

Technical Procedure for Processing Porous Items of Evidence

1.0 Purpose – This procedure describes the procedure for porous items of evidence submitted for latent evidence analysis.

2.0 Scope – This procedure applies to porous items of evidence. The following procedures contain the available options for porous processing. The Forensic Scientist is responsible for determining which methods to apply. Type and condition of evidence may limit which procedures may be used. This procedure does not include adhesive surface processing.

3.0 Definitions

- **Porous items** - Any item of evidence, or part of an item of evidence, that may absorb fingerprint residue.

4.0 Equipment, Materials and Reagents

4.1 Equipment and Materials

- Alternate light sources (CrimeScope, Mini-CrimeScope, TracER Laser)
- Image processing system

4.2 Reagents

- Ninhydrin, ninhydrin-HFE, zinc chloride, zinc chloride-HFE, DFO, physical developer

5.0 Procedure

5.1 The following is a list of recommended processing procedures for porous items of evidence that are submitted for analysis.

5.2 The Forensic Scientist shall produce a self-made test print to be processed concurrently with items of evidence (see Section Technical Procedure for Ensuring Quality Control).

Note: The Forensic Scientist has the authority, based on his/her training and experience, to determine the most appropriate method by which to process a particular item of evidence.

- Visual examination using ambient light
- Inherent luminescence (LASER and/or Alternate Light Source)
- DFO
- Ninhydrin/ninhydrin-HFE
- Zinc chloride/zinc chloride-HFE
- Alternate light source (LASER, CrimeScope, or Mini-CrimeScope)
- Blood print processing (Amido Black, Coomassie Blue, etc.)
- Adhesive processing (Tape Glo, Sticky-Side Powder, Crystal Violet)
- Grease print processing (Sudan Black)
- Physical developer/modified physical developer

5.3 Standards and Controls- N/A

5.4 Calibration – N/A

5.5 Sampling- N/A

5.6 Calculations – N/A

5.7 Uncertainty of Measurement - N/A

6.0 Limitations –The processing Forensic Scientist shall determine, based on training and experience, which chemical processing techniques are most appropriate for the item of evidence. Based on the condition of the evidence upon submission, some processing steps may be omitted.

7.0 Safety – All chemicals shall be used in the fume hood or in a well ventilated area. Additionally, appropriate protective clothing shall be worn when handling all chemicals.

8.0 References - See individual technical procedures.

Kent, T., ed. *Manual of Fingerprint Development Techniques: A Guide to the Selection and Use of Processing for the Development of Latent Fingerprints*. Police Scientific Development Branch, London (July 1992).

Lee, H.C. “Methods of Latent Print Development.” *Proceedings of the International Forensic Symposium on Latent Prints*. (July 1987): 15–24.

Lennard, C.J. and P.A. Margot. “Sequencing of Reagents for the Improved Visualization of Latent Fingerprints.” *Proceedings of the International Forensic Symposium on Latent Prints*. (July 1987): 141-142.

Manual of Fingerprint Development Techniques: A Guide to the Selection and Use of Processes for the Development of Latent Fingerprints. Scientific Research and Development Branch, London (1986).

Trozzi, T.A., R.L. Schwartz and M.L. Hollars. *Processing Guide for Developing Latent Prints*. (2000): 1-64.

US Department of Justice. *Chemical Formulas and Processing Guide for Developing Latent Prints*. FBI Laboratory Division, Latent Fingerprint Section (1994).

9.0 Records – N/A

10.0 Attachments – N/A

Revision History		
Effective Date	Version Number	Reason
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