



## 基于RAPD标记的SCAR分子标记技术鉴定川牛膝及其混清品

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**中文摘要:**目的: 基于RAPD标记开发SCAR标记,为川牛膝及其混清品鉴定提供有效方法。方法: 建立了收集于四川天全、宝兴、会理、金口河等地的19个牛膝种群(包括川牛膝及其混清品红牛膝、怀牛膝)的RAPD指纹图谱,从中找到能有效区分上述材料的多态性谱带F300、F500进行克隆与测序;根据测序结果设计2对特异引物对19份材料进行PCR扩增。结果: 引物SC-320能稳定地区分川牛膝与怀牛膝,引物SC-495 则能稳定地区分川牛膝与红牛膝,2对引物结合能快速准确地鉴定川牛膝、红牛膝和怀牛膝。结论: 建立了鉴定川牛膝及其混清品的SCAR标记技术体系。

**中文关键词:**川牛膝 混清品 RAPD标记 SCAR标记

### Authentification of Radix Cyathule and its adulterants based on SCAR markers

**Abstract:** Chuanniuxi (Radix Cyathule) is one of the most important geo-herb in Sichuan province, which adulterants are Hongniuxi (*Cyathula capitata*) and Huainiuxi (*Achyranthes bidentata*). In this paper Chuanniuxi and its adulterants were identified by SCAR markers. Nineteen populations from Tianquan, Baoxin, Huili and Jinkouhe were collected and their RAPD fingerprints were established. Based on the RAPD patterns, two polymorphic bands F300 and F500 were selected, recycled, cloned and sequenced. According to the sequences two pairs of sequence characterized amplified regions (SCAR) primers were designed and used to amplify all materials to prove the efficiency of identification of the different populations. Chuanniuxi and Huainiuxi could be distinguished by the primer SC-320. Chuanniuxi and Hongniuxi could be distinguished by the primer SC-495. Combining the two SCAR markers, Chuanniuxi, Hongniuxi and huainiuxi could be identified effectively and quickly.

**keywords:** Radix Cyathule promiscuous medicinal materials RAPD marker SCAR marker

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