TECHNICAL INFORMATION

Amido Black

Catalog Nos. LV501, LV5011

INTRODUCTION

Amido Black is a biological dye that stains the protein present in blood and some other body fluids producing a dark blue-black image. It is extremely useful in developing latent fingerprints contaminated with blood, but it will not successfully develop a normal perspiration-based print.

It should be used only after all other physiological samples have been gathered (semen, saliva, urine, blood for typing, etc.), and only after all other fingerprint development methods have been attempted. Amido Black can interfere with examinations of handwriting, inks, paper, and indented writing as well as fiber, hair, paint, and similar evidence. Photograph any visible prints/impressions before application.

Amido Black can be used on almost any surface, porous and non-porous; however, some porous surfaces will produce a high background color. The methanol-based formula is highly flammable and toxic, and it can damage some surfaces. Therefore, it is suggested that the water-based formula be used in the field whenever practical. Amido Black is available in a powder and a pre-mixed concentrate.

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PRECAUTIONS

- Before using this product, consult the appropriate Material Safety Data Sheets (MSDS) found on our website at www.sirchie.com/support.
- Wear protective gloves and clothing, including protective eyewear when preparing or using Amido Black.
- Amido Black is toxic and should be mixed in a fuming hood or with an appropriate respirator.
- Use with adequate ventilation. If ventilation is inadequate, wear a facemask equipped with organic vapor cartridges.

SOLUTIONS

Typical solution is:
10% acid solution—citric or acetic acid; 2 g/L Amido Black Dye

Mixing Procedure (1 liter):

1. Add 1000ml of distilled water to a beaker of container.
2. Add 20g of citric acid.
3. Dissolve citric acid by mixing.
4. Add 2g of Amido Black powder.
5. Stir until completely dissolved (use of a magnetic stir plate recommended).

This solution is stable, but if older than 4-6 weeks, mix fresh solution.

If we must add a solvent formula:
900ml Methanol; 100ml Acetic Acid; 2 g/L Amido Black Powder

Rinsing Solution—20g citric acid / 1000ml distilled water

Aqueous Solutions—Field or Lab Use

To Create an Aqueous Fixing Solution—Solution No. 1 (makes 1L):

1. Add 1000ml distilled water to container.
2. Add 30g of 5-sulphosalicylic acid
3. Mix until dissolved

To Create An Aqueous Working Solution—Solution No. 2 (makes 1000ml):

1. Weigh out 2g of Amido Black. Place in a clean, dry, 2 liter glass beaker.
2. Weigh out 20g of citric acid. Add to the Amido Black.
3. Measure out 1 liter of distilled water. Add to the beaker. Stir with a magnetic stirrer for at least 30 minutes. A blue-black working solution will be produced.

4. Transfer the water-based Working Solution to a clean, dry, labeled 1 liter plastic coated, glass bottle with a tightly fitting screw cap. *(Unused water-based Working Solution will keep indefinitely.)*

To Create A Laboratory First Rinse Solution (makes 1000ml):

1. Carefully pour 100ml of glacial acetic acid into a 2-liter beaker.
2. Add 900ml of methanol. Stir with a plastic stirring rod. A colorless solution is produced.
3. Transfer solution to a clean container and cap tightly.
4. Label container with the substance name (acetic acid/methanol rinse solution) and the date it was mixed. *(Rinse solution will keep indefinitely.)*

PROCEDURE

Methanol Solutions

General Considerations

Remember that Amido Black will not develop latent prints or impressions that are not contaminated with blood. Use Amido Black only where blood is visible, and use other standard methods to detect prints not displaying blood. Careful application of powers and ninhydrin should not prevent the use of Amido Black. However, cyanoacrylate methods have been found to severely diminish Amido Black's usefulness. Physical developer and powders may be used following the application of Amido Black. ***NOTE:*** *All physiological samples such as semen, saliva, urine, and blood for typing must be taken before the use of Amido Black.* Additionally, because it is a dye, Amido Black can interfere with questioned document examinations of handwriting, inks, papers, and indented writing as well as fiber, hair, paint and similar evidence. Therefore, photograph any visible prints/impressions before beginning application.

Immersion Method

STABILIZE THE BLOOD PROTEINS—Whenever possible stabilize or fix blood to the item of evidence by applying a fixative of 5-sulphosalisylic acid. Submerge each item in a covered container for approximately one hour. Replace fixative as it becomes contaminated. ***NOTE:*** *Some items may require several changes.* Drain fixative.

DEVELOP THE BLOOD PROTEINS—Prepare two baths: One of the Amido Black solution and one of a rinsing solution.

1. Immerse the items in the Amido Black solution and soak 2-3 minutes.
2. Remove the items from the bath and allow to drain.
3. Place items in the rinse bath, gently shaking or rocking the bath for 1-2 minutes.
4. Remove items and allow to dry.
5. Allow items to AIR DRY at room temperature.
6. PHOTOGRAPH any useful prints—The development process can be repeated to enhance development. Photograph any prints or impressions after each development cycle.

Field Spray Methods

It is often not possible to follow laboratory protocols in the field. Highly successful spray methods have been field tested and reported by some agencies. This technique involves the use of only two solutions. When treating porous surfaces, dilute the working solution with four to five parts rinse solution to each part working solution before application. *All physiological samples such as semen, saliva, urine, and blood for typing must be taken before the use of Amido Black.* The area or item to be treated should be dry.

1. Spray the suspect surface of the specimen with a saturating mist or working solution. Prints or impressions will appear rapidly. All areas adjacent to visible stains should be sprayed thoroughly as well since development of blood prints/impressions not visible to the naked eye is probable.
2. Spray developed areas with the rinse solution until the background is sufficiently cleared.
3. Photograph any useful prints.
4. As necessary, repeat the development/rinse process to enhance development or until no further development occurs.
5. Photograph any prints or impressions after each development cycle.
6. Occasionally staining can be cleaned using a solution of 10% bleach.