



Determination of Emodin, Chrysophanol, and Physcion by HPLC in the Chinese Medicine *Rumex japonicus* Houtt.

Chongliang LIN¹, Mengchun CHEN², Jinzhang CAI³,
Minmin LAI², Yiting ZHENG² & Xuezhi YANG^{1*}

¹ The First Affiliated Hospital,

² Analytical and Testing Center &

³ The Second Affiliated Hospital of Wenzhou Medical College, Wenzhou 325000, China.

SUMMARY. A high performance liquid chromatography (HPLC) method for determination of emodin, chrysophanol and physcion in *Rumex japonicus* Houtt. from different places in Zhejiang Province (China) was established. The samples were separated on a Agilent Zorbax SB-C18 column (2.1 × 150 mm, 5 μm) at a flow rate of 0.4 mL/min using acetonitrile-water as the mobile phase, with a gradient elution. The column oven temperature was 30 °C and the wavelength of detection used was 285 nm. The three anthraquinones were well separated by this HPLC method. Linearities of emodin, chrysophanol, and physcion were good in the ranges of 0.23-46 ($r = 0.998$), 0.2-50 ($r = 0.9999$), and 0.5-50 ($r = 0.9997$) μg/mL, respectively. The average recoveries were 99.01 % for emodin, 100.73 % for chrysophanol, 101.12 % for physcion, with RSD 1.23, 1.09 and 3.42 %, respectively. The method is simple, accurate, reproducible, and it can be used to quality control of *Rumex japonicus* Houtt.

KEY WORDS: Emodin, Chrysophanol, HPLC, Physcion, *Rumex japonicus* Houtt.

* Author to whom correspondence should be addressed. E-mail: yangxuezhi1977@163.com