B31 Chemical Processes Related to the Development of Latent Blood Fingerprints

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There are many different chemical methods of developing latent blood fingerprints. The goal of this presentation is to address what is the best way to develop these blood fingerprints, especially when those blood fingerprints are found on dark surfaces at a crime scene.

This presentation will impact the forensic community and/or humanity by demonstrating how the use of Ninhydrin, Amido Black, and Coomassie Blue are not feasible in these cases where blood is found on dark surfaces because they stain the fingerprint ridges a purple or dark blue color that is not visible on these dark surfaces. The solution may be a different color stain or one that fluoresces the blood print long enough to photograph it.

Latent blood fingerprints found on dark surfaces at a crime scene are not useful when developed with Ninhydrin, Amido Black and Coomassie Blue. These three examples are common techniques used on blood prints that stain the fingerprint ridges purple or dark blue which may not be visible on many dark surfaces. The solution to visualize these prints may be a different color stain or one that fluoresces a blood print long enough to photograph it. The chemical processes used in this study are ABTS, Merbromin, IND, Leucomalachite Green, Fluorescein, DFO, and Leucocrystal Violet. The fluorescent nature of many of these processes may assist in visualizing these latent blood fingerprints.

Latent, Blood, Fingerprint

 ** Presenting Author*