



D22 The Microscopic Characteristics of Drying and Transfer of Impacted Bloodstains on Fabric and Textiles

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After attending this presentation, attendees will understand the microscopic appearance of drying and dried impacted bloodstains as part of a bloodstain pattern analysis.

This presentation will impact the forensic community and/or humanity by allowing for more precise determinations of time for bloodshed events where impacted bloodstain patterns are present.

Blood shed events and the resulting bloodstain patterns have been used for the purposes of crime scene reconstruction for many years. It is widely accepted in courtrooms, crime scene investigations, and taught extensively to criminal justice and forensic science students throughout the United States. Although bloodstain pattern analysis is widely accepted and widely taught, this project's testing in the area of microscopic analysis of bloodstain transfer mechanisms on drying has not been researched.

This project extensively analyzed and documented the semi- microscopic drying mechanism of medium force impact blood spatter on selected natural and synthetic fabrics. Additionally, the photo- documentation of the semi-microscopic mechanisms by which blood could be transferred between fabrics was examined.

The results of the drying tests show that the impacted bloodstains immediately become incorporated into the matrix of the fabric and not as predicted, the stains do not remain on the surface of the fabrics while drying. The quick drying of these impacted bloodstains within the fabric matrices also seems to make transfer by contact difficult even with added force.

Bloodstain Patterns, Impacted Blood, Microscopic Drying