



A Progress of Herbal Finish (Aloe Vera & Neem) in Infant Tank Tops in Mother's View Point

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ABSTRACT

Textiles are an integral part of everyone's life associated with him from cradle to grave. It is used to cover human body, thus encompassing and protecting it from dust, sunlight, wind and other foreign matter present in the external environment that may be harmful to him. Textiles in apparel have retained an important place in human life, starting now into developing of newer high technology and interdisciplinary products. Among technical textiles, medical textiles are a very promising sector which plays a vital role in health of mankind. It consists of textiles used in operative and post-operative tasks in and around the patient and the medical practitioners. These products are produced either by weaving, knitting, braiding or other nonwoven techniques. Medical textiles are broadly classified as non-implantable materials, implantable materials, extra corporeal devices, and hygiene products, protective and health care textiles. Health care and hygiene products include both disposable and non-disposable products mainly used in hospitals such as surgical gowns, surgical masks and gloves, infant tank top, sanitary napkins, wipes and incontinence products. The use of such products helps to reduce the opportunity for contamination by biological toxins and infectious pathogens. Hygiene and health care textiles consists of absorbent disposable products,

such as baby infant tank top, tampons, panty shields, etc. which are mostly single use items. Baby infant tank top are made up of cotton fibres A Progress of Herbal finish (50 % Aloe Vera & 50% Neem) in infant Tank Tops When baby passes urine onto the baby infant tank top it creates the favorable conditions for the growth of microbes which will result in the occurrence of rashes. Also the cellulosic materials used in baby infant tank top are easily degraded by microorganisms which in turn affects to the sensitive skin of babies. Bacterial growth is one of the biggest fallout of non-hygienic atmosphere. Further microorganisms such as bacteria, mould and fungi also cause deterioration of textiles. Hence there has been greater interest in textiles and garments that offer enhanced comfort as well as protection to the wearer. Hence to prevent such rashes some kind of an antibacterial finishes is essential. Plants and plant product are traditionally used for healing of wounds, burn injuries, anti fungal, anti viral, anti bacterial and anti microbial activity against skin infections. Herbal plant extract for antimicrobial finishing in textiles because of the excellent antimicrobial and eco friendly properties exhibited by them. Since these natural antibacterial agents are less toxic, less irritant and biodegradable they can be used as an antibacterial finish for baby infant tank top. This Herbal finish (50

% Aloe Vera & 50% Neem) in infant Tank Tops is subjected to the Mothers Survey.

Keywords: *Health Care Textiles, baby infant tank top, Antimicrobial Finish and 50 % Aloe Vera & 50% Neem of Mothers Survey*

1. INTRODUCTION

Textiles are an integral part of everyone's life associated with him from cradle to grave. According to American Textile Manufacturers Institute, "Textiles go to war, it reaches space, can become a roof, choke an oil spill, imitate an artery, hold you safely in your car seat, form tea bags, support tyres, baby infant tank top, line roads, wrap wounds and so on. Present day consumers are demanding much more on value addition in the product. Hence technical textiles have established to offer a strong potential to the revival of the industry. The fields of application of technical textiles are unlimited and the ideas are often revolutionary.

Among technical textiles, medical textiles are a very promising sector which plays a vital role in health of mankind. It consists of textiles used in operative and post-operative tasks in and around the patient and the medical practitioners. These products are produced either by weaving, knitting, braiding or other nonwoven techniques. Medical textiles are broadly classified as non-implantable materials, implantable materials, extra-corporeal devices, and hygiene products, protective and health care textiles.

Evolution is a constant and human race is constantly trying to upgrade to better quality of life. One of the outcomes of this "growth" is the need for healthier living through better hygiene. Health care and hygiene products include both disposable and non-disposable products mainly used in hospitals such as surgical gowns, surgical masks and gloves, surgical drapes, surgical foot wear and head wear, staff apparel, towels, bedding, baby infant tank top, tampons, panty shield, wipes, incontinence products,

Hygiene and health care textiles consist of absorbent disposable products, such as, baby infant tank top, tampons, incontinence products, panty shields and wipes which are mostly single use items designed to receive, absorb and retain body fluids and solid wastages. As it is a commonly accepted principle, prevention is better than cure and hence maintaining a

better hygienic environment will obviate the need for curative measures.

1.1 OBJECTIVES

- 1) To produce herbal infant wears by using natural extracted from 50% Aloe Vera and 50% Neem Essence.
- 2) To impact and produce babies wear with new application as behaviors of 50% Aloe Vera and 50% Neem Essence.
- 3) To incense the medical sense towards kids wear.
- 4) To test the Colorfastness retains ability.
- 5) To make a clear cram as survey on infant wears in mother's viewpoint.

2. REVIEWS

2.1 Technical Textiles

Technical textiles are one of the fastest growing sectors of the global textile industry, reveals Gulrajani (2008). The term technical textiles was coined in the 1980s to describe the growing variety of product and manufacturing techniques being developed primarily for their technical properties and performance rather than their appearance or other as aesthetic characteristics, remark Nadiger et al. (2008). The promise of technical and performance textiles is an emerging generation of products combining the latest development in advanced flexible materials with advances in computing and compensations technology, bio materials, nanotechnology and novel process technologies such as plasma treatment, says Venkatachalam (2007).

