Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **31** (8): 1161-9 (2012)

Regular Article
Received: February 23, 2012
Revised version: September 27, 2012
Accepted: September 29, 2012

Efficient Extraction and Rapid Quantitative Determination of Nucleoside Compounds from *Cordyceps jiangxiensis*, a new *Cordyceps* Producing-Cordycepin

Jian-Hui XIAO [1]*, Zhong-Hua SUN [1], Xiao-Jie ZHANG [1], Qing XIONG [1], & Jian-Jiang ZHONG [2]*

[1] *Key Laboratory of Cell Engineering of Guizhou Province, Affiliated Hospital of Zunyi Medical College, 149 Dalian Road, Zunyi 563000, China;*
[2] *State Key Laboratory of Microbial Metabolism, and School of Life Sciences & Biotechnology, Shanghai Jiao Tong University, 800 Dongchuan Road, Shanghai 200240, China*

SUMMARY. ***Cordyceps*****, a well-known and valuable traditional Chinese medicine, has received increasing attention worldwide due to its outstanding curative effects for different diseases. Nucleosides are the main active compounds of *Cordyceps*, and are usually used the chemical marker for the quality control of *Cordyceps* and its bioproduct. In this study, an optimal condition for extracting nucleosides in *Cordyceps jiangxiensis* was achieved by an orthogonal design as follows: 15 % methanol-water extraction solvent, 10 min extraction time, 20:1 solvent to sample ratio, and 1 extraction frequency. Also, a simple, rapid, and reliable method by HPLC-DAD was successfully used to simultaneously and qualitatively identify seven nucleosides compounds in *C. jiangxiensis*. Determination was achieved on a Shimadzu VP-ODS column (4.6 x 250 mm i.d. 5 μm) using a gradient elution with a methanol/water mobile phase. All calibration curves showed good linearity ($R^2 > 0.99$) within the test ranges. The overall relative standard deviations for intra- and inter-day of seven analytes were less than 4.2 %. Under the developed method, the findings indicated that uridine was the most abundant nucleoside, adenosine was inferior to uridine, and cordycepin with antitumor activity was also detected in *C. jiangxiensis*. The method developed might be applied as an alternative approach in assessing the quality of other *Cordyceps* species.**

KEY WORDS: Cordycepin, *Cordyceps jiangxiensis,* Nucleosides, Extraction, Quantitative detection, HPLC-DAD.

* Author to whom correspondence should be addressed. *E-Mail:* jhxiao@yahoo.cn (J.H. Xiao); jjzhong@sjtu.edu.cn (J.J. Zhong).