CHAPTER - 1

INTRODUCTION

1.1 General Introduction:

Remarkable progress has been achieved recently in the field of textile technology by means of the application of modern technology. The textile machinery for high speed production of yams and fabrics has been developed for the production of large quantities of textile products with high efficiency. The control of finishing processes also has become more precise compared with that of the past. In the technological field during the past two decades, many research projects have been carried out with respect to yarn and fabric properties in order to assess their performance during use.

Clothing is one among the basic necessities. In the functional sense, it offers protection to the individual against nature's vagaries such as hot or cold, humid or dry environments, thus providing physiological comfort and psychological satisfaction. Aesthetically, clothing is a primary form of embellishment and provides scope for expressing one's personality.
In early days clothing served the purpose of protection, adornment and modesty. But today, they are expected to serve manifold functions of durability, good appearance in the form of style design, colour fastness, wrinkle resistance, crease retention and dimensional stability in addition to being capable of shedding soil readily, quick drying, requiring little or no ironing - to mention a few. This illustrates the wide range of properties and expectations of the consumers of performance of textiles. It is for the industry to be alive to these multiple requirements, eventhough some needs like crease retention and wrinkle recovery, good absorption and quick drying are inherently contradicting, which no single fabric can accomplish in spite of the wide range of fibre types, qualities and finishing techniques available. Thus, it has become imperative to blend two or more fibres so that the properties which are deficient in one is supplemented by the other fibre being blended with.

In India, blending emerged as an economic factor when cotton prices increased substantially due to its stunted growth all over the world. It was at this time that the first plant went into production and it was presumed that the polyester staple would provide a good
substitute for superfine cotton which was being imported. The blending technology also paved way for satisfying most of, if not all of the consumer requirements.

The present day textiles should not only meet the social aspect of providing adequate variety but also the marketing aspect of making them available according to the requirements of the consumer. Products which do not meet these requirements are sure to cause great concern to the manufacturer, government and the consumer.

With the wide variety of colour, design style, texture and finish of textiles available today and the lack of adequate product information, textile buying has become rather a challenge to the present day consumer. It demands experience, skill, ability to analyse and distinguish and foresee performance on the part of the consumer prior to purchase, if it is to give satisfaction to him.

The term consumer satisfaction encompasses preferences of products, purchase practices and problems faced by the consumer which are important. They indirectly influence the production planning of textile
fabrics. The growth of the industry depends principally on the demand for its products and the satisfaction of the consumer. If both of them are to benefit, there should be an unambiguous understanding among them. It has been pointed out that efforts to help consumers might become more meaningful if research were conducted to trace how the consumers buy and what they want and if research work were scientifically controlled to assess properties of fabrics in use. Such an attempt necessitates the study of consumer preference, purchase practices, problems and requirements in textile buying from time to time to visualise the growing trend in consumer attitudes towards textile selection, use and care. Transfer of such data to the manufacturer will help in planning and production of products which will really appeal to the consumers and thus promote its growth. There is also a need for the producers to plan for transfer of relevant information in terms of product quality information and care and maintenance information to the consumers.

The textile industry is going through a period of upheaval marked by the emergence of new ideas and modernization of old notions. With the advancing finishing and blending technologies, attempts are being made to improve their performance qualities. The blending
of polyester staple, which has low moisture absorbency with cellulosic fibres not only mitigates its drawbacks, but also improves its performance.

Recent cotton shortage, oil hike and emphasis on utilization of cultivable land for growing food crops have paved way for the government to take up fiscal policy of blending at least 15% man-made cellulose in their products by the mills which proved to be of great advantage to the cotton mill industry as well as the consumer. The blending of man-made cellulose was continued even after the situation improved. This sort of unpredictable cotton situation seems to have set out once again and the government is disturbed about the substantial increase in the domestic cotton price and is considering to curb fresh exports of staple cotton. Thus it can be expected from the past experience, that any uncertainty with cotton is going to be a boon to the man-made industry and the fibres like polynosic and VR will be expected to play a major role in place of cotton. With this in view, the present work has been planned to include a study of 100% PN, PN/C and PN/PE fabrics.
1.2 Scope:

It is in this background and in-keeping with the current needs, the present research has been carried out in two phases - the first phase comprising of consumer survey covering the different aspects of buying and the second one covering the quality assessment of the select fabrics.

Thus the main objectives of the present study are:

Phase I:

1) to study the differences in the preferences, buying practices and problems of consumers in village, town, district and city,

2) to study the influence of select demographics of the respondents on their buying practices, and

3) to identify the factors which are conducive to consumer satisfaction.

Phase II: To subject the fabrics to multiple launderings using two different detergents in order

4) to study their aesthetic and mechanical properties of fabrics and to examine their comfort characteristics in terms of air-permeability, absorbency, etc.,
5) to compare the findings with norms if any or else to establish norms for performance quality wherever possible, and

6) to transfer the above findings in more meaningful terms for better understanding by the consumer.

A review of literature pertaining to the above objectives has been presented in Chapter 2. Chapter 3 deals with the objectives of Phase I while Chapters 4 to 12 discuss the objectives of Phase II as follows. Chapter 4 discusses the qualitative and quantitative estimation of PN and PN blends, Chapter 5 related to durability, Chapter 6 related to comfort, Chapter 7 related to shape retention characteristics, Chapter 8 related to aesthetic qualities, Chapter 9 related to bending, shearing and other more subtle aesthetic qualities which is followed by Chapter 10 which deals with the making up qualities of PN blends. Chapter 11 brings out their ease-of-care properties while in Chapter 12 an attempt has been made to integrate all the test results from Chapters 4 to 11 and to convert them into meaningful, informative and useful Product Performance Index. Chapter 13 gives the major conclusions of Phase I and Phase II and the implications of the study along with recommendations for further study.