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TECHNICAL INFORMATION

Aqueous Leuco Crystal Violet

Catalog No. LV509

INTRODUCTION

The application of Aqueous Leuco Crystal Violet is a fast, relatively safe and uncomplicated method to enhance latent blood prints through the catalytic oxidation of a dye. Additionally, this formulation fixes the blood impressions through the use of sulfosalicylic acid. It is especially useful when little or no visible impressions are present due to a subject having had blood on his hands, and then touches various objects throughout the crime scene. Furthermore, LCV may develop faint bloody footwear impressions on solid or carpeted floors and other objects such as pieces of clothing.

This reagent does not react to the normal finger constituents found in latent fingerprints like eccrine or sebaceous deposits. LCV is reactive to heme based materials, which in blood is hemoglobin. When LCV and hydrogen peroxide come into contact with the hemoglobin in blood, a catalytic reaction occurs and a blue to purple/violet reaction product occurs. Leuco Crystal Violet may be used on both porous and non-porous

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surfaces, and may be applied with a fine mist spray or by immersing an object in the solution.

CAUTIONS

- Before using this product, consult the appropriate Material Safety Data Sheets (MSDS) found on our website at www.sirchie.com and click on MSDS.
- Use only in a well-ventilated area, or with a fume hood. Wear an organic vapor respirator when spraying large areas. Wear chemical-resistant gloves and safety glasses.
- This formulation may interfere with subsequent blood tests. Be certain to collect blood samples for laboratory analysis prior to application of LCV.
- Handle objects with gloved hands before and after treatment.
- Do not open any of the three bottles of reagents until just prior to mixing them.
- Pretreatment using other methods of development such as cyanoacrylate fuming may interfere with this procedure.
- If prints are developed in bright sunlight, photograph them as quickly as possible as photoionization may occur, resulting in unwanted background development.
- This substance may produce considerable staining and will be difficult to remove from surfaces such as carpet, furniture, cloth, etc.

No. LV509 consists of three (3) different compounds:
PART 1—An aqueous solution containing Hydrogen Peroxide and 5-Sulfosalicylic Acid (500ml); PART 2—Sodium Acetate; and PART 3—Leuco Crystal Violet

This formula should be sprayed on surfaces using a fine mist sprayer (supplied), or objects may be immersed in the solution.

SHELF LIFE

Unmixed chemicals stored at room temperature will remain useful for a year or more. *Please note that once these various reagents are combined, shelf life is limited to a few months. To extend shelf life, refrigerate mixed solutions and store in opaque containers.*

PREPARATION

1. Open the bottle marked PART 2 and add it to the contents of the bottle marked PART 1. Recap PART 1 and shake well for several minutes.
2. Add the contents of the bottle marked PART 3 to the PART 1 bottle. Recap PART 1 and shake well for an additional several minutes. The reagent is now ready for use.

   The formula used for this product is from the FBI's "Processing Guide for Developing Latent Prints".

Prior to Enhancement:

Since the reaction of this chemical is based on a oxidation reaction, the presence of some plant materials, and metals, such as iron or copper, could cause a false positive. All suspect blood stains or prints should be screened to determine if it is blood before enhancing. This can be achieved with the use of Phenolpthalein or Leuco-Malachite (DCB100/DCB200).

PROCEDURE

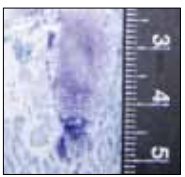
For large areas such as floors, walls, etc., this reagent is best applied using the *fine mist sprayer* supplied with the kit. Apply reagent to visible bloodstains as well as to areas suspected of containing weak traces of blood. If blood is present a dark blue to purple/violet color will develop within 30 seconds. After 30 seconds, you may lightly blot the developed stains with clean paper towels or tissues. After blotting, and the surface is dry, additional reagent may be applied if stains are very weak.

Since this formulation of Leuco Crystal Violet contains a fixative, the developed prints need no further treatment. All visible prints should be photographed immediately since photoionization or darkening of the background may occur. Be certain to include a photographic scale in the photos.

In lieu of applying the reagent in a fine mist spray, smaller objects may be treated using tray-development.

If the use of Leuco Crystal Violet fails to produce usable evidence, other treatments such as Amido Black may be used.

EXAMPLES OF AQUEOUS LEUCO CRYSTAL VIOLET ENHANCED PRINTS



Fingerprint on a painted surface.

Footprint on cloth.

Footprint on floor tile.