



HPLC-DAD-ESI-MS/MS研究金银花水提工艺中绿原酸类成分的变化规律

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中文摘要:目的:分析金银花水提液中的绿原酸类成分及水提过程中绿原酸类成分的变化规律。方法:Agilent Zorbax SB-C₁₈色谱柱(4.6 mm×250 mm,5 μm),检测波长327 nm,柱温30 ℃,流动相0.1%甲酸溶液(A)-乙腈(B),梯度洗脱,流速0.5 mL·min⁻¹,流速采用负离子多级检测模式,对抽取的22个金银花水提液样本进行分析。结果:从水提液中准确鉴定了咖啡酸和6种绿原酸类成分。在提取过程中,绿原酸和3,5-二咖啡酰奎宁酸含量达到最高值后会逐渐趋于平衡或缓慢降低,其他成分的含量一直呈上升趋势,但是变化率逐渐减小。结论:该研究为改进含金银花中药制剂的生产工艺提供了依据。

中文关键词:金银花 水提工艺 绿原酸类成分 HPLC-DAD-ESI-MS/MS 变化规律

Regularity of changes in chlorogenic acids in *Lonicera japonica* extracts by HPLC-DAD-ESI-MS/MS

Abstract: Objective: To analyze chlorogenic acids contained in *Lonicera japonica* water extracts, and to investigate the regularity of changes in chlorogenic acids during the water extraction process. **Method:** Agilent Zorbax SB-C₁₈ analytical column (4.6 mm×250 mm, 5 μm) was eluted with 0.1% formic acid (A)-acetonitrile (B) as the mobile phase at a flow rate of 0.5 mL·min⁻¹. The detection wavelength was 327 nm and the column temperature was 30 ℃. Negative MSⁿ mode was adopted in mass spectrum for analyzing the 22 samples of *L. japonica* water extracts. **Result:** Caffeic acid and six organic acids were accurately identified from the water extracts. During the extraction, the contents of chlorogenic acid and 3, 5-dicaffeoylquinic acid became stable or gradually decreased after reaching the highest value. The contents of the other components had long been increasing, but with a decreasing rate of change. **Conclusion:** This study provides basis for improving the production process of traditional Chinese medicine preparations containing *L. japonica*.

keywords: *Lonicera japonica* water extraction process chlorogenic acids HPLC-DAD-ESI-MS/MS regularity of change

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