

# Green Revolution in Pharmaceutical Formulations: Banana Peel-Derived Fast-Dissolving Tablets for Enhanced NSAID Delivery

Miss. Prajakta Shriram Nathe, Dr. S. C. Kale Sir, Dr. K. R. Biyani Sir

Anuradha College of Pharmacy, Chikhli, India

**Abstract:** *The pharmaceutical industry is undergoing a transformative shift towards sustainable practices, and this review explores the potential of utilizing banana peel-derived materials in the development of Fast-Dissolving Tablets (FDTs) for Non-Steroidal Anti-Inflammatory Drug (NSAID) delivery. Banana peels, often discarded as waste, contain bioactive compounds with promising pharmaceutical applications. This review provides a comprehensive summary of key findings, emphasizing the biocompatibility, sustainability, and cost-effectiveness of banana peel-derived materials in pharmaceutical formulations. Taste-masking techniques and flavor enhancements are discussed as crucial considerations to enhance patient acceptability. The implications for the pharmaceutical industry extend beyond therapeutic benefits, aligning with the growing demand for environmentally conscious practices. The future outlook highlights the need for further research and development, optimization of formulations, and comprehensive evaluations to establish the safety, efficacy, and regulatory compliance of banana peel-derived FDTs. Successfully integrating these materials may set a precedent for eco-friendly drug development, fostering a green paradigm in the pharmaceutical industry.*

**Keywords:** Banana peel, Fast-Dissolving Tablets, NSAID delivery, Sustainable pharmaceuticals, Biocompatibility, Taste-masking, Environmental responsibility, Pharmaceutical industry

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