Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **32** (1): 139-42 (2013)

Short Communication
Received: August 28, 2012
Revised version: November 25, 2012
Accepted: November 29, 2012

Analysis of Plasma Protein Binding of Sophoridine by Ultrafiltration and High-Performance Liquid Chromatography

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***SUMMARY*. Plasma protein binding is an important factor that influences drug ADME. The aim of the present study was to analysis protein binding of sophoridine to rat plasma. A simple and specific HPLC method was developed for the determination of sophoridine in plasma protein binding. The method involved liquid-liquid extraction and a reversed-phase chromatographic separation with a mobile phase of acetonitrile-0.1 %phosphate buffer (containing 0.1 % triethylamine) (7:93, v/v) and UV detection at 220 nm. The standard curve for sophoridine was liner over the concentration range of 0.2 to 15 μg/mL. The intra-day and inter-day variations were less than 10 %. Ultrafiltration technique was applied to determining the protein binding of sophoridine in rat plasma after injection of sophoridine solution. Results show the plasma protein binding of sophoridine was in the range of 22-31 % over the all concentrations studied and the protein binding association constant was determined to be 2.18×10^4 L/mol at 37 °C.**

KEY WORDS: Plasma protein binding, RP-HPLC, Sophoridine.

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