

TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division



Latent Print Standard Operating Procedures

3.2 Amido Black Water

3.2.1 Scope

Amido Black (Naphthol Blue Black) is a protein sensitive dye used to stain blood-contaminated latent prints yielding a blue-black color. The water base formula is recommended for painted surfaces, but can be used on non-painted surfaces as well. This staining process will not develop latent prints deposited in other body secretions.

3.2.2 Evidence

Any non-porous surface where latent prints may be deposited in blood, preferably surfaces light enough in color to produce adequate contrast after the staining process

3.2.3 Safety Precautions/Limitations

Protective clothing and gloves are needed when using Amido Black. Mixing should be performed in a fume hood or an adequate respirator may be used. Dispose of chemicals properly.

Universal precautions shall be taken when handling items that contain blood.

Amido black will not develop areas of latent prints in the normal constituents of perspiration.

Cyanoacrylate can inhibit the staining process.

Surfaces bearing blood must be completely dry prior to staining.

Care should be taken to not directly spray the area with bloody friction ridges so potentially fragile blood evidence is not damaged. Instead, the area with bloody friction ridges should be flooded with amido black and then allow the amido black to cover the area containing bloody friction ridges.

3.2.4 Chemicals/Reagents

Naphthol Blue Black
Citric Acid
Kodak Photo Flo 200 Solution
Distilled Water



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3.2.5 Instruments/Equipment

Balance
Beakers
Graduated Cylinder
Magnetic Stirrer
Stirring Bar or other Stirring Device
Clear or Dark Storage Bottles
Trays
Control Slides
Safety Equipment (gloves, lab coat, safety glasses)

3.2.6 Preparation

3.2.6.1 Citric Acid Stock Solution

38 g Citric Acid
2 L Distilled Water

1. Combine the above ingredients in a beaker.
2. Place on a stirring device and mix until Citric Acid is dissolved.

3.2.6.2 Developer Solution

1 L Citric Acid Stock Solution
2 g Naphthol Blue Black
2 ml Kodak Photo Flo 200 Solution

1. Place the liter of Citric Acid Stock Solution on a stirring device.
2. Slowly add 2 grams of Naphthol Blue Black and stir for approximately 30 minutes.
3. Add Photo Flo 200 and stir lightly.

3.2.6.3 Rinse Solution

1 L Citric Acid Stock Solution

3.2.6.4 Storage

Clear or dark bottles.

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3.2.6.5 Shelf Life

No expiration date is provided, however a control will be performed prior to use on evidence.

3.2.7 Controls

Amido Black (water base) is applied to a glass slide containing a print deposited in blood. (An individual from the laboratory will use a tube of his/her own blood to make multiple slides that will be stored in the Latent Print Unit laboratory area for future use as controls.)

A positive result is the known blood staining a blue-black color.

A negative result occurs when there is a lack of color change with the known blood.

A control must be successfully performed each time amido black is prepared and documented in the Reagent Log Book.

A control must be successfully performed before applying amido black to evidence. This control must be documented in the Reagent Logbook as well as the examiner's notes.

If at any time a control test indicates that a reagent is not working properly, the examiner or technician performing the control will properly dispose of that reagent, make a new reagent, and test a new control. Once the control tests appropriately, the reagent may be used.

In some circumstances of a failed control test it may be necessary to review each component of the reagent/solution to ensure no deficiencies exist in that lot number. If a deficiency is discovered, the preparer will properly dispose of that lot number and document the deficiency and disposal in the Chemical Log. A different lot shall then be used to make the reagent.

3.2.8 Procedure

Any latent prints determined to be of comparable value shall be photographed with a ruler included before amido black is applied. Refer to 2.5.2 and 2.5.5 of the Forensic Imaging Standard Operating Procedures Manual for further instruction.

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1. Apply the developer solution to the evidence by dipping, spraying or with a squirt bottle.
(Completely cover the target area)
2. Apply the rinse solution.
3. Repeat Steps 1 and 2 until optimum detail and contrast are obtained.
4. A final rinse of distilled water may be used on the evidence.
5. Allow the evidence to dry at room temperature.
6. Photograph any identifiable latent prints and include a ruler. Refer to 2.5.2 and 2.5.5 of the Forensic Imaging Standard Operating Procedures Manual for further instruction.

3.2.8.1 Deviation from Protocol

A variation in the above procedure may be performed with supervisor approval.

3.2.9 Interpretation of Results

Latent prints of comparable value shall be marked and photographed with a ruler included.

3.2.10 References

CBDIAI. "Amido Black – Water base." Retrieved from <http://www.cbdiai.org/Reagents/amidow.html>

Federal Bureau of Investigation. Revised 2000. "Amido Black (Water Base) Processing Guide for Developing Latent Prints. Federal Bureau of Investigation, Washington, D.C., p. 43-44.

Federal Bureau of Investigation. Revised 2001. "Amido Black (Water Base) Processing Guide for Developing Latent Prints. Federal Bureau of Investigation, Washington, D.C., p. 67-69.