

Textile dyeing using traditional and biodegradable salts.
A comparative study



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A comparative study

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**MS
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CHEMISTRY**

**BY
Muhammad Imran Bilal**

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SESSION: 2015-2017

**DEPARTMENT OF CHEMISTRY
SCHOOL OF SCIENCE
UNIVERSITY OF MANAGEMENT AND TECHNOLOGY,
LAHORE, PAKISTAN**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah, the Most Merciful, the Most Kind



Research Completion Certificate

RESEARCH COMPLETION CERTIFICATE

Certified that the research work contained in this thesis titled, “Textile dyeing using traditional and biodegradable salts.A comparative study” has been carried out and completed by Muhammad Imran Bilal, ID: 15005140033. The quantum and the quality of the work contained in this thesis is adequate for the award of degree of MS.

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Declaration

DECLARATION

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Session **2015-2017** hereby declare that the matter printed in the thesis titled “**Textile dyeing using traditional and biodegradable salts. A comparative study**” 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.

Dated: _____

(Muhammad Imran Bilal)

Dedication

This thesis work is dedicated to my parents, who have always loved me unconditionally and whose good examples have taught me to work hard for the things that I aspire to achieve.

This work is also dedicated to my supervisor **Dr. Sohail Nadeem** and **Muhammad Farooq** who have been a constant source of support and encouragement during the challenges of this thesis work.

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List of Tables

List of Tables

Table 3. 1 Specifications of Fabrics.	Error! Bookmark not defined.
Table 3. 2 Dyeing Recipe	Error! Bookmark not defined.
Table 4. 1 CF to Laundering of Blue Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 2 Color fastness to Laundering of Red Dyed Fabric Specimens.....	Error! Bookmark not defined.
Table 4. 3 Color fastness to Laundering of Ultra-Wine Dyed Fabric Specimens..	Error! Bookmark not defined.
Table 4. 4 Color fastness to Laundering of Black Dyed Fabric Specimens.....	Error! Bookmark not defined.
Table 4. 5 Comparison of All dyed fabric specimen AA to SC (CF to Laundering).....	Error! Bookmark not defined.
Table 4. 6 Color fastness to Crocking of Blue Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 7 Color fastness to Crocking of Red Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 8 Color fastness to Crocking of Ultra-wine Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 9 Color fastness to Crocking of Black Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 10 Color fastness to Crocking of all Dyed Fabric Specimens.....	Error! Bookmark not defined.
Table 4. 11 Color fastness to Light of Blue Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 12 Color fastness to Light of Red Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 13 Color fastness to Light of Ultra-wine Dyed Fabric Specimens.....	Error! Bookmark not defined.
Table 4. 14 Color fastness to Light of Black Dyed Fabric Specimens	Error! Bookmark not defined.
Table 4. 15 Comparison Color fastness to Light of all Dyed Fabrics Specimens..	Error! Bookmark not defined.
Table 4. 16 Effluent analysis of all dyed fabric specimens.....	Error! Bookmark not defined.



List of Tables

List of Figures

List of Figures

Figure 1. 1 The dissociation of cellulose	Error! Bookmark not defined.
Figure 1. 2 Wrap and Weft of the cotton.	Error! Bookmark not defined.
Figure 1. 3 Structure of Reactive dye	Error! Bookmark not defined.
Figure 3. 1 Mounting of test specimens and blue wool references. ..	Error! Bookmark not defined.
Figure 4. 1 CF to Laundering of Blue Dyed Fabric Specimens (Staining)	Error! Bookmark not defined.
Figure 4. 2 CF to Laundering of Blue Dyed Fabric Specimens (Change in Color)	Error! Bookmark not defined.
Figure 4. 3 Color fastness to Laundering of Red Dyed Fabric Specimens (Staining)	Error! Bookmark not defined.
Figure 4. 4 Color fastness to Laundering of Red Dyed Fabric Specimens (Change in Color)	Error! Bookmark not defined.
Figure 4. 5 Color fastness to Laundering of Ultra-Wine Dyed Fabric Specimens (Staining)..	Error! Bookmark not defined.
Figure 4. 6 Color fastness to Laundering of Ultra-Wine Dyed Fabric Specimens (Change in Color)	Error! Bookmark not defined.
Figure 4. 7 Color fastness to Laundering of Black Dyed Fabric Specimens (Staining)	Error! Bookmark not defined.
Figure 4. 8 Color fastness to Laundering of Black Dyed Fabric Specimens (Change in Color)	Error! Bookmark not defined.
Figure 4. 9 Comparison of All dyed fabric specimen (Staining)	Error! Bookmark not defined.
Figure 4. 10 Comparison of All dyed fabric specimen (Change in Color)	Error! Bookmark not defined.
Figure 4. 11 Color fastness to Crocking of Blue Dyed Fabric Specimens.....	Error! Bookmark not defined.
Figure 4. 12 Color fastness to Crocking of Red Dyed Fabric Specimens.....	Error! Bookmark not defined.
Figure 4. 13 Color fastness to Crocking of Ultra-wine Dyed Fabric Specimens ...	Error! Bookmark not defined.
Figure 4. 14 Color fastness to Crocking of Black Dyed Fabric Specimens	Error! Bookmark not defined.
Figure 4. 15 Comparison of all dyed fabric specimens (CF to Crocking)	Error! Bookmark not defined.
Figure 4. 16 Color fastness to Light of Blue Dyed Fabric Specimens	Error! Bookmark not defined.

