



B25 A Non-Destructive Collection of Latent Fingerprints Using Gellifters® and GLScan®

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Learning Overview: The goals of this presentation are to: (1) demonstrate the effectiveness of Gellifters® in conjunction with GLScan® to collect and visualize latent fingerprints of value on porous and semi-porous substrates, and (2) highlight the improved performance of Gellifters® as compared to the recovery of latent prints using alternate light sources.

Impact on the Forensic Science Community: This presentation will impact the forensic science community, specifically crime scene and evidence technicians and latent print examiners, by providing a method using Gellifters® and GLScan® that improves the performance of non-destructive collection of latent prints on porous and semi-porous substrates.

Non-destructive methods for latent fingerprint collection are highly sought after. In the current latent print development process, the furthest an examiner can process a piece of porous evidence non-destructively is up to visual inspection with white light and alternate light sources. However, there are a limited amount of latent prints that naturally fluoresce when viewed with alternate light sources. One way to increase the number of latent fingerprints developed without destroying the evidence could be with the use of Gellifters®. These gelatin lifts consist of a jet-black low-tack adhesive layer with a high-gloss finish and are typically used to collect latent shoeprints from various surfaces.¹ Collection is performed by laying the Gellifters® on a surface, removing it, and then placing the lift onto a scanner known as the GLScan® that produces high-quality digital images for analysis.¹

This experiment was designed to determine if: (1) suitable latent prints for comparison can be captured on porous and semi-porous substrates; (2) substrates remain intact post-lifting; (3) GLScan® provides better results than currently used alternate light sources to detect latent prints; and (4) suitable latent prints for comparison can be captured after aging. To test these, prints were left on multiple porous and semi-porous substrates that were then collected using Gellifters® and scanned with GLScan® while also assessing if the substrate remained intact. Some of the samples from this study were stored for one month to assess whether prints of value could be collected after aging. In a later experiment, the capabilities of Gellifters® were compared to alternate light sources to determine the relative effectiveness of each. It was determined that latent fingerprints of value can be collected on both porous and semi-porous substrates even after being aged, while keeping the substrate intact. The comparison between alternate light sources and GLScan® showed that GLScan® performed better overall than alternate light sources. More research needs to be conducted; however, Gellifters® in combination with GLScan® appear to be a viable non-destructive collection method for field use.

Reference(s):

- ¹ BVDA Gellifters®. *Lift your evidence to the highest level*. 2012.

GLScan®, Gellifters®, Latent Prints