

## **AN EVALUATION OF microFLOQ® DIRECT COLLECTION DEVICE**

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Body fluids such as blood, saliva and nasal secretions are often collected as evidence at crime scene. Sometimes in forensic cases a female victim goes missing. DNA profiles obtained from bloodstains or other body fluids retrieved from the crime scene cannot be compared to the victim due to lack of reference samples. In these cases, specimens such as routinely preserved Papanicolaou test slides can be used as the reference sample as they are intimate source items collected from within the victim's body.

Standard methods that are routinely used for generation of DNA profile require extraction, purification, and quantification of DNA before they are subjected to thermal cycling for DNA profiling. In this study direct amplification of various types of body fluid was performed using microFLOQ® Direct collection device from COPAN Italia, Brescia, Italy, thus avoiding labor intensive, time consuming, expensive steps. The use of this device shortens the time of the identification process and allows the collection of minute amounts of blood, saliva, nasal secretions, cervical cells from slides and epithelial cells from touch evidence. Samples were amplified using PowerPlex® Fusion 6C System from Promega Corporation, the Investigator 24plex GO! Kit from Qiagen, and GlobalFiler™ Express Amplification kit from Life Technologies. Complete and concordant STR profiles were successfully generated from blood, saliva, nasal secretion, and cervical cells within a very short period of time. This study demonstrates that minute amounts of body fluids can be amplified directly using the microFLOQ® Direct collection device and DNA profiles can be obtained when used with these amplification kits.