

	<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>Effective Date: 2018/04/01</p>	<p>Ver: <b>3</b></p>
<p>Procedure for Amido Black</p>			<p>Page #: <b>1 of 5</b></p>

### **Technical Procedure for Amido Black**


- 1.0 Purpose** – This procedure outlines how to make and apply Amido Black to items of evidence.
- 2.0 Scope** – This procedure applies to items of evidence, porous and non-porous, that contain impressions in blood that require enhancing.
- 3.0 Definitions** – N/A
- 4.0 Equipment, Materials and Reagents** (alternatively pre-mixed solutions may be purchased from a commercial forensic supplier)

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

- Protective gloves and apron/coat
- Face shield visor and/or safety goggles
- Magnetic stirrer, magnetic follower, and magnetic retriever
- Two (2) 2000 mL glass beakers
- One (1) 1000 mL glass beaker
- Dark, shatter-proof container

#### **4.2 Reagents**

- 5-Sulfosalicyclic acid (20 g)
- Naphthalene 12B, Naphthol Blue Black, or Amido Black (3 g)
- Sodium carbonate (3 g)
- Formic acid (50 mL)
- Acetic acid (50 mL)
- Kodak Photo Flo 600 Solution (12.5 mL)
- Distilled water

	<p 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>Effective Date: 2018/04/01</p>	<p>Ver: <b>3</b></p>
<p>Procedure for Amido Black</p>			<p>Page #: <b>2 of 5</b></p>


## 5.0 Procedure

### 5.1 Preparation

- 5.1.1** Pour five hundred (500) mL of distilled water into a clean two thousand (2000) mL glass beaker and place on a magnetic stirrer.
- 5.1.2** Place a magnetic follower in the distilled water and stir while adding the following in order:
- 5-Sulfosalicyclic acid (20 g)
  - Naphthalene 12B, Naphthol Blue Black, or Amido Black (3 g)
  - Sodium carbonate (3 g)
  - Formic acid (50 mL)
  - Acetic acid (50 mL)
  - Kodak Photo Flo 600 Solution (12.5 mL)
- 5.1.3** Stir until all crystals are dissolved.
- 5.1.4** Dilute mixture to one (1) liter with distilled water.
- 5.1.5** Solution may be stored indefinitely as there is no expiration period.

### 5.2 Application

- 5.2.1** Examiners shall produce a self-made test print to be processed concurrently with items of evidence. (See Section Technical Procedure for Ensuring Quality Control.)
- 5.2.2** Amido Black may be applied to evidence either by using a spray bottle or by dipping the evidence. Completely cover the target area and allow to develop for approximately three (3) to five (5) minutes. Rinse item with tap water to remove any excess reagent after development.
- 5.2.3** Remove the item from the solution and allow the item to dry completely prior to proceeding.
- 5.2.4** Preserve the developed impressions through photography, according to the techniques in Photographic Equipment/Procedures and/or by electronically recording the

	<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>Effective Date: 2018/04/01</p>	<p>Ver: <b>3</b></p>
<p>Procedure for Amido Black</p>			<p>Page #: <b>3 of 5</b></p>

impressions (See Image Processing). The impression may be lifted directly from the item only after the item is completely dry.

**5.3 Standards and Controls – N/A**

**5.4 Calibration – N/A**

**5.5 Sampling – N/A**

**5.6 Calculations – N/A**

**5.7 Uncertainty of Measurement - N/A**

**6.0 Limitations – Amido Black may stain lighter background surfaces.**


**6.1** Amido Black will not detect the normal constituents of latent impressions; therefore, Amido Black must be used in sequence with other processing techniques. It is essential to develop any traditional latent impressions prior to treatment with Amido Black. Careful treatment with powders before the application of Amido Black will not interfere with its process. Ninhydrin, if used, must precede the application of Amido Black.

**6.2** Some impressions in blood on porous surfaces such as paper or cardboard may be improved by using Physical Developer after the application of Amido Black. Washing the item in a warm detergent solution after the Physical Developer treatment will reduce the Amido Black background staining. Use one (1) mL of Tergitol 7 per liter of distilled water at 50 °C, if the item of evidence will withstand this temperature. Wash the item until the background stain is reduced to maximize observational data.

**6.3** Amido Black solution may be kept indefinitely in a dark, shatter proof container.

**7.0 Safety – Amido Black shall be used only in a well ventilated area such as a fume hood. The glacial acetic acid and formic acid in the solution may be corrosive. Eye protection shall be worn when preparing and transporting the reagent, and when processing items with the solution.**

**7.1** This solution may also be used at crime scenes provided that proper safety precautions are applied.

	<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>Effective Date: 2018/04/01</p>	<p>Ver: <b>3</b></p>
<p>Procedure for Amido Black</p>			<p>Page #: <b>4 of 5</b></p>

## 8.0 References

Hamm, E. "Enhancement and Development of Blood Prints." *74<sup>th</sup> Annual Educational Conference International Association for Identification*. (June 22, 1989): 1-11.

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. Margot. "A 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*. (January 1986): 2-8.

*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).

Merchant, B., and C. Tague. "Developing Fingerprints in Blood: A Comparison of Several Chemical Techniques." *Journal of Forensic Identification*. Vol. 57, 1: 76 – 57 (2007).

Norkus, P.M., and K. Noppinger. "Enhanced Latent Prints in Blood with a New Staining Technique." *Proceedings of the International Forensic Symposium on Latent Prints*. (July 1987): 147.

Trozzi, T.A., R.L. Schwartz, and M.L. Hollars. *Processing Guide for Developing Latent Prints*. (2000): 1-64.

## 9.0 Records – N/A

## 10.0 Attachments – N/A



## ***Latent Procedure***

**Pitt County Sheriff's Office Forensics Services Unit**  
*Issued by Technical Leader*

Effective Date:

2018/04/01

Ver:

**3**

Procedure for Amido Black

Page #:

**5 of 5**

### **REVISION HISTORY**

<b>CURRENT VERSION</b>	<b>EFFECTIVE DATE</b>	<b>SUMMARY OF CHANGES</b>
1	2016/07/01	Original
2	2018/04/01	Change revision history table- change issue date to effective date, change rev# to Ver#
3	2018/04/01	Under purpose change describe to outlines

***All copies of this document are uncontrolled when printed.***