Latin American Journal of Pharmacy (formerly Acta Farmacéutica Bonaerense)
Lat. Am. J. Pharm. 29 (7): 1171-6 (2010) Original Article Received: February 22, 201 Revised version: March 2, 2010 Accepted: March 6, 2010

A Quantitative Method Using One Marker for Simultaneous Assay of Steroidal Saponins in Rhizoma Paridis

Chaoyi MA¹, Wenyuan GAO^{1*}, Shuli MAN¹, Ying GAO¹, Luqi HUANG² & Changxiao LIU³

 ¹ School of Pharmaceutical Science and Technology, Tianjin University, Tianjin 300072, China
² Institute of Chinese Matetria Medica, China Academy of Chinese Medicinal Sciences, Beijing 100700, China

³ Tianjin Institute of Pharmaceutical Research, Tianjin 300193, China

SUMMARY. Current quality control patterns are limited to industrial application, for most the natural chemical reference substances are expensive and unavailable. Here in, quantitative analysis of multi-components with single marker (QAMS) method, is established and validated to simultaneously determine five steroidal saponins (Paris-VII, Paris-H, Paris-II, Dioscin, Paris-I) in Rhizoma Paridis. Using Paris-I as the contrast, the relative correction factors (RCF) of the other four steroidal saponins are determined by HPLC-UV. With in the linear ranges, the values of RCF of Paris-I to Paris-VII, Paris-H, Paris-II and Dioscin are 0.877, 1.087, 0.975 and 1.127, respectively. The RCF has a good reproducibility in various instruments, chromatographic columns (RSD = 0.88 % ~ 4.52 %). According to their RCF, five steroidal saponins are simultaneously determined in Rhizoma Paridis by one marker.

KEY WORDS: Quantitative analysis of multi-components by a single marker, Relative correction factor, HPLC, Steroidal saponins, Rhizoma Paridis.

* Author to whom correspondence should be addressed. *E-mail:* biochemgao@hotmail.com