



## Quantitative Determination of 2-Hydroxy-1,7-dimethoxyxanthone in Rat Plasma by Liquid Chromatography-Mass Spectrometry

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**SUMMARY.** 2-hydroxy-1,7-dimethoxyxanthone (XAN) is a potential bioactive agent isolated from *Securidaca inappendiculata* Hassk. This study is designed to develop a quantitative determination method of XAN in rat plasma. The analysis of analytes extracted from plasmas were achieved on a BDS Hypersil column (50 mm × 2.1 mm ID, 5 μm), and eluted by methanol and water (v/v = 90:10) at 0.2 mL/min. The m/z of [M+Na]<sup>+</sup>: 295 and 395 representing XAN and internal standard (IS) were recorded simultaneously, and used to monitor drug concentrations *in vivo*. The concentrations of XAN exhibited a satisfying linearity vs peak area ratio (XAN/IS) in the range of 0.01-5 μg/mL ( $r^2 = 0.997$ ). The developed method was thoroughly validated, and successfully applied to characterize pharmacokinetic features of XAN in rats followed by a single intravenous administration at dose of 6 mg/kg.

**RESUMEN.** La 2-hidroxi-1,7-dimetoxixantona (XAN) es un potencial agente bioactivo aislado de *Securidaca inappendiculata* Hassk. Este estudio está diseñado para desarrollar un método de determinación cuantitativa de XAN en plasma de rata. El análisis de los analitos extraídos de plasma se realizó en una columna Hypersil BDS (50 mm x 2,1 mm ID, 5 μm) y se eluyó con metanol y agua 90:10, v/v) a 0,2 mL/min. El m/z de [M+Na]<sup>+</sup> (295 y 395) que representa XAN y el patrón interno (IS) se registraron de forma simultánea, y se utilizó para controlar las concentraciones de fármaco *in vivo*. Las concentraciones de XAN mostraron una satisfactoria linealidad vs. relación de área de pico (XAN/IS) en el intervalo de 0,01-5 mg/mL ( $r^2 = 0,997$ ). El método desarrollado fue validado y se aplicó con éxito para caracterizar las características farmacocinéticas de XAN en ratas, seguido de una sola administración intravenosa en dosis de 6 mg/kg.

**KEY WORDS:** 2-hydroxy-1,7-dimethoxyxanthone, LC-MS, Pharmacokinetics, *Securidaca inappendiculata*.

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