

# DESIGN AND DEVELOPMENT OF THE LIQUISOLID COMPACT OF GINGEROL LOADED LOZENGES

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## Abstract:

The research aimed to design a liquisolid compact containing gingerol for use in lozenges in order to enhance the solubility of gingerol, which is known to have poor solubility. Various techniques like FTIR, DSC, XRD, and drug content analysis were used to characterize the formulation and assess the interaction between the drug and excipients. The optimized formulation had a drug content above 97.82 %. The lozenges formulation was optimized based on parameters like weight variation, hardness, friability, and drug content, and formulation LF4 was chosen as the optimized formulation based on evaluation studies. *In-vitro* drug release of formulation F4 showed a release profile of 90.08 % and followed the Higuchi model. Stability studies of the optimized formulation LF4 were also satisfactory. Overall, this research successfully improved the solubility and bioavailability of gingerol using the liquisolid compact technique.

**Keywords:** Lozenges, Gingerol, Liquisolid, Higuchi model.