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饲料原料中转基因成分的PCR检测 PCR Detection of Transgenic Elements in Feed Raw Material

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摘要　采用PCR检测方法从饲料的主要原料豆粕、玉米蛋白粉中成功地检出启动子35S (35S-promoter, originated from cauliflower mosaic virus)、终止子NOS (nopaline synthase-terminator, derived from Agrobacterium tumefaciens)、耐除草剂基因EPSPS(5-enolpyruvylshikimate-3-phosphate synthase)和抗虫基因CryIA (b) (delta-endotoxin, evolved from Bacillus thuringiensis subsp. kurstaki)等转基因成分，并通过扩增玉米自身蛋白基因Zein(a protein extracted from corn gluten)及大豆自身基因Lectin(chitin-binding protein)的引物和阴阳性对照、阴阳性质控，避免假阳性、假阴性结果。该方法已在口岸进口饲料原料转基因检测中得到初步应用。
Abstract:Based on the heterogenous genes usually used in transgenic crops, the PCR technique was performed with primers derived from CaMV 35S promoter(35S-promoter, originated from cauliflower mosaic virus), NOS terminator(nopaline synthase-terminator, derived from Agrobacterium tumefaciens), EPSPS(5-enolpyruvylshikimate-3-phosphate synthase) gene, and CryIA(b)(delta-endotoxin, evolved from Bacillus thuringiensis subsp. kurstaki)gene to detect transgenic agents from feed raw materials of soybean dregs and corn gluten meal, respectively. Endogenous corn Zein(a protein extracted from corn gluten) gene, soybean Lectin(chitin-binding protein) gene and negative, positive control were applied for avoiding false results. The method established here has been succeessfully applied in detecting transgenic elements in imported feed raw material.

关键词　PCR 转基因 饲料 豆粕 玉米蛋白粉 Key words PCR transgene feed raw material soybean dreg corn gluten meal
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Abstract

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