DUCTION AND ACCEPTABILITY OF SPECIALTY PAPER OUT OF RECYCLED PAPER USING QUAIL EGG SHELLS AS AN EXTENDER

Research Study

JERMIELYN YVON R. PENOBLAR
SARAH ABIGAEL C. ALEGRE

Science High School
CAVITE STATE UNIVERSITY
Indang, Cavite

March 2010

PRODUCTION AND ACCEPTABILITY OF SPECIALTY PAPER OUT OF RECYCLED PAPER USING QUAIL EGG SHELLS AS AN EXTENDER

A Research Study Presented to the Faculty of
Science High School, College of Education
Cavite State University,
Indang, Cavite

In partial fulfilment of the
requirements for graduation

JERMIELYN YVON R. PENOBLAR
SARAH ABIGAEL C. ALEGRE

March 2010

ABSTRACT

ALEGRE, SARAH ABIGAEL DE CASTRO and **PENOBLAR JERMIELYN YVON RAMOS. Production and Acceptability of Specialty Paper out of Recycled Paper using Quail Egg Shells as an Extender.** Research Study.(General Science Curriculum). Science High School, College of Education, Cavite State University, Indang, Cavite,March 2010. Adviser: Mr. Renato T. Agdalpen.

The study was conducted in Mendez and Indang Cavite. It aimed to produce specialty paper out of recycled paper using quail egg shells as extender and determine its acceptability. Also the study aimed to determine the treatment that would produce the best specialty paper in terms of color, texture, flatness, opacity and appearance; to determine the level of acceptability of each treatment that is produced from recycled paper using quail egg shells as extender; and to determine the cost of production of the specialty paper.

A total of 50 respondents were interviewed. The data were gathered through a questionnaire given to each respondent.

Based on the data gathered, T3 is best in terms of texture, and opacity. It ranked second in terms of color, general appearance and general acceptability. It ranked least in terms of flatness. T2 on the other hand, is the best treatment in terms of color, appearance, and general acceptability. It ranked second in terms of texture, flatness and opacity. T1 is the least treatment in terms of color, texture, opacity, general appearance and general acceptablity but best in terms of flatness.

LIST OF TABLES

Table		Page
1	Experimental Layout.....	18
2	Materials used.....	18
3	Scale.....	21
4	Acceptability of specialty paper in terms of color.....	24
5	Acceptability of specialty paper in terms of texture.....	25
6	Acceptability of specialty paper in terms of flatness.....	26
7	Acceptability of specialty paper in terms of opacity.....	27
8	Acceptability of specialty paper in terms of appearance.....	29
9	Acceptability of specialty paper in terms of general acceptability...	30
10	Cost of wooden frame production.....	31
11	Cost of paper production	31

LIST OF APPENDICES

Appendix		Page
A	Score sheet for sensory properties.....	36
B	ANOVA Table.....	37
C	Duncan Multiple Range Test Table.....	39

LIST OF PLATES

Plate		Page
1	Quail egg shells used in the study	42
2	Soaked used bond paper	42
3	Wooden Frames	43
4	Miller used in the study	43
5	Milled quail egg shells.....	44
6	Squeezing of the soaked paper out of water	44
7	Crushing of the soaked paper to produce paste.....	45
8	Isolating the fibres of the crushed paper	45
9	Pouring of water	46
10	Addition of crushed quail egg shells	46
11	Removing of the frame from the watery suspension	47

Acceptability of specialty paper in terms of texture 24

Acceptability of specialty paper in terms of flatness 25

Acceptability of specialty paper in terms of opacity..... 26

Acceptability of specialty paper in terms of appearance 28

Acceptability of specialty paper in terms of general acceptability 29

Cost of wooden frame production 30

Cost of paper production..... 31

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 32

Summary 32

Conclusions 33

Recommendations 33

LITERATURE CITED 34

APPENDICES 36

PLATES 42

TABLE OF CONTENTS

	Page
APPROVAL SHEET	ii
BIOGRAPHICAL DATA	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	viii
LIST OF TABLES	xi
LIST OF APPENDICES	xii
LIST OF PLATES	xiii
INTRODUCTION	1
Statements of the Problem	3
Objectives of the Study	3
Significance of the Study	4
Time and Place of the Study	4
Scope and Limitations of the Study	4
Definition of Terms	5
REVIEW OF RELATED LITERATURE	7
METHODOLOGY	18
Materials	18
Methodology	19
Statistical Analysis	22
RESULTS AND DISCUSSION	23
Acceptability of specialty paper in terms of color	23

PRODUCTION AND ACCEPTABILITY OF SPECIALTY PAPER OUT OF RECYCLED PAPER USING QUAIL EGG SHELLS AS AN EXTENDER

Penoblar, Jermielyn Yvon R.
Alegre, Sarah Abigael

A research study presented to the Faculty of Science High School, College of Education, Cavite State University, Indang, Cavite in partial fulfilment of the requirements for graduation with Contribution No. SHS 2010-022. Prepared under the supervision of Mr. Renato T. Agdalpen.

INTRODUCTION

In today's world the importance of recycling is becoming greater of a concern both for the general public and also to the economy. Recycling has become a major issue as scientific research has been suggesting for years that the earth is being depleted too fast to sustain a healthy balance. In the Philippines, **Republic Act No. 9003** enacted by the Senate and House of Representatives of the Philippines which is "An Act Providing for an Ecological Solid Waste Management Program, Creating the Necessary Institutional Mechanisms and Incentives, Declaring Certain Acts Prohibited and Providing Penalties, Appropriating Funds therefore, and for other Purposes. The act teaches the Filipinos on proper waste management and at the same time disseminate them about the importance of recycling

The earth's natural resources are being consumed at a rate that reinforces the idea that we are living for today and the future generations will be paying for the