

Determination of Flavonoids from Persimmon Leaves in Rats Plasma by HPCE-LIF

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SUMMARY. In this study, three flavonoids of persimmon (*Diospyros kaki* L.) leaves in rats plasma were determined by high-performance capillary electrophoresis (HPCE) method, which provides the basis for further study of persimmon leaves. After oral administration of flavonoids from persimmon leaves at a single dose of 500 mg/kg, rat blood samples were collected. The supernatant was extracted with ethyl acetate with morin as the internal standard (IS). Then these pretreated samples were injected into the capillary. Separations were performed using 30 mM sodium borate with 20% acetonitrile as a buffer solution, pH 9.58, and voltage at 30 kV. The methods were validated and found to be linear in the range of 0.2 to 10 mg/L. The limit of quantification was 0.05, 0.03, and 0.06 mg/mL, respectively. The intra-day precision values were $\leq 3.0\%$. The extraction recoveries ranged from 82.5 to 93.1%. The method was validated useful for pharmacokinetic study of the three flavonoids.

RESUMEN. En este estudio se determinaron tres flavonoides de hojas de caqui (*Diospyros kaki* L.) en plasma de ratas mediante un método de electroforesis capilar de alto rendimiento (HPCE), que proporciona la base para un estudio adicional de las hojas de caqui. Después de la administración oral de flavonoides a partir de hojas de caqui a una dosis única de 500 mg/kg, se recogieron muestras de sangre de rata. El sobrenadante se extrajo con acetato de etilo con morina como patrón interno (IS). A continuación, estas muestras pretratadas se inyectaron en el capilar. Las separaciones se realizaron usando borato sódico 30 mM con acetonitrilo al 20% como solución tampón, pH 9,58 y voltaje de 30 kV. Se validaron los métodos y se encontró que eran lineales en el intervalo de 0,2 a 10 mg/L. El límite de cuantificación fue de 0,05, 0,03 y 0,06 mg/mL, respectivamente. Los valores de precisión intra-día fueron $\leq 3,0\%$. Las recuperaciones de extracción variaron de 82,5 a 93,1%. El método se considera útil para el estudio farmacocinético de los tres flavonoides.

KEY WORDS: flavonoids, persimmon leaves, high-performance capillary electrophoresis, pharmacokinetics.

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