Health care and hygiene products include bedding, clothing, surgical clothes products for famine hygiene like baby and, briefs Gulrajani (2008). The product is in direct contact with skin; hence it has to be of very high sensitivity. Besides being particularly soft and gentle to the skin, the product feature excellent workability, high strength and good strike through wet back characteristic, reveals Vishnu (2006). Nonwoven fabrics are flat, flexible, porous sheet-like structures that are produced by interlocking of layers or networks of fibres, filament or elementary structures. They generally fall in two category i.e. disposables or durables and provide the basis for a wide variety of consumer, industrial and health care products used around the world, describe Advarekar et al. (2007).

2.2 Finishes

The rapid growth in technical textiles and in their end uses has generated many opportunities for the application of innovative finishes. Novel finishes of high added value for apparel fabrics, home textiles are also greatly appreciated by a more, discerning and demanding consumer market, indicates Holmes (2007). The modern trend is towards the production of durable and lasting finishes

2.2.1 Antibacterial Finish

The term antibacterial finishes indicates controlling or limiting the growth of bacterial colonies and their extinction, defines Achwal (2003). The antibacterial finish protects wearers of the textile product for against bacterial, dermatophytic fungi, yeasts, viruses and other deleterious microorganisms, states Jasuja (2004). Antibacterial control, destroy or suppress the growth of microorganisms and their negative effects of odour, staining and deterioration.

2.2.2 Aloe Vera

According to Rawar (2005), Aloe vera gel is an extraordinary demulcent compound, composed of mannuronic and glucuronic units combined to form a polymer of high molecular weight. Gastric mucin contains only glucuronic units in its carbohydrate moiety. The uronic acids are natural detoxicants, and as they are released by the hydrolytic cleavage of Aloe vera gel, they may take part in the healing process by stripping toxic materials of their harmful irritation.

2.2.3 Origin and Distribution of Neem

Two species of *Azadirachta* have been reported, *Azadirachta indica* A. Juss – native to Indian subcontinent and *Azadirachta excelsa* Kack. – confined to Philippines and Indonesia. Neem is a member of the Mahogany family. Taxonomic position of neem.

Order	Rutales
Suborder	Rutinae
Family	Meliaceae
Subfamily	Melioideae
Tribe	Melieae
Genus	<i>Azadirachta</i>
Species	<i>indica</i>



Fig-1: Neem and Aloe vera

3. SPECIFICATIONS

AREA: Medical Textiles

PROJECT GUIDE: Specification:

Fabric: Cotton Single Jersey Fabric

Antimicrobial Finish: 50% Aloe Vera and 50% Neem Essence

GSM: 140

Colour: Light Green, Light lavender, Light Pink and Light yellow

Garment Details: Infant Tank Top

Size: 0-3 months, 3 -6 months, 6 – 9months, 9 -12 months

4. METHODOLOGIES

This article deals with the material used for the less irritant and biodegradable infant tank top; they can be used as an antibacterial finish for baby infant tank top with the herbal items. This Herbal finish (50 % Aloe Vera & 50% Neem) in infant Tank Tops is subjected to the Mothers Survey and it is defined as an eco-friendly product in nature for the infants of the age group 0-3 months, 3 -6 months, 6 – 9months, 9 -12 months. The plain single jersey is converted into the tank tops of the above mentioned sizes then the garments are subjected to the Herbal finish (50 % Aloe Vera & 50% Neem) with the dip-Dry method.

5. TEST REPORTS

5.1 PARAMETERS TESTED

- 1) Colour Fastness towards Laundering
- 2) Colour Fastness towards Perspiration
- 3) Colour Fastness towards Saliva

4) Mothers Survey Study

(iv) Mothers Survey Study

5.1.1 COLOUR FASTNESS REPORT

Size of Test Sample : Size: 0-3 months, 3 -6 months, 6 – 9months, 9 -12 months

Reagents : 5 gpl soap and 2 gpl soda ash

Colour : Light Green, Light lavender, Light Pink and Light yellow

(i) Apparatus Required : Laundrometer and grey scale

Temperature : 95+/-2oc.

Time : 30 minutes.

RESULT

Rating for change in test specimen = 4-5.

Rating for staining in white fabric is = 3-4.

(ii) Apparatus Required : Crock meter and grey scale

Temperature : 95+/-2oc.

Time : 30 minutes.

RESULT

Rating for change in test dry specimen = 4-5.

Rating for change in test Wet specimen = 3-4.

(iii) Apparatus Required : Saliva

Temperature : 95+/-2oc.

Time : 30 minutes.

RESULT

35 LMBG 82.10-1

Part: 1

Resistance to artificial saliva: Not fast to saliva

Part: 2

Resistance to artificial saliva: Not fast to sweat

5.1.2 ANALYSIS OF THE SURVEY

The survey is taken towards the mothers towards this product can be based on questionnaires,

Colour

An attribute of things that results from the light they reflect, transmit or emit in so far as light causes a visual sensation that depends on the wave length the product while is used to carry the baby.

