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Determination of Berberine and Berberrubine in Rabbit Plasma by Capillary Electrophoresis with Amperometric Detection and its Application to Pharmacokinetic Study

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***SUMMARY*. A simple and selective method based on capillary electrophoresis with amperometric detection has been developed for the separation and determination of berberine (BB) and berberrubine (BBR) in rabbit plasma. The working electrode was a 150 μm diameter platinum microelectrode at a detection potential of +1.1 V (*versus* Ag/AgCl). The analytes could be well separated within 6 min in a 50 cm length fused-silica capillary at a separation voltage of 15 kV in a 50 mmol/L phosphate buffer (pH 6.0). Calibration curve was linear over the range of 0.002-20 μg/mL. The detection limits (*S/N* = 3) were 1.0 and 0.8 ng/mL for BB and BBR, respectively. Relative standard deviations (R.S.D.) of not more than 6.0 % were obtained for both migration times and electrophoretic peak area. The proposed method was successfully used to analyze the drugs in samples of rabbit plasma for pharmacokinetic study.**

KEY WORDS: Amperometric detection, Berberine, Berberrubine, Capillary electrophoresis.

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