



Role of Packing in Reduction of Fermented Milk Wastage

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DESCRIPTION

Fermented milk, which is important for human health, is a food made using milk and/or a milk product that has undergone microbial action and seen a pH drop. Fermented milk comes in a wide range of variants that change based on the microorganisms that are utilised during the fermentation process. It is also competitively priced and available to customers in both little and big retail stores. By limiting or suppressing biological, physical, chemical, and biochemical changes and ensuring a long shelf life, packaging is essential in the food industry for maintaining product quality and preventing food waste. If the packaging includes reduced food waste as one of its key attributes but the industry chooses a design that just meets the needs of marketing appeal, it can go against this notion. Another objective of packages is to be able to sell themselves in this context, having a commercial appeal in the packaging design is acceptable. However, modern customers also prefer food packaging that doesn't contribute to pollution [1-3].

There is no arguing that packaging adds economic and social value to products, but food producers and consumers alike need to be aware of the environmental damage that food waste creates. When a package wastes food, in addition to the food itself, water, electricity, and all the deforestation done for animal care, as well as water used for the production of milk and fermented milk, site cleanliness, and pasture expansion, are also wasted. In addition, the world is currently more hungry than ever the COVID-19 pandemic caused the Prevalence of Undernourishment (POU) to increase to roughly 9.9 in 2020 after remaining at 8.4 for five years. One can contribute to the elimination of world hunger by minimising food loss and waste. Food losses are defined as the decrease in edible food mass "along the food supply chain from harvest but excluding, the retail level" Contrarily, food waste describes the food that is thrown away by customers, restaurants, and retailers [4-6].

The issue of food losses and waste is one that impacts the entire world, and producers and consumers must collaborate to adopt measures that will help the situation. Either a shortage of food

packing or bad planning led to this circumstance. The packaging must permit bundling, preserving, and transporting the product in addition to allowing for full consumption of the product's contents. This study sought to understand the impact of package design on fermented milk waste. The quantity of fermented milk consumed is influenced by the packaging of the product. These designs differ in terms of bottleneck, edge, and substance (plastic and carton). The package layout that resulted in the least amount of waste, though (0.73%) has a curved outward border that makes it simpler to entirely drain the liquid. The design with the highest rate of waste (2.14%) has a bottleneck, embossed printing (drawing), and an edge where fermented milk collects [7-9].

As a result, the degree of residue retention affects how much trash fermented milk produces. When compared to a package with an inward edge, the bottleneck edge that arcs outward minimise waste by preventing the buildup of spoiled milk. In addition, the height, depth, number of right angles, and volume of fermented milk waste produced increase with the size of the package. We must be aware of the dangers posed by fermented milk waste on a worldwide scale and the fact that companies can design bottles with protruding edges to maximize overall product consumption [10].

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Received: 02-Feb-2023, Manuscript No. JFPT-23-20329; **Editor assigned:** 06-Feb-2023, PreQC No. JFPT-23-20329 (PQ); **Reviewed:** 20-Feb-2023, QC No. JFPT-23-20329; **Revised:** 27-Feb-2023, Manuscript No. JFPT-23-20329 (R); **Published:** 06-Mar-2023, DOI: 10.35248/2157-7110.23.14.987

Citation: Fu S (2023) Role of Packing in Reduction of Fermented Milk Wastage. J Food Process Technol. 14:987

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