

COMPARISON OF THE QIAAMP® DNA MINI KIT AND TRADITIONAL METHODS OF DNA EXTRACTION: A SAFE, QUICK AND INEXPENSIVE ALTERNATIVE FOR GENETIC TYPING

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Short Tandem Repeat (STR) sequences have proven to be of great value for paternity testing, gene mapping, diagnostic and forensic identification. These loci are small in size allowing easy amplification by the Polymerase Chain Reaction (PCR) and display a high degree of polymorphism between different individuals. Advances in PCR technology have allowed amplification of samples that are degraded or of limited quantity thus yielding information about an individual's genetic identity.

Several methods are now available for extracting DNA from a wide range of evidentiary samples such as blood and body fluid stains, bone, hair, saliva and other biological material. This research was undertaken to compare the quality, yield and consistency of results of STR analysis using the QIAamp® DNA Mini Kit from QUIAGEN with more traditional method. Several contamination studies were also carried out.

The goal of this research was to obtain a safe, inexpensive and quick method for STR analysis using the 310 Genetic Analyzer. The results indicated that the QIAamp® spin columns offer a rapid alternative to standard extraction protocols. The kit is highly suitable for extraction of biological samples that are eventually analyzed by the 310 Genetic Analyzer.

