



Quantitative Determination of Quercitrin in Rat Plasma by Liquid Chromatography: Application to Pharmacokinetic Study

Huihui XIANG¹, Xuchun FU², Haitong WAN¹, Jiehong YANG^{1*} & Yuyan ZHANG^{1*}

¹ Zhejiang Chinese Medical University, Hangzhou 310053, China

² Zhejiang University City College, Hangzhou 310015, China.

SUMMARY. A simple and specific high performance liquid chromatographic method for determination of quercitrin in rat plasma was developed and validated. The analytes of interest were extracted from rat plasma samples by ethyl acetate. Chromatographic separation was achieved on an Agilent Zorbax SB-C₁₈ column (250 × 4.6 mm, 5 mm) using a mobile phase consisting of 0.04 mol/L KH₂PO₄-acetonitrile (82:18, v:v) at a flow rate of 1.0 mL/min. The UV detection was performed at 256 nm. The linear calibration curves were obtained in the concentration range of 55-6976 ng/mL in rat plasma. The intra- and inter-day precisions in the measurement of quality control samples were less than 5.8%. Accuracy of the method was in the range of 96.8-107.7%. The extraction recovery of quercitrin was more than 90.0%. This validated method was successfully applied to pharmacokinetic studies after a single intravenous and oral administration of *Penthorum chinense* Pursh extract to Sprague-Dawley rats.

KEY WORDS: HPLC, *Penthorum chinense* Pursh, Pharmacokinetics, Quercitrin.

* Author to whom correspondence should be addressed. E-mail: yjhong@zjtcn.net