

Formulation and Evaluation of Fast Dissolving Tablet of Piperazine Citrate

Pratiksha Shirame, Ms. Apeksha Dalvi, Pragati Darade

Samarth Institute of Pharmacy, Belhe, Junnar.

Abstract: *Piperazine is a well-established broad-spectrum anthelmintic commonly used to treat parasitic infections such as those caused by roundworms and pinworms. Its mechanism of action involves inducing flaccid paralysis in the parasites, facilitating their elimination from the host's body. Although piperazine demonstrates good oral bioavailability (60%-80%), its poor aqueous solubility leads to slow dissolution, potentially delaying absorption and therapeutic onset. This limitation is particularly critical in cases requiring immediate relief. To address this issue, fast-dissolving tablets (FDTs) offer a promising solution. These dosage forms rapidly disintegrate in the oral cavity, enhancing dissolution and promoting faster absorption. The formulation of piperazine as FDTs not only improves therapeutic efficacy but also enhances patient compliance, especially in pediatric and geriatric populations with swallowing difficulties. This review highlights the need for and advantages of developing fast-dissolving formulations of piperazine citrate for improved clinical outcomes.*

Keywords: Piperazine Citrate, Fast Dissolving Tablet, Superdisintegrants, Antihelmintic, Dissolution Enhancement, Direct Compression

