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Abstract

[Development and validation of a rapid-chemo metrics assisted RP-](#)

HPLCmethod with PDA detection for the simultaneous estimation of domperidone and ilaprazole in pure and pharmaceutical formulation

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A simple, rapid, accurate and precise chemo metrics assisted RP-HPLC method was developed, optimized and validated for the simultaneous estimation of the domperidone and ilaprazole in pure and pharmaceutical formulation. The developed method was optimized by using Central composite design (CCD) in resoponse surface methodology (RSM). Separation of domperidone and ilaprazole was achieved on phenomenex C18 column (150 X 4.6 mm i.d, 5? particle size) with mobile phase containing 64.89% of acetonitrile and 35.11 % of ammonium acetate buffer (14.18mM) was delivered at a flow rate of 1.2 mL/min. Detection was carried out at 286nm by photodiode array detection. Retention time was found to be 1.661 for domperidone and 2.420 for ilaprazole. The developed and optimized method was validated successfully as ICH guidelines. Linearity of domperidone and ilaprazole were found to be 30-90?g/mL and 10-30 ?g/mL with their correlation coefficient (R2) of 0.9997 and 0.9995 respectively. LOD and LOQ were found to be 158.12ng/mL and 479.16ng/mL for domperidome and 101.68 ng/mL and 308.12 ng/mL for ilaprazole. The % RSD value of accuracy and precision study was found to be less than 2 %. Hence this proposed method is useful for the simultaneous estimation of domperidone and ilaprazole in pure and pharmaceutical dosage form.

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