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**A Survey on Consumer Satisfaction and Their Opinions to Develop Eco
Friendly Baby Diapers**

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ABSTRACT

In recent decades, commercial diapers are used for babies regularly by the parents. These commercial diapers are mainly used for the purpose of good absorbency, long time consumption, babies comfort. Except the above properties there are some of the failure aspects in existing commercial diapers. There are some toxins and chemicals are used in diaper



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manufacturing to give good absorbency. By the regular usage of these commercial diapers to the babies, there is a chance to affect some of the infections like rashes, diaper dermatitis, urinary tract infection. This article is based on the consumer survey which is given by the mother's of the different age group of children below the age of 5. Also this article shows the acceptance level of natural based eco-friendly diapers by the parents.

Key words: commercial diapers, good absorbency, diaper dermatitis, urinary tract infection

I- INTRODUCTION

A **diaper** or a **nappy** is a type of underwear that allows the wearer to defecate or urinates without the use of a toilet, by absorbing or containing waste products to prevent soiling of outer clothing or the external environment mainly used for the babies. Diapers are made of cloth or synthetic disposable materials. There are 2 types of diapers one is cloth diapers and another one is disposable diapers. Cloth diapers are composed of layers of fabric such as cotton, hemp, bamboo, microfiber, or even plastic fibers such as PLA or PU, and can be washed and reused multiple times. But the Disposable diapers contain absorbent chemicals which are disposed away after the usage. A disposable diaper consists of an absorbent pad sandwiched between two sheets of non woven fabric. The disposable diapers are specially designed to absorb and retain body fluids, and the nonwoven fabric gives the diaper a comfortable shape and helps prevent leakage. In this article, the consumer survey is followed to conclude the properties of



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commercial diapers. Also this survey gives a chance to understand the acceptance level of natural based diapers by the parents.

II- OBJECTIVES

- To make the diapers by using natural based one which is chemical free.
- To make the diaper without toxin or chemical based products.
- To make the diaper which are disposable and ecofriendly to the environment.
- To make the diaper without any harm and infections to the baby's skin.
- To make the diaper with better absorbing property using natural based product.

PARTS OF A DIAPER

There are 3 major parts in a diaper. They are

- 1) Permeable top layer
- 2) An absorbent pad
- 3) Impermeable bottom layer

PERMEABLE TOP LAYER



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The permeable top sheet in the diaper is specially designed to attract fluid or urine and transport the fluid away from the baby's skin passing it to the next layer. These top sheets are made of porous non-woven material.

AN ABSORBENT PAD

The absorbent pad contains wood pulp (usually bleached white with chlorine) and super-absorbent polymers, usually sodium poly acrylate which is a chemical compound that can soak up to 30 times its weight in urine. This absorbent pad is very important layer in commercial diapers which only gives absorbency property to the diapers.

IMPERMEABLE BOTTOM LAYER

The Impermeable bottom layer or back sheet is made of a water proof polyethylene flim that serves as a micro porous barrier. It is drier outside and has lower relative humidity.

PROPERTIES OF COMMERCIAL DIAPERS

- The commercial diapers are convenient and comfort to use.
- The commercial diapers consumes large amount of fluid than the cloth diapers.
- The commercial diapers are meant for single usage and disposed off.
- The commercial diapers absorb moisture and give dryness to the babies.



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- The commercial diapers have good absorbency of fluid and hold without leakage.

DISADVANTAGES OF COMMERCIAL DIAPERS

- The commercial diapers may cause allergic reaction to baby skin
- The commercial diapers may cause skin rashes to babies.
- The commercial diapers may lead to toxicity.
- The commercial diapers have more chances to cause infections like diaper dermatitis, Urinary Tract Infection (UTI).
- The commercial diapers are little expensive which are everyone cannot afford.
- The commercial diapers are not eco friendly to the environment.
- The commercial diapers are little hard to dispose.

QUESTIONNAIRE FOR SURVEY

- Do you see any allergic reactions on babies?
- Do you see any rashes on baby's skin?
- Is a commercial diaper having good absorbency?



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- Is a commercial diaper give good comfort to babies?
- Is there is any leakage in short time?
- If you feel any bad odor after diaper gets wet?
- If commercial diaper give comfort sleep to overnight
- Fig 1.1 percentage of properties of commercial diapers

FINDINGS OF SURVEY

From the we can conclude the properties of commercial diapers vary from 60-70% according to the sayings of mother. The finding says that there is 70% chance for the cause of allergic reactions and 65% of possibility to cause rashes on baby's skin. Finally, we can conclude that there is a need to develop natural based diapers.

FINDINGS OF SURVEY

This survey is taken between 2 group of mother's who are separated as educated mother(A) and uneducated mother(B). shows that 60% of educated mother have a chance to accept natural based diapers and 40% of educated mother do not accept. Like the above 45% of uneducated mother is ready to accept natural based diapers and 55% of uneducated mother do not accept.

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CONCLUSION

From this article, we can conclude that even though commercial diapers have advantages like better absorbency, long time consumption also there are some of the disadvantages are there. From the above consumer survey we can come with an assumption that the commercial diapers have a chance to cause infections, rashes, skin problems. These are some major problems in commercial diapers. so there is a need and purpose to develop a natural based diapers to overcome these demerits.

REFERENCES

- SwateeDey, PhD, Dianna Kenneally, BSCHE, MBA, Mauricio Odio, PhD, and Ioannis Hatzopoulos, PhD 'Modern diaper performance: construction, materials, and safety review'. *International Journal of Dermatology* 2016, 55(sup.1):18-20.
- Sahana M Srinivas, Sandipan Dhar 'Advances in diaper technology *Indian Journal of Pediatric Dermatology* volume 17, issue 2, apr June 2016.
- Baker, Joseph and Bernasconi, Jenna (2016). Determining the Efficiency of Disposable Baby Diapers through Data Envelopment Analysis. *Undergraduate Review*, 12, 19-26.
- Disposable baby diaper--a threat to the health and environment.

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Umachitra G, Bhaarithidhurai. *Journal of Environmental Science and Engineering* 2012
Jul;54(3):447-52.

- The baby's diaper with suggestions for its improvement

M.D. Charles F. McKhann, A.B. George Bricmont

Babies & Childrens Hospital of Cleveland, Cleveland, Ohio USA Volume 34, Issue 2, Pages
131–138

- <https://www.parenting.com/article/everything-you-need-to-know-about-diapers>
- <https://www.parents.com/baby/diapers/>
- <https://kidshealth.org/en/parents/diapering.html>