Simultaneous Determination of Three Bioactive Compounds in Traditional Chinese Medicine Patent Prescription Zuojin Pill by HPLC

Jinzhang CAI 1, Zhenzhen HUANG 2, Xiaole CHEN 2, Renai XU 3, Hongzhang HE 2, Chongliang LIN 3, Guanyang LIN 3, & Xianqin WANG 2*

1 The Second Affiliated Hospital, 2 Analytical and Testing Center, 3 The First Affiliated Hospital, Wenzhou Medical College, Wenzhou 325000, China.

SUMMARY. A high-performance liquid chromatography (HPLC) method coupled with ultraviolet (UV) detection has been developed and validated for simultaneous quantification of berberine hydrochloride, evodiamine and rutaecarpine in Zuojin Pill. Chromatographic separation were achieved on a ODS-C18 column (250×4.6 mm i.d., 5.0 μm particle) through a 25 min gradient delivery of a mixture of A (acetonitrile) and B (0.3 % phosphoric acid-0.3 % triethylamine) at a flow rate of 0.8 mL/min at 40 °C. All of the analytes showed good linearity (r > 0.999). The method was validated for repeatability, precision, stability, accuracy and selectivity. The validated method was applied to quality control of Zuojin Pill from different manufacture.

KEY WORDS: Berberine hydrochloride, Evodiamine, HPLC, Rutaecarpine, Zuojin pill.

* Author to whom correspondence should be addressed. E-mail: lankywang@yahoo.cn.