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论文

花椒及其混淆品的rDNA ITS区序列分析与鉴别

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摘要：

目的研究不同居群的花椒及其混淆品的rDNA ITS区碱基序列的特征及其差异，为花椒的鉴别提供可靠的分子标记。方法运用PCR产物直接测序和克隆测序法对甘肃、陕西、四川、河北等7个花椒居群及3个混淆种的rDNA ITS区(包括ITS1，5.8S，ITS2)碱基序列进行序列测定。结果首次报道花椒ITS区的碱基序列，序列总长度为619-620 bp，长度变异较少，与混淆种长度仅相差4 bp。花椒各居群中，rDNA ITS区碱基序列有15个变异位点、12个信息位点、3个特异性识别位点。与混淆品间的碱基差异则较为显著，多达71个变异位点，有4个花椒特异性识别位点。结论依据花椒ITS区的序列特征可准确鉴别各居群的花椒及其混淆品；亲缘关系密切的花椒居群在地理位置上也非常靠近；rDNA ITS序列特征可作为花椒种内和种间鉴别的有效分子标记。

关键词： 花椒 居群 混淆品 rDNA ITS区 DNA分子鉴别

Authentication of *Zanthexylum bungeanum* Maxin population and adulterants by analysis of rDNA ITS sequences

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Abstract:

AimTo study the difference of rDNA ITS sequences between *Zanthexylum bungeanum* populations and their adulterants in main habitants of China so as to provide molecular markers for identifying *Zanthexylum bungeanum* populations against adulterants. MethodsrDNA ITS regions (including ITS-1, 5.8S and ITS-2) of 7 populations of *Zanthexylum bungeanum* which are separate located in Gansu, Shanxi, Sichuan, Hebei provinces, and 3 adulterants were sequenced by PCR products sequencing method or clone sequencing method. ResultsThe sequences of rDNA ITS region of Zanthexylum bungeanum were reported for the first time, and the sequences of ITS region ranged from 619 to 620 bp, and the length difference amoung Zanthexylum bungeanum and their adulterants is 4 bp. There are 15 variable sites, 12 informative sites and 3 authenticable sites among Zanthexylum bungeanum populations. The difference of rDNA ITS regions amoung Zanthexylum bungeanum and their adulterants is obvious, the number of variable sites is 71. ConclusionThe difference of rDNA ITS sequences can be used to authenticate accurately the populations of Zanthexylum bungeanum and their adulterants. These populations of Z.bungeanum which have close relationship always distribute in near geographic areas. The characteristics of rDNA ITS sequence can be used as good markers for authenticating Zanthexylum bungeanum populations form their adulterants.

Keywords: population adulterants rDNA ITS rengions DNA molecular authentication Zanthexylum bungeanum Maxim

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本刊中的类似文章

1. 王来友;J elle;Millet;黄芳芳;杨得坡.花椒毒素在人体皮肤及角质层中的渗透动力学探讨[J]. 药学学报,

2006,41(9): 878-881
2. 陈世文;赖茂祥.14种花椒属药用植物根的生药鉴定[J]. 药学学报, 1985,20(8): 598-605
3. 陶朝阳;陈万生;郑水庆;张卫东;乔传卓.刺异叶花椒化学成分研究[J]. 药学学报, 2001,36(7): 511-513
4. 任丽娟;谢凤指;谢晶曦.柄果花椒酰胺的化学结构[J]. 药学学报, 1989,24(1): 67-70
5. 刘锁兰;魏璐雪;王动;高从元.青花椒化学成分的研究[J]. 药学学报, 1991,26(11): 836-840
6. 熊泉波;施大文.花椒及其同类品的形态组织学研究[J]. 药学学报, 1991,26(12): 938-947
7. 陈立华;谢蓝;谢晶曦.化学合成法确证柄果花椒酰胺的结构[J]. 药学学报, 1990,25(12): 926-928
8. 任丽娟;谢凤指;冯菊仙;薛智.柄果花椒树皮的化学成分研究[J]. 药学学报, 1984,19(4): 268-273

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