

论文

中药材分子鉴别新方法：锚定引物扩增多态性DNA的研究

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摘要:

为了寻找稳定性好、可操作性强的分子鉴定新方法,在充分吸取RAPD优势的基础上,对其引物和退火温度进行了改进。本文以人参、西洋参为例进行了方法的探索和各种验证,并推广应用到天花粉以及白芷类药材的鉴别。结果显示引物Pg-q36F得到人参、西洋参及其9种伪品的多态性条带。对于人参、西洋参的鉴别结果与文献鉴别方法结果一致,并且具有更高的稳定性。引物TKS1-64F得到了天花粉及其11种伪品的多态性条带,引物AfS1-100F得到白芷及其3种伪品的多态性条带,均能准确鉴别各种药材。实验结果证明本方法具有简单易行、稳定性和重复性好、提供的信息量大等优点,是一种极具前途的中药材分子鉴定新方法,被命名为锚定引物扩增多态性DNA(anchored primer amplification polymorphism DNA, APAPD)。

关键词: 锚定引物扩增多态性DNA 分子鉴别 人参 西洋参 天花粉 白芷

A new molecular identification method: anchored primer amplification polymorphism DNA

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Abstract:

To build up a stable and easy doing method for molecular identification in traditional Chinese medicine, on basis of RAPD, the new method mainly changed the primer length and PCR annealing temperature. *Panax ginseng*, *Panax quinquefolius* and its nine adulterants were used to establish the method and test it using MARMS primers published in 2004. The new method also used to authenticate Chinese Materia Medica of Tian-hua-fen (*Radix Trichosanthes*) and Bai-zhi (*Radix Angelica*). Primer Pg-q36F obtained polymorphic bands of *P. Ginseng*, *P. quinquefolius* and its adulterants. The identification result is identical to that published before and more stable. Primer TKS1-64F obtained polymorphic bands of Tian-hua-fen and its nine adulterants. Primer AfS1-100F obtained polymorphic bands of Bai-zhi and its three adulterants. The method has good stability and reproducibility and can easily identify authentic medicines from their adulterants. It was a potential molecular method to identify other Chinese Materia Medica. The method was named as anchored primer amplification polymorphism DNA (APAPD).

Keywords: molecular identification *Panax ginseng* *Panax quinquefolius* Tian-hua-fen Bai-zhi APAPD

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