A STUDY ON IMPARTING FRAGRANCE FINISH IN GIRLS TOPS USING COTTON FABRIC

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ABSTRACT

Our human life got five sense organs and the important one among that was the sense of smell. The smell can be differentiated basically into two types that is fragrance which means a god smell and odour which reflects bad smell. In human beings perspiration is being a main cause for some of our health issues. It is happened due to the sweat dissipation from human body which was absorbed by the wearers garment. Later on this will cause the odour from our garment which leads to head ache and some sort of skin irritation to some sensitive skin. In order to overcome the problem of odour from the garments the fragrance (i.e aroma) has been imparted in the garment which will give a pleasant and pleasing smell to the wearer. Working people will get more body odour rather than an ordinary people. So the fragrance finished garments were designed for working ladies with an age group of 20 to 25. Cotton fabric was selected to which fragrance finish was applied and converted into Ladies tops. Then the evaluations were done by Colour fastness test and Visual Inspection.

Key Words: Fragrance Finish, Perspiration, Cotton fabric.

INTRODUCTION:

Textiles have such an important bearing, that everyone needs to know something about it. Now-a-days they are used in all the aspects and everyone is an ultimate customer. Textile refers from yarn, fiber, fabric, and it refers to any material made through weaving knitting processes.

Aroma therapy and aromachology and their role in pharmaceutical industry are already established in the field of research. Its treatments to medical textile materials have gained importance in the recent years. The uses of this fragrance finish are diverse. They are also used in the field of interior textiles like sheets, quilt – covers, curtains, carpets and bed gowns.

Fragrance finishing is the process which enhances the value of the product by adding some incentives to it. In the world market place it is continuously changing and the demand of

people changing. Every person desires for some change .i.e. something new & unique. The successful effective implementation of change has to be done to in the market.

The popular use of essential oils is for aromatherapy. So these aromatic oils are attributed with a range of properties that helps to achieve 'physical and emotional balance. This therapy includes blends of various fragrances like musk, pineapple, rose, lavender, jasmine, lemon, peppermint etc., which are applied on the fabric with the help of a binder.

This fragrance finish can be given by using microencapsulation technique. This technique of fragrance has been used to maintain a fresh aroma on textiles. In this microencapsulation technique the fragrance are applied in the form of atoms. Once the wearer wear the garments and it is supposed to abrade on the wearer's body the fragrance atoms present in the garment will burst out to give the fragrance. The microcapsules are a container which protects its contents from evaporation, oxidation and contamination till its release it's triggered by gentle rubbing.

Perspiration is an important aspect to be considered in the garment. The garments weared during summer should have more moisture absorbency property due to sweat dissipation. Similarly it must absorb and release the moisture effectively. The fabric should bring some sort of fragrance to hide odor created by sweat dissipation. In order to develop these properties in garment, the garment can be subjected to fragrance finish.

Cotton fabric is the most comfortable one to wear. It is natural and cellulosic fabric which was made up of cotton balls. It has the property of more moisture absorbency and breathability. It has the resistance property to static electricity.

Weaving is a method of fabric production where two sets of yarn interlaced together at right angles to produce fabric. The other methods of fabric manufacturing are knitting, crocheting, braiding, felting and Plaiting.

Reactive dyes are the dyes which react with the fiber molecules while dyeing. Reactive dyes give better affinity than other dye stuff for cellulosic fibers. Reactive dyes are available in both the brands like hot and cold. Due to the better dye affinity towards cellulosic fibers that investigator has selected reactive dye.

Perspiration is an important aspect in our daily life. In human beings perspiration is being a main cause for some of our health issues. It is happened due to the sweat dissipation from human body which was absorbed by the wearers garment. Later on, this will cause the odour from our garment which leads to head ache and some sort of skin irritation to some sensitive skin. In order to overcome the problem of odour from the garments the fragrance (i.e aroma) has been imparted in the garment which will give a pleasant and pleasing smell to the wearer. Working people will get more body odour rather than ordinary people. So the fragrance finished garments were designed for working ladies with an age group of 20 to 25.

METHODOLOGY

SELECTION OF YARN:

Cotton is called the King of Fiber. It is a natural fiber. Cotton Fiber has the property of moisture absorption and basically it is a cellulosic fiber. Cotton yarn of 60s count was selected for the study. Then the cotton yarn was sent for weaving.

