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摘要： 采用改良环介导等温扩增（LAMP）技术，建立一套准确、快速、可靠的用于转基因大豆检测及DNA提取的方法。以CP4-EPSPS外源基因为检测的目的片段，设计内、外引物和环引物，并采用改进的方法提取DNA，进行LAMP扩增，实际检测已知转基因大豆和市售大豆，通过肉眼观察白色沉淀，判断检测结果。改进的DNA提取方法与经典的CTAB方法相比，提取时间至少缩短了1 h，降低了提取成本。环介导等温扩增（LAMP）技术对转基因大豆的检出限为0.01%，是普通PCR方法的20倍。因此，改良的LAMP检测转基因大豆方法灵敏度高，耗时短，方法简便。

Abstract: A loop-mediated isothermal amplification(LAMP) technology was established to detect transgenic soybean. The sequence of exogenous gene CP4-EPSPSwas used as target sequence, to design outer primers, inner primers and loop primers. The DNA extraction method was improved. Through visual observation of white precipitate to judge results of detection. The improved CTAB method isolated total DNA quickly and reducing DNAOextraction cost as compared with the traditional CTAB method. The detection limit of the genetically modified soybeans by LAMP technology was 0.01% which was superior to PCR. Results indicate that LAMP can provide a sensitive, rapid yet simple test for the detection of CP4OEPSPS in transgenic soybean.

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