



## Simultaneous Determination of Caffeic Acid and Rosmarinic Acid in *Ziziphora clinopodioides* Lam. from Different Sources in Xinjiang by a Novel Rapid Resolution Liquid Chromatography Method

Xiaoying ZHOU <sup>1</sup>, Qian YU <sup>1,2</sup>, Haiyan GONG <sup>1</sup>, Haoke ZHANG <sup>1,2</sup>,  
Dongdong WANG <sup>1,2</sup> & Shuge TIAN <sup>1,2\*</sup>

<sup>1</sup> Xinjiang Key Laboratory of Famous Prescription and Science of Formulas,  
Urumqi-830011, Xinjiang, China

<sup>2</sup> College of TCM, Xinjiang Medical University, Urumqi-830011, Xinjiang, China

**SUMMARY.** A simple and sensitive rapid resolution liquid chromatography method with a short run time was developed for the simultaneous determination of caffeic acid and rosmarinic acid in *Ziziphora clinopodioides* Lam. A good chromatographic separation was obtained on an XDB-C<sub>18</sub> reversed-phase analytical column (50 mm × 4.6 mm, 1.8 μm) by gradient elution with methanol and water containing 1 % acetic acid (v/v) at 0.9 mL/min flow rate. The detection wavelength was set at 330 nm. The mean recoveries of the two compounds were 101.6 % for caffeic acid and 104.2 % for rosmarinic acid. The method was successfully applied to determine the two compounds in 10 *Z. clinopodioides* Lam. samples of different origins. A significant variation in the contents of the two compounds among the 10 samples was observed. Therefore, this method provides a new basis for the overall routine quality control assessment of *Z. clinopodioides* Lam.

**KEY WORDS:** Caffeic acid, Rosmarinic acid, Rapid Resolution Liquid Chromatography (RRLC), Simultaneous determination, *Ziziphora clinopodioides* Lam.

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