

## 应用ISSR分子标记绘制红麻种质资源DNA指纹图谱

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## Establishment of DNA Fingerprints of Kenaf (*Hibiscus Cannabinus* L.) Germplasm Resources with ISSR Molecular Markers

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摘要

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**摘要** 以6份红麻种质资源为材料, 对UBC807-UBC80等80个ISSR引物进行筛选, 筛选出多态性好的ISSR引物20个。利用这20个ISSR引物扩增来自国内外84份红麻种质资源, 共获得230条谱带, 平均每个引物扩增出11.5条谱带, 其中多态性谱带185条, 多态性条带比率为80.43%, 表明供试的红麻种质资源遗传多样性较丰富。以供试84份红麻种质资源的ISSR扩增谱带为基础, 建立了供试材料扩增条带指纹数据库的Excel文件。根据指纹图谱唯一性原则, 采用自行开发的DNA指纹数据分析软件, 再从20个多态性好的ISSR引物中遴选出UBC 813、UBC 825、UBC 836、UBC 888和UBC 889引物, 绘制出82个红麻种质资源的DNA指纹图谱, 为红麻种质资源分子身份证的构建奠定了基础。

**关键词:** 红麻 种质资源 DNA ISSR 指纹图谱

**Abstract:** Kenaf (*Hibiscus cannabinus* L.) is an important economic crop in China. To identify germplasm resources and establish the data base of DNA fingerprints, we adopted six kenaf germplasm resources to screen 80 ISSR primers, 20 of which were polymorphic. Then 20 ISSR primers were used to amplify 84 kenaf germplasm resources introduced and preserved from home and abroad. Totally 230 bands were produced, the average number of DNA bands amplified by each primer was 11.5, and the number of polymorphic DNA bands was 185. The polymorphic proportion of DNA bands was 80.43%, which indicated the abundant genetic diversity of kenaf germplasm resources preserved. Based on the DNA bands amplified from 84 kenaf germplasm resources, the Excel data base for PCR amplified bands of the kenaf germplasm resources was established. According to the principle of uniqueness of the fingerprints, the DNA fingerprints of 82 kenaf germplasm were constructed with five ISSR primers (UBC813, UBC825, UBC836, UBC888 and UBC889) selected from 20 polymorphic primers, using the analyzing software designed by our laboratory programmed and based on image manipulation. The fingerprints provide a basis of the molecular identification of kenaf germplasm resources. In this research, the DNA fingerprints system was proved to be feasible and reliable.

**Keywords:** Kenaf (*Hibiscus cannabinus* L.) Germplasm resource DNA ISSR Fingerprinting

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