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Formulation, Evaluation and Optimization of Glipizide loaded Niosomes

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Abstract : In the present study, Glipizide-loaded Niosomes were formulated and evaluated for their *in vitro* characteristics to improve the oral bioavailability of the drug. Formulation of Niosomes was optimized for highest percentage of drug entrapment. Microscopic observation confirmed that all particles werenano sized. The *in vitro* release studies of drug from Niosomes exhibited a prolonged drug release as observed overa period of 24 h. The negative value of zeta potential indicated that the Glipizide Niosomes were stabilized by electrostatic repulsive forces. Results from stability study have shown that the drug leakage from the vesicleswas least at 4°C followed by room temperature. The Niosomes showing maximum entrapment and suitable release rate were selected for *in vitro*evaluation. In conclusion, the Niosomal formulation could be a promising delivery system for Glipizide with improved bioavailability and prolonged drug release profile.
Keyword : Niosome, Glipizide, Tween 80, Cholesterol.

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