

**CASE STUDY: ANALYSIS OF AN ANORECTAL SWAB ALLEGED TO CONTAIN CANINE
SPERM USING A FLUORESCENTLY LABELED HUMAN SPERM HEAD SPECIFIC
ANTIBODY**

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Here we present the analysis of an evidentiary anorectal swab that was suspected to contain canine semen. Most methods for identifying sperm from sexual assault evidence utilize a nucleic acid and protein stain (e.g. KPIC or H+E). Due to the non-specificity of these cell stains, another staining technique (SPERM HY-LITER™) was employed to determine whether any sperm cells present in the sample were of human origin. SPERM HY-LITER™ is an antibody based staining technique that employs a general fluorescent stain for nucleic acids, and a fluorescently labeled human sperm head specific antibody. A series of experiments were performed to verify the efficacy and specificity of SPERM HY-LITER™ with the evidential anorectal swab. We present experimental data demonstrating the specificity and sensitivity of SPERM HY-LITER™ as a confirmatory method for human sperm identification on sexual assault evidence.