

Sustainable biodegradable absorbent for diapers

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Statement of the Problem: The single largest contributor to environmental pollution in the world is diapers. Landfills are full of these products and they are not biodegradable. There is no substitute for their use in the foreseeable future and, in fact, the use of diapers has increased to include both babies and adults as the ageing population in developed countries is now high. In the health-care sector, also, diapers are needed in large quantities for patient's incontinence purposes. There is an urgent need for the society to find a sustainable alternative product as this problem is experienced in both developed and developing countries.

Analyzing any diaper system reveals the most important part as the absorbing element. Different brands have invested resources in finding the most absorbent polymer by mass and volume. Much success has been achieved in this regard at the detriment of the environment because these synthetic polymers are nonbiodegradable. Volumes find their way to landfills and oceans threatening ecosystems. The purpose of this study was to find a sustainable biodegradable absorbent to use in the diaper system.

Methodology and Theoretical Orientation: A natural based polymer was explored as well as available cellulosic based ingredients were analyzed as substitutes for synthetic polymers. Some polymers from different brands were also obtained for comparison.

Findings: Excellent and results from the alternative systems used were obtained and are comparable to currently used polymers from several brands. This finding is significant, and a large-scale commercial production and sourcing needs to be explored.



Fig: Sustainable Diaper

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Biography

Doice Moyo has his expertise in industrial textiles, nonwovens, sustainability and exploring ways to improve the health and wellbeing in the society. He has liaised with several industries in their research and developing products that have a tangible beneficial impact to the community. His passion is also in research and supervising upcoming skilled youth.

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