



Dr. BICO

BIOPLASTICS & PRODUCTS
GO SUSTAINABLE



Case Study - Straws

Overview

This case study focuses on a large customer who previously used approximately 200 crore plastic straws per annum. However, due to the government ban on single-use plastic, the customer had to find an alternative solution. They switched to paper straws, but encountered several challenges in the juice industry. To address these problems, Dr BICO invented bioplastic straws that are environmentally friendly, have functional properties similar to plastic straws, and are cost-effective.

Problems

- Environmental Impact:** The plastic straws used by the customer had a detrimental impact on the environment, as they remained in the environment for thousands of years and posed a threat to marine life.
- Pressing During Transportation:** The paper straws experienced issues during transportation, where they would get pressed, causing blockages in the juice flow when sucked.
- Limited Availability of FSC Compliant Paper:** The availability of Forest Stewardship Council (FSC) compliant paper, made from recycled materials, was limited in the country. As a result, the customer had to rely on natural or virgin paper, leading to increased tree cutting for straw production



The Solution

- Development of Bioplastic Straws:** Dr Bio invented bioplastic straws that decompose within six months, making them environmentally friendly. These straws underwent rigorous testing and received positive results from the Central Pollution Control Board and the Central Institute of Plastics Engineering & Technology (CIPET). These straws have a lower carbon footprint and address the concerns related to single-use plastics.
- Functional Properties:** The bioplastic straws were designed to retain their shape and not develop any unpleasant odors. They also exhibited excellent functional properties, similar to the plastic straws previously used by consumers.
- Cost-effectiveness:** Compared to paper straws, the bioplastic straws offered a 30% reduction in price, providing a more affordable option for the industry and consumers

Conclusion

The introduction of bioplastic straws proved to be a win-win situation for both the environment and the juice industry. By replacing plastic straws with biodegradable alternatives, the customer mitigated the environmental impact and complied with government regulations. The bioplastic straws addressed the pressing issue faced during transportation, had functional properties similar to plastic straws, and were available at a lower cost. This case study demonstrates the positive outcomes that can be achieved when innovative and sustainable solutions are adopted.



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