

HOW TO IMPROVE STR ANALYSIS USING A NOVEL QUANTIFICATION TECHNOLOGY: MORE THAN DNA QUANTIFICATION

Di Pasquale, F., Cornelius, S., König, M., Bochmann, L., Prochnow, A., Schnibbe, T., and Engel, H.

QIAGEN GmbH, Hilden, Germany

Quantification in forensic casework analysis is typically the only pre-STR analysis step and could be seen as a quality control step rather than just a quantification of the DNA concentration.

Thus, we present data from our novel human DNA quantification assay product line, called **Investigator® Quantiplex Kits**, that is available as human (Quantiplex Kit) and human/male (Quantiplex HYres Kit) configuration. Both provide fast and accurate quantification of DNA in forensic database and casework samples with a very high sensitivity and accuracy due to the trusted and validated autosomal multi-copy target 4NS1C and the validated multi-copy target on the Y-chromosome. Detection of inhibitors is ensured by a balanced internal amplification control, without significantly affecting the DNA quantification results. This novel technique of high quality control standards provides a highly accurate assay for DNA quantification in forensics. The assay ensures an improved correlation to the STR results in comparison to other standard real-time PCR methods.

The Investigator Quantiplex product line utilizes a novel PCR fast-cycling technology as well as Scorpion primers that enable rapid results. Using the Rotor-Gene Q system, quantification can be performed in around 50 minutes. ☘