

Bio-analytical determination of clopidogrel and pantoprazole by RP-HPLC method in rat plasma: Application to drug interaction study

B. M. Gurupadaya and Sindhura Sama

Department of Pharmaceutical Chemistry, JSS College of Pharmacy, JSS University, India

A simple, sensitive, rapid, robust and reproducible method for the bioanalytical determination of clopidogrel and pantoprazole in rat plasma was developed using reverse phase high performance liquid chromatographic method. The analysis was performed on C₈ (250×4.6 mm, 5 μm) column with a mobile phase consisting of 0.03 M potassium dihydrogen ortho phosphate buffer (pH 3), acetonitrile in the ratio of 40:60 (v/v) with a flow rate of 1.2 ml/min. The analyte was monitored with UV detector at 240 nm. In the developed method pantoprazole elutes at retention time of 2.6 min and clopidogrel at 8.2 min. The proposed method is having linearity in the concentration range 10-50 μg/ml for both clopidogrel and pantoprazole. The method was validated with respect to system suitability, linearity, precision, limit of detection (LOD) and limit of quantification (LOQ), accuracy (recovery), ruggedness, robustness, stability, forced degradation studies (specificity). The proposed method can be readily utilized for determination of clopidogrel and pantoprazole in routine plasma samples.

KeyWords: Bio analytical method, Drug Interaction study, Pantoprazole and clopidogrel.

Biography

B. M. Gurupadaya is working as Professor in the department of Pharmaceutical Chemistry. He has completed his Ph.D. degree from Kuvempu University, Shimoga and postdoctoral studies from Gulbarga University. He has published more than 60 papers in reputed journals and has been serving as an editorial board member of reputed journals like Journal of Saudi Chemical Society, International Journal of Health and Applied Science (IJHAS), International Journal of Spectroscopy and Current Pharmaceutical Analysis.

bm_guru2004@yahoo.co.in