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(57) Abstract :
The present invention relates to formulation and optimization of taste masked mouth dissolving tablets of levocetirizine hydrochloride using ion exchange resin complexation technique combined with statistical design of experiments. The invention describes preparation of drug resin complex using Tulsion-335 ion exchange resin through batch process achieving 98.47% drug loading with complete taste masking. The mouth dissolving tablets were formulated using direct compression technique and optimized employing 32 central composite design with polyvinylpyrrolidone K30 as binder and Kyron T-314 as superdisintegrant as independent variables. The dependent responses evaluated were wetting time, friability and drug release at 15 minutes. The optimized formulation demonstrated wetting time of 11.8 seconds, friability of 0.42% and drug release of 91.16% in 15 minutes. Response surface methodology validated the optimization with regression coefficient values above 0.95 for all responses. The invention provides rapidly disintegrating tablets with enhanced patient compliance particularly beneficial for pediatric, geriatric and dysphagic patients requiring antihistaminic therapy

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