

# Technological Innovations and Evaluation of Fast Dissolving Tablets: A Comprehensive Review

Ms. Thorat Nikita Rajendra, Vide Rohan Kashinath, Bhore Sakshi Santosh, Waphare Nikita Sudam, Gadge Shubham Chandrakant, Mr. Shubham Gadge  
Samarth Institute of Pharmacy, Belhe, Pune, Maharashtra

**Abstract:** *A fast dissolving tablet, designed to quickly dissolve or disintegrate in the mouth without requiring water, facilitates swallowing, especially for those struggling with conventional tablets or capsules. These tablets usually disintegrate within seconds to a minute upon saliva contact and may contain active pharmaceutical ingredients (APIs) for immediate release or be formulated for controlled release. In the pharmaceutical industry, oral delivery reigns as the gold standard, prized for its safety, convenience, and cost-effectiveness, boasting the highest patient compliance among all drug delivery methods. Fast or mouth dissolving tablets cater to pediatric, geriatric, and bedridden patients, as well as to active individuals who are busy or traveling and may lack access to water. Advantages of FDTs include easy portability and manufacturing, precise dosing, robust chemical and physical stability, making them an ideal alternative for geriatric and pediatric patients. This tablet format is engineered to facilitate oral solid dose administration without the need for water or fluid intake, with tablets readily dissolving or disintegrating in saliva, typically within less than 60 seconds. In this review encompasses concise information about fast dissolving tablets, covering various formulation aspects, definition, advantages, requirements, salient features, limitations, and marketed formulations, among other aspects.*

**Keywords:** Fast dissolving tablets, FDTs, Superdisintegrants, Mouth dissolving tablets, MDTs, Oral delivery, Bioavailability, Excipients