

DEVELOPMENT OF HERBAL FINISHED BABY DIAPERS WITH BAMBOO FIBER

G. MALARVIZHI

Research Scholar, Research and Development Center, Bharathiar University, Coimbatore, Tamil Nadu, India

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, diapers, 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 diaper, sanitary napkins, tampons, panty shields, etc. which are mostly single use items.

Baby diaper are made up of different kinds of fibers such as bamboo, cotton, rayon, wood pulp and or cotton linters which are usually cellulose fluffs combined with super absorbent polymers to create the absorbent core that acts as a storage structure in the product. When baby passes urine onto the baby diaper it creates the favorable conditions for the growth of microbes which will result in the occurrence of nappy rashes. Also the cellulosic materials used in baby diaper 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 nappy 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. The population explosion and the environmental pollution in the recent years forced the researchers to find new health and hygiene products for the well being of the mankind. Nowadays the consumers are demanding eco-friendly products. Hence the research has been carried out to use natural herbal plant extracts for antibacterial finishing in textiles because of the excellent antibacterial 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 diaper.

KEYWORDS: Health Care Textiles, Baby Diaper, Antimicrobial Finish