SELECTION OF WEAVING:

Plain weave was selected for the study. Plain weave is the most common and tightest of basic weaves. The selected cotton yarn was taken for weaving. Plain weave consist of both warp and weft threads. The intersection of warp yarn and weft yarn at right angles forms fabric.

SELECTION OF PRE-TREATMENT:

The pretreatment for the cotton fabric are as follows:

1) Desizing

2) Scouring

3) Bleaching

SELECTION OF DYE:

Dye is a coloring substance that has an affinity to the substrate to which it is being applied. The dye is generally applied in aqueous solution. Colour is applied to the fabric by different methods and at different stages of the textile manufacturing process. To dye a cellulosic fibre the best choice is to dye with reactive dyes because of its dye affinity. In that way reactive dye is suitable to dye the cotton fabric.

SELECTION OF AROMA FINISH:

It is the method of imparting a good smelling agent in any textile substrate**.** This was done by micro encapsulation technique, by imparting the microcapsules in the fabric with the smelling agent according to the flavours. Once the wearer wear the garment consisting of fragrance finish the fabric would abrade with the wearer‘s body where the micro capsules burst out the fragrance to make the wearer to feel the fragrance and it hides the unpleasant smell due to perspiration. It also gives a wonderful soft touch to the fabric. Hence the investigator has selected this finish.

SELECTION OF FLAVOURS

The selection of flavours had come to know by conducting a survey among 50 girls belonging to the age group of 20 to 25. This survey was conducted by placing ten kinds of fragrance samples readily available in the market. So from those ten kinds of flavours girls have chosen two best flavours according to their taste.

1) JASMINE

2) LAVENDER

APPLICATION OF AROMA FINISH:

The result of the best finishing of fragrance can be obtained by applying the microcapsules towards the end of the production process. The ratio of capsules to the binder is 4:1. Measure the correct weight of capsule of application. Mix the capsule paste well. Separately weight the binder needed. The weight of the binder was estimated 25% from the total weight of the capsules. So this equates the binder weight 500 g. Slowly add the binder to the capsule paste, with constant agitation. The mixture needs to be mixed for ninety seconds separately with a high shear mechanical mixer, so that the binder wraps around the capsules properly.

FINISHING PROCESS:

First the fabric is passed through the padding mangle which will apply the chemical consisting of fragrance flavours with binder. Then the machine was set to run for 5 minutes. So that the finish will impart in the whole length of the fabric. Then the fabric was taken away and the squeezing process was done. During squeezing the fabric pick up was about 70% - 80%. Then the fabric was sent to dry.

DESIGNING, DRAFTING AND CONSTRUCTION OF GARMENTS:

STANDARDISATION OF MEASUREMENT:

The investigator has selected 15 working girls belonging to the age group of 20 to 25 of Coimbatore region. Based on their measurements the standardized measurement chart was prepared.

SELECTION OF DESIGN:

A set of 25 designs were created and they were kept for a survey of 50 girls to select the designs with a set of rating chart. In that rating chart Design 9 was rated best and got first rank, Design 3 was rated by most and got second rank, Design 21 got third rank, Design 8 got fourth rank and Design 2 got fifth rank. Thus the designs were selected from the 25 created designs. These selected 5 designs were sent for drafting.

DRAFTING & CONSTRUCTION:

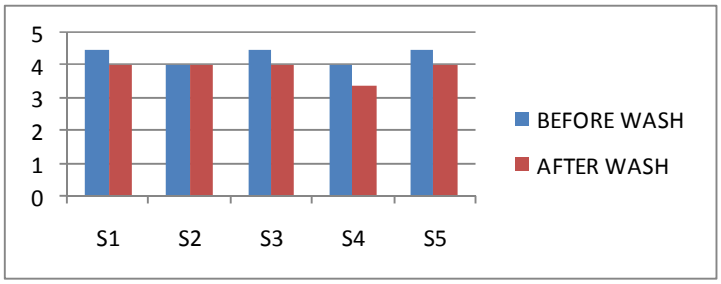
The measurements were taken from standardization chart and they were used for drafting pattern. The drafting was done for Design 9, Design 3, Design 21, Design 8 and Design 2. The drafting and construction was done for the above mentioned designs.