List of Figures

- Figure 4. 17 Color fastness to Light of Red Dyed Fabric Specimens **Error! Bookmark not defined.**
- Figure 4. 18 Color fastness to Light of Ultra-wine Dyed Fabric Specimens ... **Error! Bookmark not defined.**
- Figure 4. 19 Color fastness to Light of black Dyed Fabric Specimens **Error! Bookmark not defined.**
- Figure 4. 20 Comparison Color fastness to Light of all Dyed Fabrics Specimens **Error! Bookmark not defined.**

List of Abbreviation

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AA=	Ammonium Acetate
SC=	Sodium Chloride
TDS=	Total Dissolve Solid
CI=	Color Index
K/S=	Color Strength Value
e.g. =	Example
g/l=	Gram per liter
H ₂ O =	Molecular formula of water
Mins=	Minutes
λ_{max} =	Maximum absorption wavelength
Vs=	Versus

Abstract

Abstract

This theory shows the consequences of concentrates into the viability of biodegradable basic natural salts as contrasting options to customary non-biodegradable inorganic salts (electrolytes) and soluble bases utilized as a part of exhaust coloring of cotton with receptive colors. The essential goal of the investigation was to create enhanced earth economical coloring frameworks. A synozol blue, synozol red, synozol black and synozol Ultra Wine colors were utilized as a part of this study. After early reassuring outcomes utilizing ammonium acetic acid derivation salts. The colour fastness to laundering of all dyed fabrics, Color fastness to crocking and Color fastness to light of dyed fabric was found at good level. In replacement of sodium chloride, Ammonium acetate ($\text{NH}_4 \text{CH}_3 \text{CO}_2$) has been successfully employed to make the process environment friendly.



Table of Contents

Table of Contents

RESEARCH COMPLETION CERTIFICATE	i
DECLARATION	ii
Dedication	iii
ACKNOWLEDGEMENT	iv
List of Tables	vi
List of Figures	vii
List of Abbreviation	viii
Abstract	ix
Introduction.....	12
Fiber textiles.....	12
Cotton fiber	Error! Bookmark not defined.
Properties of cotton fiber	Error! Bookmark not defined.
Hygroscopic properties	Error! Bookmark not defined.
Chemical properties	Error! Bookmark not defined.
Dyeing of cotton	Error! Bookmark not defined.
Preparing cotton for dyeing	Error! Bookmark not defined.
Pick & End per inches.....	Error! Bookmark not defined.
Chemical structure of reactive dyes	Error! Bookmark not defined.
Exhaust dyeing.....	Error! Bookmark not defined.
Steps of Exhaust Dyeing.....	Error! Bookmark not defined.
Biodegradability.....	Error! Bookmark not defined.
Total Dissolved solids.....	Error! Bookmark not defined.
Literature Review.....	Error! Bookmark not defined.



Table of Contents

Experimental Work.....	Error! Bookmark not defined.
Chemicals used:	Error! Bookmark not defined.
Apparatus used:.....	Error! Bookmark not defined.
Equipment used.....	Error! Bookmark not defined.
Procurement of Materials:.....	Error! Bookmark not defined.
Dyeing of Fabric:	Error! Bookmark not defined.
Quantitative Evaluation of Dyed Fabrics.....	Error! Bookmark not defined.
Colorfastness to Crocking.....	Error! Bookmark not defined.
Colorfastness to Laundering	Error! Bookmark not defined.
Color fastness to Light	Error! Bookmark not defined.
Results and Discussion	Error! Bookmark not defined.
Comparative effluent analysis.....	Error! Bookmark not defined.
Conclusion	Error! Bookmark not defined.
References.....	Error! Bookmark not defined.

Conclusion

Introduction

Cotton dresses are used for at least 7000 years in the least use. Although, Polyesters such as polyethylene fibers, acrylic, polyamides and so on, has entered the market in the past 50 years, cotton is still consolidated demand for its strong consumers around the world. Cotton represents textile today More than half of the global textile market is expecting and demand is expected Continue. This dominance of cotton fiber is mainly due to its natural convenience, Performance and appearance. The cotton plant produce most natural fiber and is one of the main economies of the global economy. Cotton fibers, commonly known as cotton lint. Cotton usually increases 30 to 40 mm in length and thickness increases 15 μm in thickness and account for 90% of production in the world.

Fiber textiles

Cotton textures are known to have been used at any rate for a long time, for example, polyesters, acrylics, polyamides, and polypropylenes have involved the market in the course of past years, and cotton has still kept up its solid buyer request around the world. Today, cotton materials speak to the greater part of the worldwide material commercial (King 2007), and the request are relied upon to operation. This predominance of cotton fiber is chiefly because of its regular use, execution, and appearance(Gohl and Vilensky 1983)