

Simultaneous spectrophotometric estimation of gemifloxacin and ambroxol from tablet formulation

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Two simple, accurate and precise UV methods were developed for the estimation of Gemifloxacin (GEM) and Ambroxol hydrochloride (AMB) from its tablet dosage form. Both the drugs are used in treatment of chronic bronchitis and mild to moderate pneumonia. The muscle spasm. Method I is Simultaneous equation method, wavelengths selected for Quantitation are 271.0 nm and 245.5 nm for c respectively which are the λ_{max} of both the drugs. Method II is Q -Analysis method, wavelengths selected were 271nm (λ_{max} of GEM) and 244.0 nm (Isobestic point) for the analysis. In both the methods linearity for detector response was observed in the concentration range of 10-60 $\mu\text{g/ml}$ for GEM and 2-12 $\mu\text{g/ml}$ for AMB respectively. The results of tablet analysis for method I is found to be 99.97% + 0.041 S.D for GEM and 99.93% + 0.21 S.D for AMB and results obtained for Method II is 99.94% + 0.080 S.D for GEM and 99.90% + 0.15 S.D for AMB. The proposed methods were successfully applied for the simultaneous determination of both the drugs in commercial tablet preparation. The results of the analysis have been validated statistically.

Biography

Khan Hajera has completed her M.Pharmacy in Quality Assurance from BAMU University in 2011. She has published 8 research papers in reputed National and international journals and presently working as assistant professor in pharmacy college.

Design and development of matrix type hydroxyzine hydrochloride transdermal patches

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Matrix type transdermal drug delivery systems (TDDS) of Hydroxyzine hydrochloride (HHCL) with and without permeation enhancers were prepared by solvent casting method. Mixture of polymers Eudragit RS100, Eudragit RL100, PVP, HPMC E15 LV and ethyl cellulose were employed in the preparation of patches. Dibutylphthalate was used as plasticizer. The prepared patches were evaluated for physicochemical characterization, *in vitro* and *ex vivo* diffusion study. In order to reduce the skin barrier property and to enhance the skin permeation of drug, permeation enhancers transcutool and propylene glycol were incorporated in polymeric films.

The central composite design was applied to optimize the best permeation enhancer. Formulations (HhLS_{3,0t}) with Eudragit RS100, RL100 at 25% transcutool concentration and formulation (HhLS_{3,-1p}) with Eudragit RS100, RL100 at 15% propylene glycol were found to be the best. Among these two permeation enhancers used, no statistically significant difference ($p > 0.05$) was observed between transcutool (25%) and propylene glycol (15%). All the optimized formulations had shown zero order kinetics and non fickian type of diffusion. No signs of skin-irritation were observed in testing with rabbit.