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From: Tiffany Vasquez, DNA Technical Leader, Nuclear DNA Operations

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Subject: Male screening test and presence of male DNA

A handwritten signature in black ink, appearing to read "T. Vasquez".

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Male screening test results have been reported by the Department of Forensic Biology since 2017. However, the laboratory's evaluation of possible male DNA within a sample has always been based on more than this individual screening test. If a sample is indicative of male DNA at the screening step, where a portion of the swab or stain processed, the swab or stain will typically be recut for an additional extraction, and the estimated amount of male DNA is evaluated again at the DNA quantification step after this testing is performed. If a sufficient concentration of total and male DNA is present at the DNA quantification step, the sample is then eligible to undergo STR-DNA typing. It is also possible that an insufficient concentration of total and male DNA may be present at the DNA quantification step. The sample is then not eligible to undergo STR-DNA typing and is reported as indicative of male DNA at the screening step, but insufficient for STR-DNA typing. Any STR-DNA typing results obtained are evaluated in combination with the quantification results, to ensure that they are concordant with each other.

DNA quantification results are expressed as the concentration of DNA using the unit "pg/ $\mu$ L," (picograms of DNA per microliter of liquid DNA extract). Each human cell contains approximately 3-6 picograms of DNA. The DNA quantification test is an estimate that uses just a small portion of an extract, and as the results approach 0 (i.e. less than a few cells' worth of DNA within an extracted sample), that estimate becomes more variable, and is the reason for the updated reporting language for the results of this specific screening test. Depending on the results within a particular case, including the amount of male DNA detected at the quantification step, the results obtained from repeated tests or multiple cuttings of a swab or stain, and/or any STR-DNA testing results, the conclusion that the presence of male DNA is confirmed within a sample may still be elicited during discussions with or testimony by the assigned analyst.