

**LP SOP-17 Validation Procedures for Reagents &
Chemicals**

Approved by Director: Dr. Guy Vallaro

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Purpose: Validation Procedures

Responsibility: Latent Print Examiners

Safety:

Procedure:

1. Chemicals & Reagents

All new chemicals and reagents to be utilized by the latent print section will be validated as to their potential for developing latent print evidence. Validation shall include the following:

- a. Reaction to Porous Materials
 1. Copy Paper
 2. News Paper
 3. Brown Paper Bag
 4. Kraft or Wrapping Paper
 5. Plain Envelope
 6. Manila Envelope
 7. Cardboard
 8. Wood
- b. Reaction to Non-Porous Materials
 1. Glass
 2. Plastic
 3. Glossy Materials (photo etc)
 4. Back Side of Tape
 5. Metal
 6. Painted Material
- c. Reaction to Adhesives
 1. Scotch Tape
 2. Duct Tape
 3. Masking Tape

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4. Electrical Tape

d. DNA Sensitivity

1. Swabs will be taken before and after processing to determine the effects to DNA.

1.1 The validation will be conducted in the following manner.

a. Twenty samples will be taken of each material tested.

b. A known print will be placed on each piece of material.

c. Five samples of each material containing the known print will be subjected to the following conditions:

1. Freezer

2. Heat

3. Normal Indoor Temperature

4. Water

c. Four new samples of each material containing the known print will be tested every day for five days. The results will be recorded. Evaluation of the results will determine the suitability for use in the latent print section.

2. Digital Imaging Software

All new software utilized for enhancing images will be validated for consistency and repeatability of results.

a. Samples images will be imported into the software.

b. Filters utilized for enhancement will be applied to the images and the settings will be recorded.

c. The enhanced image will be saved.

d. This process will be repeated for each filter utilizing the same settings for five days.

e. The processed images will be analyzed to determine any differences. The difference filter in Adobe Photoshop or a hashing program may be utilized to make this determination.

f. Any filters producing inconsistent results may not be utilized.

Sources of Error:

**State of Connecticut Department of Emergency Services and Public Protection
Division of Scientific Services**

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Quality Assurance:

References:

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