	<p style="text-align: center;"><b><i>Latent Procedure</i></b></p> <p><b>Pitt County Sheriff's Office Forensics Services Unit</b>  <i>Issued by Technical Leader</i></p>	<p><b>Effective Date:</b>  2018/04/01</p>	<p><b>Ver:</b>  <b>2</b></p>
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### **Technical Procedure for Processing Hands/Feet of Unknown Deceased**

**1.0 Purpose** – This procedure outlines the suggested methodology for processing the hands/feet of unknown deceased individuals.

**2.0 Scope** – This procedure applies to the proper handling, processing and examination of severed hands and/or feet (or any part thereof) of an unknown deceased individual.

**3.0 Definitions** – N/A

### **4.0 Equipment, Materials and Reagents**

#### **4.1 Equipment and Materials**

- Appropriate gloves (numerous pairs)
- Face shield visor, surgical mask, and/or safety goggles
- Lab coat or apron
- One (1) or more scalpel handles
- One (1) or more scalpel blades (various sizes)
- Magnetic fingerprint powder
- Magna wand
- Fingerprint ink
- Inking slab
- Postmortem printing spoon
- Fingerprint cards, white paper, acetate and/or HandiPrint paper and clear acetate sheets
- Mikrosil or other casting material

#### **4.2 Reagents**


- Tissue builder and syringe(s)
- Isopropyl alcohol
- Mild soap/detergent
- 10 % bleach solution

### **5.0 Procedure**

**5.1 General Procedure:** Although the terms hand(s), finger(s) and palm(s) are used throughout this procedure, the terms foot (feet), toe(s), remains, or sole(s) may be used interchangeably.


**5.1.1** Prepare the processing and examination area by placing clean paper in the Bio-Hood and on the counter space or surface area used.

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- 5.1.2** Set out all necessary apparatus and supplies.
  - 5.1.3** Wearing, at a minimum, two (2) pairs of protective gloves, protective clothing and surgical mask/face shield, remove the container of remains from refrigeration and place in the sink.
  - 5.1.4** Remove the evidence (hands, feet etc.) from the container (leave lid, container and any liquid in the sink) and, properly clean the remains, if soiled, using tap water, mild soap, a soft bristled brush and towels.
  - 5.1.5** Once clean, allow evidence to dry in fume hood.
  - 5.1.6** Examine the remains carefully for significant ridge detail. This includes the fingers, joints and palms.
  - 5.1.7** If significant ridge detail is present, record it by either the application of printer's ink and then rolling the impression onto white paper or by the application of magnetic fingerprint powder and the use of adhesive lifters.
- Note:** Several attempts may be made to obtain the highest quality prints. Ensure that all impressions are properly marked with the finger/palm or plantar area from which they originated.
- 5.1.8** Once clean a casting material such as Mikrosil may be used to attempt to capture ridge detail. This process is a reversed impression and additional capturing techniques may be incorporated.
  - 5.1.9** If remains are shriveled, but ridge detail is still present, the remains may be soaked in a tray of tap water in an attempt to rehydrate, or a commercial tissue builder may be injected into the fingers or palms using a syringe. Inject tissue builder into the tips of the fingers or the side of the palm so as not to destroy any ridge detail. Inject enough tissue builder to add pliability and restore the finger/palm to the approximate original state.
  - 5.1.10** If tissue builder injection or soaking is successful, the remains may then be inked or powdered as described above.
  - 5.1.11** If the injection of tissue builder/soaking and ink/powder application is unsuccessful, carefully clean the ink/powder from the remains using a soft-bristled brush and alcohol. Remains may be rinsed and patted dry as needed.
  - 5.1.12** Using a scalpel handle and blade, carefully and slowly remove the layers of skin containing ridge detail from each finger/palm or plantar area in a solid sheet or large pieces.

**Note:** Ensure each piece of skin is placed in a container and is labeled as to its origin. In some instances, the remains may be in such a state of decomposition that the finger/palm skin may be

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removed without an attempt first being made to take the impressions with the skin attached to the hands.

**5.1.13** Each piece of skin shall then be photographed, inked or powdered. The procedure used is based on training and experience of the working examiner/technician. If necessary, the skin may be placed over the gloved hand or finger of the examiner/technician and ink or powder applied for printing.

**5.1.14** Prints shall be preserved on a ten-print card, white paper, adhesive lifter or by the use of photography. Ensure that all impressions are properly marked.

**Note:** The method used to obtain impressions from human remains shall be determined by the examiner/technician. Each set of remains shall be examined independently and one or more of the methods of printing described above shall be used.

**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 –** In some cases, the remains may not be suitable for obtaining adequate impressions. The level of decomposition shall dictate whether or not postmortem inked impression may be obtained.

**7.0 Safety –** Protective gloves, surgical mask/face shield and protective clothing shall be worn. Hands from deceased individuals present the most severe biological hazard of any evidence processed in the Latent Evidence Section. No examiner/technician shall process items of human remains alone. All work on detached hands or feet shall be performed in the bio-hood if possible.

**7.1** Extreme caution shall be exercised to protect yourself and others from infection. Every accident shall be reported to the supervisor immediately.

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- 7.2** Properly discard all used materials in red biohazard bags. Clean all work surfaces and contaminated instruments thoroughly with a 10 % bleach solution.
- 7.3** All hands and fingers shall be stored in the refrigerator in a sealed container until needed.

## **8.0 References**

Buckingham, A. "The Use of Plastic Receiving Surfaces in the Fingerprinting of Mummified Finger." *Journal of Forensic Identification*. Vol. 44, 3: 251-253 (June 1994).

"FBI Problems and Practices in Fingerprinting the Dead." *FBI Law Enforcement Bulletin*, (Revised May 1977).

"Proper Procedures for Taking Major Case Prints." *FBI Law Enforcement Bulletin* (July 1976).

Futrell, I. "Hidden Evidence: Latent Prints on Human Skin." *FBI Law Enforcement Bulletin*. (1996): 1- 4.

"Identifying Disaster Victims." *FBI Law Enforcement Bulletin*. (Revised February 1986): 1-4.

## **9.0 Records – N/A**

## **10.0 Attachments – N/A**



## ***Latent Procedure***

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### **REVISION HISTORY**

<b>CURRENT VERSION</b>	<b>EFFECTIVE DATE</b>	<b>SUMMARY OF CHANGES</b>
1	2016/07/01	Original Version
2	2018/04/01	Add statement on casting material, omit "Handprint" and substitute adhesive lifter, change revision history table, issue date to effective date, rev#tover# Change statement to work alone, and add text of "detached" in section 7

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