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Quantitation of DNA is a quality assurance step to ensure that there is enough DNA in a forensic sample to give optimal results based on the specifications noted for each amplification kit used. The Quality Assurance Standards for Forensic DNA Testing Laboratories (issued by the FBI), states under Standard 9: "STANDARD 9.4: The laboratory shall quantify the amount of human DNA in forensic samples prior to nuclear DNA amplification".

The FBI has defined low copy number (LCN) as samples containing 200 picograms of DNA or less. There are also restrictions for entering low copy analysis results into the Combined DNA Index System (CODIS). This makes it very important that forensic laboratories' quantitation methods are accurate and reliable to ensure that they know what type of sample they are working with. Accurate quantitation results will also allow a laboratory to choose the best analysis method for characterization. Testing has shown that depending on the quantitation kit used, the quantitation does not always provide accurate results. The DNA standard used in these quantitation kits can over- or underestimate the quantity of DNA in a sample by two to three fold.

Apart from the reasons listed above, accurate and reliable quantitation results affect all aspects of the DNA analysis process. It has a definite impact on all laboratory-conducted DNA validations, especially when attempting to evaluate sensitivity of downstream methods and instrumentation. Accurate quantitation results also ensures laboratories do not waste time and resources repeating processes because the results were not what were expected based on their quantitation. As laboratories obtain the actual quantitation results of the samples they are processing, they can take the necessary measures to correct any inconsistencies and optimize their methods.