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Cyano-Blue

TECHNICAL NOTES

Background

Cyano-blue is a new chemical developed to visualize cyanoacrylate-fumed fingerprints on nonporous items. The stain works immediately upon contact with CA residues and does not require long-term exposure to the surface. Cyano-Blue is non-toxic, non-flammable and safe for the environment.

Safety

As with all chemicals, always read the MSDS (material safety data sheet) to learn about the safe handling and health hazards of each chemical. When examining the evidence with a light source, wear protective goggles. Be familiar with the light source and know which goggles to wear under all circumstances.

Processing Instructions

Cyano-Blue comes premixed. The solution can be used as a dip or can be poured over the item. Pour a small amount of the solution into a beaker or pan. The solution should come in contact with the processed area for about five seconds. Rinse the item with tap water and let dry. View the item with long wave UV or a forensic light source.

Glue Fuming

Before using Cyano-Blue, it is necessary to glue-fume the piece of evidence. It is recommended to under-fume rather than over-fume. If heavy white residue is present on the background surface or heavy white latent prints are developed, the Cyano-Blue may stain the entire surface and the latent prints will appear as bright glowing globs with no ridge detail when illuminated with a light source. The use of fast-acting, chemical catalysts or accelerator pads is not recommended, as the process can develop heavy, white residue before the reaction can be stopped.

Place a few drops of liquid glue or a Hard Evidence™ Pouch in a closed container, such as a fish tank, with the evidence and a cup of warm water. Allow the evidence to remain about 10 minutes before checking. To check the progress of the fuming without opening the lid of the fish tank, place a black latent print backing card in the tank with test prints on it. When

these prints are just becoming visible, remove the evidence from the tank to stop the process.

Fuming under vacuum with a Coleman Vacu-Print™ will help to eliminate the problems associated with over-fuming. Vacuum technology for glue fuming is relatively new. This method will develop latent prints without excessive residue coating the surface of the evidence, and it will be easier to handle the evidence.

Because there is no residue buildup on the evidence, dye-staining for fluorescent examination is more effective. When there is excessive buildup of the glue residue, the dye stains all of it, causing the entire surface to fluoresce, perhaps obscuring ridge detail. With a vacuum process, items of evidence, such as garbage bags do not have to be opened up. The fumes will coat all of the surfaces. Also, items such as soda cans, screwdrivers and handguns can be placed inside the chamber with the items touching each other. It is not necessary to leave space between each item. For additional information on the Coleman Vacu-Print™ vacuum fuming chamber and glue fuming processes, see the Coleman Vacu-Print and Glue Fuming tech notes.

Examination

Dim the room lights and shine the light from the ultraviolet lamp or Forensic Light Source over the surface of the object. A long-wavelength ultraviolet lamp with a moderate-to-high intensity output can be used effectively to illuminate latent prints developed with Cyano-Blue. Photograph the visualized latent prints. Examine the evidence with 365 nm wavelength of light. For those using a variable wavelength Forensic Light Source, examine the evidence using 415 to 480 nm light and view with orange goggles.

Photography

To photograph the fluorescent-developed latent prints, duplicate the arrangement by which the best contrast was viewed with the eye. Use the wavelength, the color of viewing goggles and the angle of the light source to obtain the best photograph. Include a fluorescent scale in the photograph.

Additional Reading

Advances in Fingerprint Technology edited by Dr. Henry Lee and Dr. R. E. Gaensslen
Friction Ridge Skin: Comparison and Identification of Fingerprints by James F. Cowger

Manual of Fingerprint Development Techniques by the British Home Office, second edition

Fingerprint Detection by Fluorescence Examination by the British Home Office

Ordering Information

Catalog No. 1-0049 Cyano-Blue, 500mls
Catalog No. 1-4700 Coleman Vacu-Print™ Table-Top Chamber
Catalog No. 1-4702 Vacuum Pump/Motor
Catalog No. 1-4501 Loctite® Liquid Glue, 1 oz.
Catalog No. 1-4510 Hot Plate for fuming
Catalog No. 1-4600 Hard Evidence™ Pouch
Catalog No. 1-2110 Black Reversible Backing Cards, 3" x 5"

Catalog No. 6-3847 Adhesive Fluorescent Scales, 2 in (50mm), pack of 50
Catalog No. 6-3816 6 inch Fluorescent Scales, cardstock, pack of 10
Catalog No. 6-3885 INCH "L" Shaped Scale, Fluorescent, cardstock, pack of five
Catalog No. 8-5039 HOME OFFICE/*Fingerprint Detection by Fluorescence Examination*
Catalog No. 8-5041 LEE/*Advances in Fingerprint Technology*
Catalog No. 8-5043 MENZEL/*Intro to Lasers, Forensic Lights & Fluorescent Fingerprint Detection*