



ATF-LS-LP8 Amido Black	Published Online: March 2018
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I. **Scope:** Amido Black or naphthalene black 10B is a protein indicator particularly sensitive to those proteins present in blood. While other techniques for the enhancement of blood impressions are available, they may pose serious health hazards or display a reaction for short durations. Amido black is a safer, permanent procedure which can be used on porous or non-porous surfaces. Amido black does prevent subsequent serological examination and therefore may only be used after serological examination of the evidence. However, Amido black can be applied after cyanoacrylate fuming in many cases (see McCarthy and Grieve, 1989).

II. **References:**

British Home Office. "Chemical Development and Intensification of Sweat and Blood Marks, Etc.", May 1981.

Lee, Henry C.; Gaensslen, R. E., eds. *Advances in Fingerprint Technology*; Elsevier Science Publishers: NY, 1991.

Kent, Terry, ed. *Fingerprint Development Techniques*; Heanor Gate Publisher: Derbyshire, England, 1993.

McCarthy, Mary M.; David L. Grieve; "Preprocessing with Cyanoacrylate Ester Fuming for Fingerprint Impressions in Blood"; *Journal of Forensic Identification*, 1989, 39, 1, 23-32.

III. **Apparatus/Reagents:**

Amido Black Working Solution

1. Dissolve 2.0 grams of Amido black 10B in 100 milliliters of acetic acid.
2. Add 900 milliliters of methanol and thoroughly mix.

Rinse #1

1. Mix 100 milliliters of glacial acetic acid with 900 milliliters of methanol.

Rinse #2

1. Mix 50 milliliters of glacial acetic acid with 950 milliliters of distilled water.

IV. **Safety Precautions:** This procedure involves the use of hazardous materials. This procedure does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this procedure to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. Proper caution should be exercised and the use of personal protective equipment should be utilized to avoid exposure to dangerous chemicals. Consult the appropriate MSDS for each chemical prior to use.

V. **Procedures:**

1. Blood proteins must be fixed prior to Amido black application. This can be accomplished by:
 - Baking the item at 100 degrees C for 30 minutes. Heat-sensitive items may be baked at a lower temperature for a longer time or fixed using another technique.
 - If the blood proteins are dried, fix using methanol
2. Place the Amido black 10B working solution into a tray large enough to accommodate the item being processed.
3. Completely immerse the item being processed. The solution should be agitated before as well as during the evidence application.
4. Rinse the evidence item with Rinse #1

5. Rinse the evidence item with Rinse #2 until optimum contrast has been observed.
6. Record any observed impressions.

Blood impressions will be intensified and additional detail not previously visible may be revealed. Amido black is extremely stable; however, developed impression should be recorded. Dried impressions which lose contrast may be immersed for a second time in the second rinse solution and then recorded.

Quality Assurance/Quality Control: A small area of the evidence that is not critical to the fingerprint analysis shall be tested to insure that the substrate will not be adversely affected by the working solution. Additionally, any blood proteins in these areas will be stained a dark blue-black. Dye stains, such as Amido black, work by discoloring latent impressions that are composed of blood proteins. Documentation of control testing of working solutions of Amido Black shall be made using the appropriate reagent log. Test the solution by placing test blood impressions on a paper test strip and expose to the working solution per the procedure listed above. If the test prints are visualized, the solution is working properly.