

## 毛细管电泳法测定延胡索中2种生物碱含量电泳条件优化研究

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**中文摘要:**目的: 优化毛细管电泳同时测定延胡索中延胡索乙素和原阿片碱含量的电泳条件, 建立其含量测定方法。方法: 采用单因素法, 对影响缓冲溶液的组成、浓度、pH, 分离电压, 进样时间进行多水平优选。利用优化后的电泳条件同时测定延胡索中延胡索乙素和原阿片碱。结果: 以 $60 \text{ mmol} \cdot \text{L}^{-1}$ 磷酸二氢钠(磷酸调pH 6.0)-甲醇(5%THF) (体积比为65:35)为运行缓冲液, 运行电压为17 kV, 进样电压为40 kPa, 进样时间为3 s, 温度为20 °C, 检测波长为283 nm的电泳条件为最佳优化条件, 在20 min内达到完全分离。结论: 确定了毛细管电泳法测定延胡索中两种生物碱含量电泳条件, 该法简便、准确、可靠, 为毛细管电泳法测定药材含量提供了一定的方法学依据, 为延胡索药材的质量控制提供参考。

**中文关键词:**毛细管电泳 电泳条件 延胡索 延胡索乙素 原阿片碱

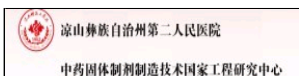
## Research Based on Capillary Electrophoresis Method to Determine the Content of Two Alkaloids in Corydalis Rhizoma

**Abstract:** Objective: To optimize the electrophoresis condition of determining the content of tetrahydropalmatine and protopine in Corydalis Rhizoma simultaneously by the method of capillary electrophoresis, and to establish the determination method. Method: Single factor method was used to optimize the composition, concentration, pH value, separation voltage and injection time that can influence the buffer solution. And the optimized electrophoresis condition was used to detect the contents of tetrahydropalmatine and protopine simultaneously. Result: The buffer solution was  $60 \text{ mmol} \cdot \text{L}^{-1}$  of sodium dihydrogen phosphate (pH 7)-methanol (5% THF) (65:35). The running voltage was set at 17 kV and the voltage of sample injection was at 40 kPa. The time of sample injection was 3 s with temperature of 20 °C and detection wavelength of 283 nm. With the optimized condition the complete separation can adopte within 20 min. Conclusion: The electrophoresis condition of determining the two content in Corydalis Rhizoma was established, that is a simple, accurate and reliable method, which provides the basis of determining content with capillary electrophoresis method and also provides a reference for the quality control of Corydalis Rhizoma.

**keywords:** capillary electrophoresis electrophoresis condition Corydalis Rhizoma tetrahydro-palmatine protopine

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