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摘要： 将环介导的等温核酸扩增技术应用于转基因大豆及加工品检测。针对抗草甘膦Roundup Ready转基因大豆及加工品外源基因EPSPS设计2对特异性引物进行扩增，成功建立起定性检测转基因大豆及加工品的LAMP检测方法。优化LAMP反应条件，反应温度为65℃，反应时间为1h。结果表明：该体系能快速、灵敏、有效地检测转基因大豆及加工品中整合的EPSPS基因，检测限为0.01%，低于国际现行最低检测量0.5%的要求。检测 EPSPS 基因操作简单，成本低、特异性强、灵敏度高。LAMP检测结果可信，稳定性好，可对目前批准的抗草甘膦Roundup Ready转基因大豆及加工品进行定性检测。

Abstract: The loop-mediated isothermal amplification(LAMP) that amplifies DNA with high specificity and rapidity under an isothermal condition was applied for rapid detection of Roundup Ready and its products. A set of four primers, two outer and two inner primers, was designed specifically to recognize EPSPS gene of Roundup Ready. The LAMP reaction mix was optimized. The optimal reaction temperature and time of the LAMP assay for EPSPS gene were 65℃ and 1 h, respectively. The LAMP detection method has been secessfully set up. The results showed that the LAMP reaction system can detect EPSPS gene effectively and sensitively. The limit of detection is under 0.01% lower than the international limit. These results suggest that detection of EPSPS by LAMP is an effective and low-cost procedure with high specificity and sensitivty that requires no specialized equipment. This asssy is expected to become a valuable tool for rapid detection and identification of Roundup Ready soybean and its products.

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