



Extraction and detection of animal deoxyribonucleic acid (DNA) species on lipsticks using Polymerase Chain Reaction (PCR) assay

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Abstract : Extraction and detection of animal DNA species was conducted by polymerase chain reaction (PCR) assay using universal mitochondria DNA (MtDNA) primers for vertebrate animal (CYTb) and species-specific for porcine (SIMp) genes. Prior to DNA extraction, triplicate lipsticks of each samples were pretreated with water and phosphate buffered saline (pH 7.0, 0.1 M) and incubated at 56 °C for 3 hours, before DNA was extracted using commercial Epicentre MasterPure™ Complete DNA Purification Kit. DNA extraction using this kit demonstrated a good DNA recovery. The extracted DNA was then tested using PCR assay and produced amplicons of 359 (CYTb) and 398 bp (SIMp) by gel electrophoresis, respectively. DNA extraction method in the present study demonstrated a good quality of DNA recovery and useful for animal species identification using PCR assay.

Keywords: DNA extraction, Lipsticks, Animal species identification, Polymerase chain reaction (PCR), porcine detection.

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