



Determination of Cefprozil in Human Plasma Using High Performance Liquid Chromatography and its Application to Bioequivalence Study

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SUMMARY. In this study, a simple, rapid and sensitive high performance liquid chromatography (HPLC) method is described for determination of cefprozil in plasma samples from bioequivalence assay. Sample preparation was accomplished through protein precipitation with 35% perchloric acid, and chromatographic separation was performed on a ZORBAX Eclipse XDB-C8 (4.6×75 mm, 3.5 μm) at 30 °C. Mobile phase consisted of a mixture of acetonitrile-0.2% trifluoroacetic acid in water-water (15:40:45) at flow rate of 1.0 mL/min. Wavelength was set at 282 nm. The method was applied to a bioequivalence study of two drug products containing cefprozil, and allowed determination of cefprozil with a higher throughput than previously described methods.

RESUMEN. En este estudio se describe un método sencillo, rápido y sensible de cromatografía líquida de alta resolución (HPLC) para la determinación de cefprozil en muestras de plasma para un ensayo de bioequivalencia. La preparación de la muestra se llevó a cabo a través de la precipitación de proteínas con ácido perclórico 35% y la separación cromatográfica se realizó en una columna Zorbax Eclipse XDB-C8 (4,6 x 75 mm, 3,5 μm) a 30 °C. La fase móvil consistió en una mezcla de ácido trifluoroacético-acetonitrilo 0,2% en agua-agua (15:40:45) a un caudal de 1,0 mL/min. La longitud de onda se fijó en 282 nm. El método se aplicó a un estudio de bioequivalencia de dos productos farmacéuticos que contienen cefprozil y permitió la determinación de cefprozil con un mayor rendimiento que los métodos descritos anteriormente.

KEY WORDS: Bioequivalence, Cefprozil, HPLC, Plasma.

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