A15 Evaluation of a New DNA Extraction Kit for Degraded Skeletal Remains

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After attending this presentation, attendees will understand information and test results from a new DNA extraction kit on skeletal remains.

This presentation will impact the forensic community by providing a simplified procedure for bones and teeth that doesn't require powdering, reduces time, and potential contamination and yields full STR profiles from highly degraded samples.

A new DNA extraction kit for degraded skeletal remains was designed and tested. Based on a method originally developed at Shinshu University in Japan (Fukushima et al. 2006), the new extraction kit has been utilized to extract DNA that yields complete STR profiles from degraded skeletal remains. The method significantly simplifies most skeletal extraction procedures, as it does not require powdering. In addition to saving time, this new method reduces the possibility of contamination. Samples, such as teeth, remain physically intact after the extraction and therefore retain their morphological evidentiary value.

Both STR and mtDNA have been analyzed from DNA extracted from skeletal remains using the new extraction method. Furthermore, the new kits require no additional specialized equipment or instruments.

Reference:

Fukushima, H. et al 2006. High-yield method of DNA extraction from old and degraded samples of human skeletal remains. 17th International Symposium on Human Identification. Poster abstract 74 http://www.promega.com/geneticidproc/ussymp17proc/abstracts/Abstract74Fukushima.pdf

DNA Extraction Kit, Bone, Degraded

 ** Presenting Author*