Baby Comfortness

A state or situation in which you are relaxed and do not have any physically unpleasant feelings caused by pain, heat, cold, etc. a state or feeling of being less worried, upset, frightened, etc., during a time of trouble or emotional pain is comfortness. Implies that the subject is in state of pain, suffering or affliction and comfort in carrying. One can provide physical comfort to someone who is not in a position to be uncomfortable.

Smoothness

This fabric gives smoothness and softness because it is made of natural fibres and the smell gives the pleasant odour.

Feel

The person who drives at very first time will not feel much comfortable when they use this often they feel better.

Experience

Experiencing will not be the correct method for survey the herbal garment but the collective opinion regarding the comfortable for the baby who uses this comfort covers at very first time. It takes time for them to make themselves comfortable while carrying the baby.

Product Sample:

Fig – 2: Material and 4 Styles of Infant wears

6. RESULTS AND DISCUSSIONS

6.1 Analysis of the Survey 100 mothers with 35 set of questions

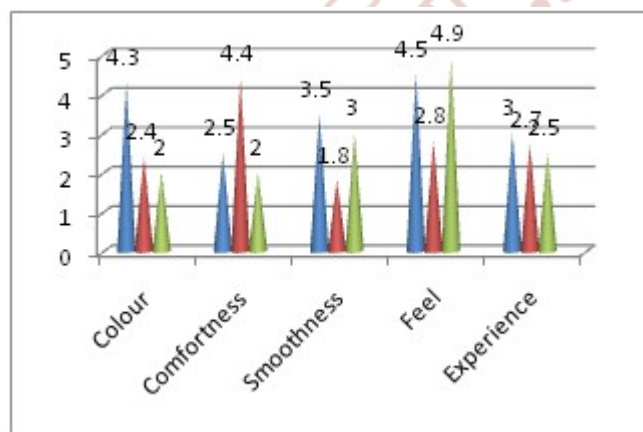
X-axis – Aesthetic properties

Y-axis – Grade points

6.2 Grade Points

- 1- Fair
- 2- Average
- 3- Good
- 4- Very good
- 5- Excellent

6.3 Analysis of the Survey



Note: Feel of the Infant herbal product ranges high ratings then compared to others.

Mother's Opinion about baby infant tank top:

Forty percent of mother of infants age group 0-3 months use baby infant tank top regularly. More than 64 percent of mothers of 3-6 months of infants use baby infant tank top occasionally in that 6-9 months use baby infant tank top occasionally due to the fact that these age children move around frequently and to be part in social gatherings along with their parents. Hygiene and travel were the major reasons quoted by 100 and 84 per cent of mothers for using baby infant tank top. Fifty percent of mothers preferred A2 followed by 44 per cent for A1 brand. The reason for preferring a specific brand was cost and comfort. Rashes and itching sensation was the maximum problem faced by children using baby infant tank top as 68 and 44 percent respectively. Only forty mothers were interested to accept the value specially finished baby infant tank top for their infants. Types of finish

required were off with antibacterial and cool finish. Maximum of 61.5 percent required for antibacterial, 38.5 for cool finish and 28.5 for perfumized finish were the type of finish required by the mothers. Use wrap and throw was the only method followed by all the mothers to dispose the baby infant tank top. The mothers also expressed curling and leakage of the designed baby infant tank top on over wetting. In a nut shell the designed baby infant tank top were good but need light modification to be commercialized.

7. SUMMARY AND CONCLUSIONS

Newborn babies, the most wonderful creator on the earth, rather the ultimate wonder of the Almighty is a dream of every married man and women. Each individual take care of their tiny ones and tries to give the best to bring them up the most effective manner. The young mother always wants her baby to be healthy in soft and warm hands. The results of this research can be a right solution for this inner feeling and production of modern health and hygiene care products.

The antibacterial skin touching layer prove to be safe Herbal finished infant tank tops (50 % Aloe Vera & 50% Neem) with the dip-Dry method. This laying a foundation to reduce health problems like rashes, red patches, itching sensation on the baby's skin. The tops (50 % Aloe Vera & 50% Neem) incorporated with wood pulp at the ratio 30:70 showed good absorbency property. The other physical such as thickness, size, shape, and odour were partially satisfied by the mothers. The results of the research study proved that the antibacterial finished baby infant wear were to reduce health problem and to produce eco friendly products. In a nut shell the study has laid a foundation in production of healthy and safe baby infant tank top.

The new product which is produced by the has Medical accept is the most important properties which have to be noticed is that it's Anti- microbial and Anti-fungal property as well as its fragrance it will attract the mothers and the infants. Our ultimate aim was to develop an infant textile product of Tank top which has got medicinal values rather alone a cushion effect. Hence there is no usage of chemicals for the development of this product it is said to be an Eco-friendly too. Then the colour fastness rating is also quite in good value of Average of 4 ratings.

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