Technical Procedure for Non-Porous Evidence

1.0 Purpose – This procedure outlines the process for non-porous items of evidence submitted for latent evidence analysis.

2.0 Scope – This procedure applies to non-porous items of evidence. The following procedure contains the available options for non-porous processing. The Examiner/Technician/Technician is responsible for determining which methods to apply. Type and condition of evidence may limit which procedures may be used. Sequential processing should be adhered to unless deviation is warranted and approved in accordance with the procedure for Deviation Request.

3.0 Definitions

- **Non-Porous -** Any item of evidence, or part of an item of evidence, that does not absorb fingerprint residue.

4.0 Equipment, Materials and Reagents

4.1 Equipment and Materials

- Alternate light sources
- Image Processing Systems
- Camera/photo equipment
- Protective Clothing
- Gloves

4.2 Reagents

- Fingerprint powder (black, bi-chromatic, gray, silver, white, magnetic, suspended spr etc.)
- Cyanoacrylate ester (bottle/vial, HotShot, Wand Tips etc.)
- Fluorescent dye (Rhodamine 6G, Ardrox, Basic Yellow, etc.)

5.0 Procedure

5.1 The following is a list of the recommended processing procedures for non-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, directional(oblique) light
- Inherent luminescence (laser and/or alternate light source)
- Cyanoacrylate fuming

- Powder(s)
- Fluorescent dye (Rhodamine 6G, Basic Yellow, Nile Red, etc.)
- Alternate light source (Crime Scope, or Mini-blue maxx)
- Blood print processing (Amido Black, Coomassie Blue, etc.)
- Adhesive surface processing (Tape Glo, Sticky-Side Powder, Crystal Violet)
- Wet processing (Small Particle Reagent)
- Grease print processing (Sudan Black)

5.2 Standards and Controls – N/A

5.3 Calibration – N/A

5.4 Sampling – N/A

5.5 Calculations – N/A

5.6 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

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).

Wallace-Kunkel, C., et al. "The Detection and Enhancement of Latent Fingermarks on Porous Surfaces – A Survey." *Journal of Forensic Identification*. Vol. 54, 6: 687–705 (2004).

9.0 Records – N/A

10.0 Attachments – N/A

REVISION HISTORY		
CURRENT VERSION	**EFFECTIVE DATE**	**SUMMARY OF CHANGES**
1	2016/07/01	Original Version
2	2018/04/01	Change revision history table, issue date to effective date, rev# to ver# add statement on sequential order. Modify limitations section.