

Specific polymerase chain reaction (PCR) analysis of raw meats and fats of pigs for Halal authentication

ABSTRACT

Species-specific polymerase chain reaction (PCR) analysis of a conserved region in the mitochondrial (mt) 12S ribosomal RNA (rRNA) gene was developed for species identification from raw pork and lard samples. Genomic DNA of pork and lard were successfully extracted and were found to be of good quality. The extracted genomic DNA was then subjected to PCR amplification targeting the specific regions of the 12S rRNA gene and produced clear PCR products on the amplification of 12S rRNA gene of 387 base pairs (bp) from pig species. The species-specific PCR identification yielded excellent results for identification of pig. This made it deal for quality control purposes and a potentially reliable technique to avoid species adulteration for Halal authentication and verification.

Keyword: Species identification; Pork; Lard; Species-specific PCR; 12S rRna