

## A Next-gen tooth lotion: A step towards contamination-free oral hygiene

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**Statement of the Problem:** This study introduces a groundbreaking innovation in oral hygiene: a low-viscosity tooth lotion formulated with natural ingredients and dispensed through a fully contactless system that delivers the product directly onto toothbrush bristles—eliminating the risk of microbial contamination commonly associated with traditional toothpaste tubes. In conventional packaging, repeated contact between the toothbrush and the tube orifice creates a pathway for contamination. This tooth lotion addresses that concern with a hygienic dispensing mechanism that ensures there is no direct contact between the applicator and the brush. Formulated with sodium coco sulfate, a gentle, naturally derived alternative to synthetic sodium lauryl sulfate (SLS), and containing minimal parabens, the lotion is designed for those seeking a safer and milder oral care option. Natural ingredients—such as clove oil, peppermint oil, and rosemary extract—contribute to both its effectiveness and eco-friendly profile. The product is housed in refillable containers, promoting sustainable consumption and reducing plastic waste. A consumer panel of 200 participants showed strong user preference, with 90% reporting ease of use and 85% expressing a preference over traditional toothpaste. The combination of hygienic, contactless application, environmentally conscious packaging, and a gentle, effective formulation positions this tooth lotion as a forward-thinking solution in modern oral care. This paper explores the formulation process, delivery mechanism, user feedback, and its broader

### Biography

Kailas Karande is an accomplished academican with 18 years of experience in the field of pharmacy education and research. With a passion for innovation and mentorship, he has been actively involved in guiding students toward entrepreneurial success in the pharmaceutical and cosmeceutical sectors. Currently, Dr. Karande is working on novel cosmeceutical preparations, blending scientific rigor with market-driven applications. His expertise extends beyond academia, fostering a culture of innovation among students. Notable Mentorship Achievements: @Pharma Summit 2025 (Lotus Business School, Pune): Mentored Akshata Gade & Amol Jangam to First Prize in the Business Funda - Business Plan Competition, winning ₹10,000. @Pharmascope 2025 Startup Competition (DYPU, Pune): Guided the same team to another First Prize for their feasible, impactful, and well-structured business model. Emphasized the importance of innovation, experimentation, and confident presentation.

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**Received:** March 02, 2025; **Accepted:** March 03, 2025; **Published:** June 24, 2025

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