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|  | <p style="text-align: center;"><i>Latent Procedure</i></p> <p>Pitt County Sheriff's Office Forensics Services Unit <i>Issued by Technical Leader</i></p> | <p>Effective Date: 2018/04/01</p> | <p>Ver: 3</p> |
| <p>Procedure for Processing Porous Items of Evidence</p> | | | <p>Page #: 1 of 4</p> |

Technical Procedure for Processing Porous Items of Evidence

1.0 Purpose – This procedure outlines the methods for processing 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 examiner/technician 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.
- **(ALS)Alternate light source:** Any of the multiple forensic light sources readily available in the digital/latent evidence section including, but not limited to, the CrimeScope, Mini Blue Maxx, Short and Long Wave lamps and Handscope Xenon (spex) ALS. ALS (Alternate Light Source) equipment used to produce light at various wavelengths to enhance or visualize potential items of evidence.

4.0 Equipment, Materials and Reagents

4.1 Equipment and Materials

- Alternate light sources
- Image processing system
- UIS(Universal Imaging System)
- Scanners
- Camera equipment


4.2 Reagents

- 1,2 Indanedione Zinc
- Ninhydrin and Ninhydrin-HFE
- Zinc Chloride, Zinc Chloride-HFE

5.0 Procedure

- 5.1** Copies digital/printed must be made of paper items when there is concern that information contained on an item may be damaged or destroyed during processing. Copies must be labeled on outer packaging/digital file name used "Copy" along with the case number, evidence item number, date and processor employee number. The step of copying must be documented in the processing notes.

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5.2 The examiner/technician shall produce a self-made test print to be processed concurrently with items of evidence (see section technical procedure for Ensuring Quality Control).

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

Note: The examiner/technician has the authority to determine the most appropriate method by which to process a particular item of evidence based on his/her training and experience and in accordance with the appropriate technical procedure.

- Visual examination using ambient light
- Inherent luminescence (Laser and/or Alternate Light Source)
- Ninhydrin/ninhydrin-HFE
- Zinc chloride/zinc chloride-HFE
- (ALS)Alternate light sources
- Blood print processing (Amido Black, Coomassie Blue, LCV)
- Grease print processing (Sudan Black)

5.4 Standards and Controls- N/A

5.5 Calibration – N/A

5.6 Sampling- N/A

5.7 Calculations – N/A

5.8 Uncertainty of Measurement - N/A

6.0 Limitations –N/A

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.

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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



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REVISION HISTORY

| CURRENT VERSION | EFFECTIVE DATE | SUMMARY OF CHANGES |
|------------------------|-----------------------|---|
| 1 | 2016/07/01 | Original Version |
| 2 | 2018/04/01 | Add copies text, Equipment needed, changed revision history table, issue date to effective date, rev# to ver# |
| 3 | 2018/04/01 | Moved text from 5.3 to 5.2 and modified Note below. |

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