



## Comparison of Element Concentrations in different processed *Rhizoma Coptidis* by ICP-AES

Xingde ZHANG<sup>1</sup>, Kunming QIN<sup>1,2</sup>, Hao CAI<sup>1</sup>, Junsong LI<sup>1</sup>, Jie GU<sup>1,2</sup>,  
Yachun SHU<sup>1</sup>, Hongli YU<sup>1</sup> & Baochang CAI<sup>1,2\*</sup>

<sup>1</sup> *Engineering Research Center of Ministry of Education for Standardization of Chinese Medicine Processing, Nanjing University of Chinese Medicine, Nanjing 210029, PR China.*

<sup>2</sup> *Nanjing Haichang Chinese Medicine Group Co. Ltd, Nanjing 210061, PR China.*

**SUMMARY.** Huanglian (*Rhizoma Coptidis*) is among the more commonly used herbal drugs in traditional Chinese medicine (TCM), with the reported efficacy of suppressing fever, dispelling dampness, removing toxicosis and detoxification. The processing of TCM is a common practice and usually occurs before most herbs are prescribed. There are a variety of traditional ways for processing herbs, such as frying with sand or oil, sauteing with rice wine or wheat bran, and steaming with water or rice wine, etc. Steaming, stir-frying and carbonizing are three widely used methods for processing Huanglian. However, the main purposes of these processing methods are still unclear. In this study, we determined the concentration of elements in *Rhizoma Coptidis* under different processing methods, such as steaming, stir-frying and carbonizing. Eleven elements including As, Ca, Cd, Cu, Fe, Hg, K, Mg, Pb, Se, and Zn were analyzed by means of ICP-AES technique. Contents of these elements in the different processed Huanglian samples were found at different levels. We suggest that these elements may play a direct or indirect role in the pharmacological effect or adverse effect of different processed Huanglian samples.

**KEY WORDS:** Element, ICP-AES, Processing, *Rhizoma Coptidis*.

\* Author to whom correspondence should be addressed. *E-mail:* bccai@126.com