EVALUATION:

SUBJECTIVE EVALUATION:

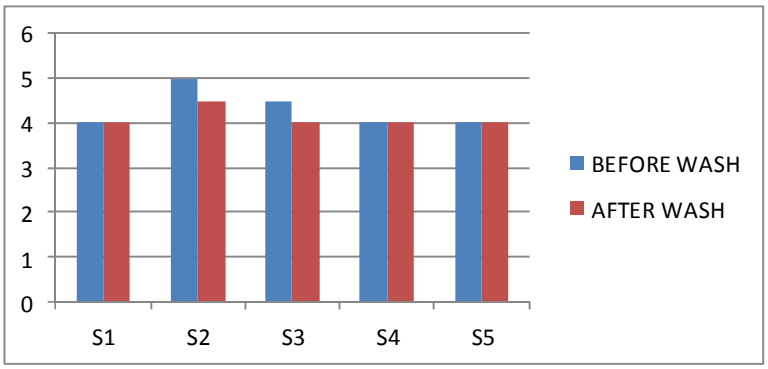
COLOUR FASTNESS TO SUNLIGHT:

Sample S1, S3, S5 showed best results. Sample s2 showed better results, Samle s4 showed good result.



COLOUR FASTNESS TO WASHING:

Sample s2 showed best result in washing, sample s3 got better result in washing, s1, s4 and s5 showed good results.

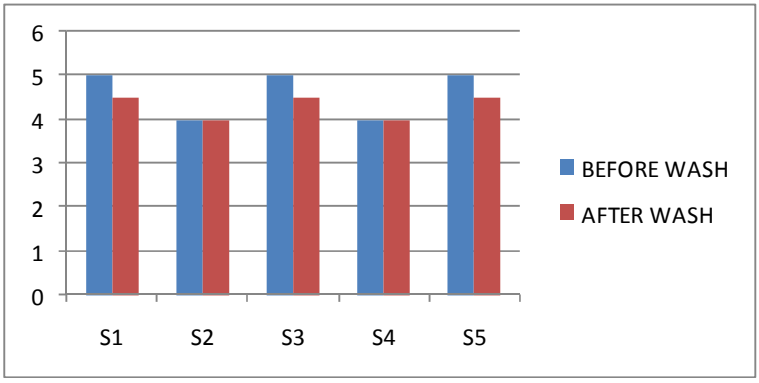


COLOUR FASTNESS TO RUBBING:

Colourfastness property was checked by crocking through dry sample and wet sample.

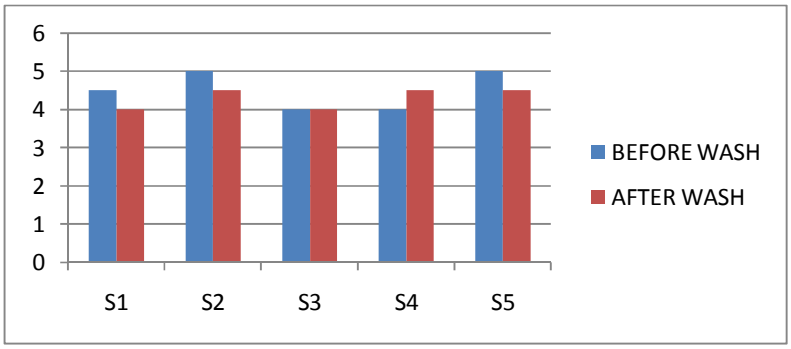
DRY RUBBING:

Sample s1, s3, s5 showed best results. Sample s2, s4 showed better result.



WET RUBBING:

Sample s2 and s5 showed Best results in wet rubbing. Sample s1 showed better result. Sample s3 and s4 showed good result.



OBJECTIVE EVALUATION:

Objective evaluation was done through Visual inspection by creating a proforma.

VISUAL INSPECTION:

The above constructed designs were displayed for a group 100 students who belong to department of Costume Design and Fashion. A proforma was created and submitted along with that to rank the constructed garments. 100 students visualize the garment and the ranked the garments according to the criteria.

Design 3 was changed as Sample 1

Design 8 was changed as Sample 2

Design 21 was changed as Sample 3

Design 2 was changed as Sample 4

Design 9 was changed as Sample 5

S3 S2 S1



RESULTS AND DISCUSSION:

The above constructed fabrics were evaluated through subjective and objective evaluation and they were ranked as follows.

Sample 3 was rated as the best and ranked as first with 95%. Sample 2 got second rank rated with 90%. Sample 1 got third rank and rated with 85%. Sample 4 got fourth rank and rated with 82%. Sample 5 got fifth rank and rated with 74%

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