Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **33** (5): 717-24 (2014)

Regular article
Received: February 4, 2014
Revised version: February 18, 2014
Accepted: February 21, 2014

Determination of Homologous of Ivermectin H_2b_{1a} And H_2b_{1b} in Tablets y High Performance Liquid Chromatography Coupled to High Resolution Mass Analyzer Detector (Q-TOF)

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***SUMMARY*. Ivermectin is an antiparasitic drug used in several pharmaceutical formulations. The objective of this research is to develop and validate a high performance liquid chromatographic (HPLC) method for quantification of two homologous of ivermectin (H_2B_{1a} and H_2B_{1b}) in tablets and identify the molecular species by Q-TOF LC/MS technique. The method of quantification of ivermectin (H_2B_{1a} and H_2B_{1b}) was validated using a LichroCart® 100 RP-18 (125 x 4 mm, 5 μm) column. The mobile phase was constituted of acetonitrile and water 95:5 (v/v) with 1% acetic acid, the flow rate was 1.0 mL/min, and the UV detection was made at 245 nm. Solutions were prepared in solvent containing 190.12 μg/mL (H_2B_{1a}) and 5.72 μg/mL (H_2B_{1b}). The method showed to be precise, selective, accurate and robust, and was successfully applied for determination of the two homologous of ivermectin (H_2B_{1a} and H_2B_{1b}) in tablets.**

RESUMEN. La ivermectina es un fármaco antiparasitario utilizado en varias formulaciones farmacéuticas. El objetivo de esta investigación es desarrollar y validar un método de cromatografía líquida de alto rendimiento (HPLC) para la cuantificación de dos homólogos de la ivermectina (H_2B_{1a} y H_2B_{1b}) en tabletas e identificar las especies moleculares mediante la técnica Q-TOF LC/MS. El método de cuantificación de la ivermectina (H_2B_{1a} y H_2B_{1b}) se validó usando una columna LiChroCart® 100 RP-18 (125 x 4 mm, 5 μm). La fase móvil estaba constituida por acetonitrilo y agua 95:5 (v/v) con ácido acético al 1%, la velocidad de flujo fue de 1,0 mL/min y la detección UV se realizó a 245 nm. Las soluciones se prepararon en solvente conteniendo 190,12 μg/mL de H_2B_{1a} y 5,72 μg/mL de H_2B_{1b}. El método demostró ser preciso, selectivo, seguro y robusto y se aplicó con éxito para la determinación de los dos homólogos de la ivermectina (H_2B_{1a} y H_2B_{1b}) en tabletas.

KEY WORDS: HPLC, Ivermectin, Mass Q-TOF LC/MS, Method validation, Tablets.

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