

Development of Antioxidant-Enriched Herbal Yogurt: A Review

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ABSTRACT

Introduction: The rising interest in functional foods has led to the incorporation of medicinal herbs into dairy products, enhancing their nutritional and therapeutic value. Herbal yogurt, enriched with antioxidants from natural plant extracts, offers potential health benefits, including improved gut health, oxidative stress reduction, and immune modulation.

Aim: This review explores the development, antioxidant potential, and challenges in formulating herbal yogurt.

Methodology: A systematic review of research articles was conducted, focusing on the selection of antioxidant-rich herbs such as *Tulsi (Ocimum sanctum)*, *Ashwagandha (Withania somnifera)*, *Moringa (Moringa oleifera)*, and *Turmeric (Curcuma longa)*. Various extraction techniques, including aqueous and ethanolic methods, were analysed for their efficiency in preserving bioactive compounds. The impact of herbal fortification on yogurt quality, antioxidant activity (DPPH, FRAP assays), sensory attributes, and probiotic viability was reviewed.

Results & Discussion: Studies indicate that herbal incorporation enhances the antioxidant activity of yogurt without significantly compromising its texture and sensory attributes. Polyphenols and flavonoids contribute to oxidative stability and improve the functional properties of yogurt. However, variations in microbial compatibility, taste acceptability, and formulation standardisation remain challenges. Optimising the concentration of herbal extracts is crucial to maintaining probiotic viability and consumer appeal.

Conclusion: Herbal yogurt presents a promising functional dairy product with potential health benefits. Future research should focus on optimising formulation techniques, assessing long-term stability, and conducting clinical studies to validate health claims. This review provides insights into the technological advancements and challenges in developing antioxidant-enriched herbal yogurt.

Keywords: Herbal yogurt, Antioxidants, Probiotics, Functional food, Polyphenols, Fortification

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