INTERNAL VALIDATION OF THE STK SPERM TRACKER PROCEDURE

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Locating and identifying semen stains on evidence items can be the most labor intensive step in processing items for DNA analysis. This is especially true for large items that either fluoresce or quench, and/or contain numerous stains that fluoresce, under an alternate light source. Traditional overlay methods used in seminal fluid searches depend on colorimetric methods to indicate the presence of acid phosphatase, but are not specific to seminal acid phosphatase, and may be masked by the presence of other materials deposited on the surface of the substrate. The fluorescence based *STK Sperm Tracker* method is reported to have a higher specificity to seminal acid phosphatase, and may have a number of advantages over the traditional overlay methods.

The results of the validation studies reported here include sensitivity, mixture, stability, reproducibility, repeatability, and case type samples with the goal of identifying the advantages and limitations of the *STK Sperm Tracker* method as compared to colorimetric mapping and alternate light search techniques.