

**EVALUATION OF ALUQUANT™ HUMAN DNA QUANTITATION SYSTEM
BY THE HOUSTON POLICE DEPARTMENT**

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Traditional slot-blot quantitation methods can be rather subjective, relying on the eye of the analyst to determine the quantity of human DNA in a forensic sample. These methods also tend to be very time consuming and labor intensive. AluQuant™ Human DNA Quantitation System is an alternative to slot-blot quantitation that is simple to use and calculates the quantity of DNA, thus taking the subjectivity out of quantitation.

The Houston Police Department Crime Laboratory evaluated the AluQuant™ Human DNA Quantitation System using samples prepared and provided by the Promega Corporation and also samples prepared within the Houston Police Department. A Turner Designs TD 20/20 Luminometer was used for detection of AluQuant™ reactions.

The results obtained reflected our expectations. Sensitivity was consistently achieved down to a range of 0.030ng/μl of DNA sample. DNA samples contaminated with Yeast (*S. Cerevisiae*) and *E.Coli* were also quantitated with little effect on the samples. Different extraction methods on solid platforms were also evaluated including: Organic Extractions, Chelex® Extractions, Qiagen Extractions, and DNA IQ™ Extractions. All DNA samples extracted yielded results with the exception of the Chelex® samples. DNA samples sheared (to simulate degradation) were also evaluated and favorable results were obtained.

Finally, blood and buccal samples were extracted using DNA IQ™, quantitated with AluQuant™, amplified using Power Plex® 16, and run on an ABI Prism® 3100 Genetic Analyzer. Minimal stutter was observed and peak balance was excellent when using these three systems together.

In conclusion, AluQuant™ is a good alternative to traditional slot-blot quantitation methods.