



Sensitive Inexpensive HPLC-UV Method for Simultaneous Monitoring of Pantoprazole and Domperidone in Raft Forming Bilayer Tablets

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SUMMARY. A simple, precise and inexpensive HPLC-UV method has been developed for the separation of pantoprazole sodium sesquihydrate (PSS) and domperidone maleate (DM) using high performance liquid chromatography (HPLC) on C₁₈ column with UV detection at 285 nm. The expected optimal assay condition comprised of acetonitrile and phosphate buffer pH 4.0 in ratio of 50:50 % v/v at a flow rate of 1 mL/min. Under this optimal state, separation of PSS and DM with good resolution and retention time less than 7 min were attained. The method was proved to be linear in the range of 1.56 to 25 µg/mL and 0.999 and 0.9994 regression values were obtained for PSS and DM, respectively. The percentage recoveries of PSS and DM were ranged from 97.60 to 99.20 % and 96.32 to 98.80 %, respectively. The precision and selectivity of the developed method was good and can be used for combined monitoring of PSS and DM in raft forming bilayer tablets.

RESUMEN. Se ha desarrollado un método HPLC-UV simple, preciso y económico para la separación de pantoprazol sódico sesquihidrato (PSS) y maleato de domperidona (DM) usando cromatografía líquida de alta resolución (HPLC) en columna C₁₈ con detección UV a 285 nm. La condición de ensayo óptima comprendía acetonitrilo y tampón fosfato pH 4,0 en una relación de 50:50% v/v a un caudal de 1 mL/ min. Bajo este estado óptimo, se lograron la separación de PSS y DM con buena resolución y tiempo de retención de menos de 7 min. El método demostró ser lineal en el rango de 1.56 a 25 µg/mL y se obtuvieron valores de regresión de 0.999 y 0.9994 para PSS y DM, respectivamente. El porcentaje de recuperaciones de PSS y DM oscilaron entre 97.60 a 99.20% y 96.32 a 98.80%, respectivamente. La precisión y la selectividad del método desarrollado fueron buenas y se pueden usar para la monitorización combinada de PSS y DM en tabletas bicapa.

KEY WORDS: bilayer tablets, domperidone maleate, HPLC, pantoprazole sodium sesquihydrate.

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