalevaluation the information are arranged in the tables. There are no definable effect of water quality on the surface properties of the dyed specimen. The water quality has no effect on the rubbing fastness and washing fastness properties of dyed fabric but has effect on light fastness properties.