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PCR Inhibitor Contaminant Detection from Extraction Products of Resin Chelating DNA in Forensic DNA Identification

Abstrak :

One crucial thing to note in forensic DNA identification is the process of DNA extraction. This research is expected to give an answer will still need information about whether the decalcification process using chelating agent EDTA ingredient in the bone used as ingredients in forensic DNA examination, in the process of DNA extraction using chelating resin, which is also a chelating agent material, where with the material chelating agent in it is feared would complicate the process of DNA amplification using PCR. DNA concentration obtained from the extraction of DNA by chelating resin method with decalcification of bone have different results with the DNA content of the extracted DNA by the same method without decalcification, the DNA content of the extracted DNA by decalcification has a tendency more than the content of the extracted DNA DNA with decalcification. Nuclear DNA and mitochondrial DNA of bone, each on the examination of Short Tandem Repeat (STR) loci VWA and examination of mitochondrial DNA Hypervariable region 1 (HV1) 143 bp amplification product of the method of extraction with chelating resin with or without decalcification without accompanied by precipitation with alcohol, have a lower success rate compared with the results of DNA extraction with or without decalcification alokohol accompanied by precipitation, using the same method in the examination. EDTA and chelating resin material which has the properties of chelating agent can be inhibitors on the reaction process Polymerase Chain Reaction (PCR).

Keyword :

PCR, DNA, forensic, resin, chelating

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