

### 3.1 PURPOSE

To determine the quantity of human and/or male DNA in biological samples.

### 3.2 RESPONSIBILITY

DNA Section Personnel

### 3.3 PROCEDURE: Real Time PCR Procedure: Quantifiler Trio DNA Quantitation:

- 3.3.1 The quantity of human DNA in a question sample must be estimated prior to performing amplification using a human DNA quantitation method, e.g., the Quantifiler Trio kit manufactured by Applied Biosystems.
- 3.3.2 Detailed work instructions are found in DNA WI-07 Quantifiler Trio. Typically, a single reaction is performed for each of the five human DNA standards, although the standards may be run in replicate.
- 3.3.3 The standard curve must contain at least three data points.
- 3.3.4 The diluted DNA quantitation standards may be stored for longer than two weeks at 2 to 8°C based on internal validation, and will have an expiration date of 1 month from the date of preparation. The slope, Y-intercept, and R<sup>2</sup> values should be evaluated to ensure that the diluted DNA quantitation standards are performing as expected. Please refer to DNA WI-07 for acceptable slope, Y-intercept, and R<sup>2</sup> values.
- 3.3.5 When importing the sample setup file, use the CT-DSS Quantifiler Trio template found in the HID Real-Time PCR Analysis Software v1.2.
- 3.3.6 Reference: Quantifiler HP and Trio DNA Quantification Kits User Guide.
- 3.4 Based on internal validation for property crime cases and sexual assault cases undergoing male screen, stopping or halting at quantitation procedural guidance can be found in DNA WI-07 and DNA SOP-34, respectively.