



Determination and Pharmacokinetic Study of Propofol in Rat Plasma

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SUMMARY. In this study, a simple, rapid and sensitive liquid chromatography tandem mass spectrometry (LC-MS/MS) method is described for determination of propofol in rat plasma samples using chlorzoxazone as the internal standard (IS) from pharmacokinetic assays. Sample preparation was accomplished through liquid-liquid extraction with ethyl acetate, and chromatographic separation was performed on an Acquity BEH C18 column (2.1 mm × 50 mm, 1.7 μm) with gradient profile at a flow of 0.4 mL/min. The linearity of this method was found to be within the concentration range of 10-1000 ng/mL for propofol in rat plasma. Only 1.5 min was needed for an analytical run. The method was applied to a pharmacokinetic study of propofol in rats.

RESUMEN. En este estudio se describe un método simple, rápido y sensible de cromatografía líquida con espectrometría de masas en tándem (LC-MS/MS) para la determinación de propofol en muestras de plasma de rata utilizando clorzoxazona como estándar interno (IS) a partir de ensayos farmacocinéticos. La preparación de la muestra se llevó a cabo a través de la extracción líquido-líquido con acetato de etilo, y la separación cromatográfica se realizó en una columna Acquity BEH C18 (2,1 mm × 50 mm, 1,7 μm) con perfil de gradiente a un caudal de 0,4 mL/min. La linealidad de este método estuvo dentro del intervalo de concentración de 10-1000 ng/mL para el propofol en plasma de rata. Se necesitan sólo 1,5 min para una serie de análisis. El método se aplicó a un estudio farmacocinético de propofol en ratas.

KEY WORDS: LC-MS/MS, Pharmacokinetic, Propofol, Rat plasma.

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