



E59 The Impact of DNA Swabbing Collection Methods on Latent Print Evidence

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The goal of this presentation is to highlight a processing sequence that will optimize latent print and DNA yield on paper items of evidence. Attendees will have a greater understanding of how DNA collection methods and latent print processes on porous substrates impact one another and how these data may provide a foundation for improving laboratory policy and procedures.

This presentation will impact the forensic science community by discussing: (1) the impact of DNA collection methods (wet and dry swabbing) on subsequent latent print processing of paper items; and, (2) the impact of porous latent print processing on subsequent DNA analysis.

Currently, unless a fold or some type of creased area exists on a paper item where targeted DNA swabbing can be performed, investigators have been encouraged to choose between latent print testing and DNA testing, rather than attempting both. This decision is largely anecdotal with little data available demonstrating the impacts and significance to one another. In an effort to gain more empirical insights into this issue, preliminary research was performed using six different types of paper: manila envelope, manila folder, plain white envelope, index card, lined notebook paper, and plain white paper. Two prints were deposited on each sample and were processed in one of the following ways: latent print processing followed by either dry swabbing or wet swabbing, wet or dry swabbing followed by latent print processing, or latent print processing followed by direct DNA analysis.

The data collected indicates insignificant differences in the DNA yield or number of suitable latent prints developed between wet and dry swabbing either before or after latent print processing; however, direct DNA analysis of the impression resulted in the highest DNA yield and most success in obtaining a full profile. Wet swabbing prior to latent print development will obscure parts of the print, but oftentimes clear areas can still be used to support the latent print examination.

This study provides preliminary data related to the impact of DNA collection methods and latent print examinations. Although further research is advised using different latent print processing techniques, this data suggests that laboratories may not need to require investigators to choose one method over another.

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