

Kinetic behavior of sophoricoside by gas chromatography/mass spectrometry in rats

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Sophoricoside was isolated as the inhibitor of IL-5 bioactivity from *Sophora japonica* (Leguminosae). To develop as novel anti-allergic drug, kinetic study was performed in rats. Serum concentration of sophoricoside was measured by gas chromatography-mass spectrometry (GC/MS) in male Sprague-Dawley rat (250±10g, n=5) after oral administration of sophoricoside (100mg/kg). The recovery of sophoricoside after extraction and concentration was above 95 % from rat serum. Between-day precision(relative standard deviation 2.2-2.8%) and within-day precision(2.0-12.1%) were determined from replicate analysis of a spiked control and incurred serum sample. The detection limits of sophoricoside in this serum was approximately 0.1 ng/mL. The Pharmacokinetic parameters were derived from the noncompartmental analysis. The C_{max} (3.56±0.34 μ g/mL) value for sophoricoside in male rat was observed at 7.6 h. The elimination half-life($t_{1/2}$) of sophoricoside was approximately 4.47 h, the mean residence time (MRT) averaged 10.75 h, the total body clearance (Cl) averaged 0.0042 mL/min/kg, and the area under the serum concentration-time curve ($AUC_{0-\infty}$) was 24.93 μ g · hr/mL.