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Simultaneous HPTLC analysis of lafutidine and domperidone

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A rapid and simple high performance thin layer chromatography method was developed and validated for simultaneous estimation of Lafutidine and Domperidone from capsule dosage form. HPTLC separation was performed on silica gel precoated aluminum plate 60 F_{254}, (10 × 10 cm) as stationary phase and ethyl acetate: methanol: ammonia (10:1:1v/v/v) as mobile phase. The Densitometric scanning was performed at 265 nm. The R_f values were found to be 0.59±0.02 and 0.47±0.02 for Lafutidine and Domperidone respectively. The method was validated for linearity, accuracy, precision and robustness. The calibration plot was linear over the ranges 200-1200 ng /µl (r^2= 0.9993± 0.016) for Lafutidine and 600-3600 ng/ µl (r^2 = 0.9991± 0.014) for Domperidone, respectively.The Limit of Detection and Limit of Quantitation were found to be 5.82 and 17.65 ng /µl for Lafudine and 10.23 and 31.00 ng /µl for Domperidone, respectively. The average percentage recoveries were found to be 100.13 % and 98.94% for Lafutidine and Domperidone respectively. Lafutidine and Domperidone were assayed and the content was found to be 99.83±0.80 % and 99.26±0.65 % in capsule dosage form respectively.The present work established an accurate and rapid validated HPTLC method for the simultaneous estimation of Lafutidine and Domperidone.

Biography

Dipmala Wagh has completed her B. Pharm at the age of 22 years from Pune University in 2010. She has published one research article in RJPR. Currently, She is in M. Pharm second year and doing work on stability indicating study of drug as a research work in Sinhgad Research Center, Pune.

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LCMS-IT-TOF - 3-D ion trap time of flight mass spectrophotometer

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LCMS-IT-TOF possesses both the MSn ability of an ion trap and the excellent resolution and mass accuracy of a TOF. The LCMS-IT-TOF opens new doors to the prediction of elemental composition and structural analysis. The LCMS-IT-TOF is new technology intended to strongly assist in the identification of target compounds by using high speed/high accuracy MSn data in R&D fields such as impurity analysis, metabolic profiling and biomarker research.With the LCMS-IT-TOF, a variety of precursor ion selection criteria is available, such as the selection of ions in order of intensity or m/z, as well as intelligent automatic precursor selection, such as a monoisotopic peak selector and charge-state filtering.The 3-D ion trap time-of-flight mass spectrometer(LCMS-IT-TOF) is used to analyze mass of components eluting from the HPLC column, and for structural elucidation. Time-of-flight (TOF) has quickly established itself as the preferred type of mass analyzer for the characterization of synthetic macromolecules. TOF combines a high sensitivity with a broad mass range and a high spectral resolution and accuracy. The ion trap is not only used to focus ions before ejection into the TOF, but it also supports fragmentation, MSn analysis and a high precursor ion selection (resolution > 1,000 at 1,000m/z). A high precursor ion selection allows specific ions to be isolated for further fragmentation, simplifying MS/MS data interpretation and enhancing the selectivity of detection, particularly from complex matrices. Coupling atmospheric pressure ionization with Ion-Trap (IT) and Time-of-Flight (TOF) technologies, the LCMS-IT-TOF delivers high mass accuracy and high mass resolution (10,000 at 1000 m/z) independent of MS mode.

Biography

G.Shanthi Reddy is studying her M.Pharmacy in Pharmaceutical Analysis and Quality assurance department in Nalanda College of Pharmacy, Charlapally which comes under Jawaharlal Nehru Technological University. She completed her B pharmacy in KVK College of Pharmacy, Hyderabad.

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