DEVELOPMENT OF A NEW ROBUST qPCR QUANTIFICATION ASSAY EXAMINING QUALITY AND INTEGRITY OF HUMAN DNA IN FORENSIC SAMPLES

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Human DNA isolated from various sources has to be assessed in terms of quantity, quality and integrity prior to STR analyses since these are complex multiplex systems that require a defined range of input DNA and template quality to perform accurately. As DNA quantification is the only step preceding STR it is essential to extract as much information as possible from this reaction to aid correct setup of STR reactions. With the new qPCR quantification assay we can address the amount of amplifiable DNA, the presence of inhibitors and the integrity of DNA samples in one reaction to ensure a high correlation between quantification and STR results. The qPCR assay uses a novel PCR fast-cycling technology and provides rapid, robust and precise quantification and a high sensitivity for male DNA even in the presence of high amounts of female DNA. We will present data from our current development.