

# SWGFAST

## Glossary - Latent Print Processing

**ARCHIVED**

### **A-NAPHAFLAVONE**

Chemical used in fixing Iodine processed friction ridge detail.

### **ACETONE**

Solvent used as a carrier in reagents; also used as a cleaning agent.

### **ACETONITRILE**

Solvent used as a carrier in reagents; also used as a cleaning agent.

### **ACID FUSCHIN**

Reddish protein stain used to enhance bloody friction ridge detail.

### **ALTERNATE LIGHT SOURCE (ALS)**

Device that produces a variety of selectable wavelengths of light used in forensic examinations. See *FLS* (Forensic Light Source).

### **AMIDO BLACK**

Blue-black protein stain used to enhance bloody friction ridge detail. See *Naphthalene Black*.

### **AQUEOUS**

Water based.

### **ARDROX**

Fluorescent yellow dye used with UV light to visualize cyanoacrylate ester fumed friction ridge detail.

### **BASIC FUSCHIN**

Fluorescent dye used with selected wavelengths of light to visualize cyanoacrylate ester fumed friction ridge detail. See *Rosaniline chloride*.

### **BASIC YELLOW 40**

Fluorescent yellow dye used with selected wavelengths of light to visualize cyanoacrylate ester fumed friction ridge detail. See *Panacryl Brilliant Flavone 10GFF*. See *Maxilon Flavone 10GFF*.

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**BIOHAZARD**

Biological agent or condition (as an infectious organism or insecure laboratory conditions) that constitutes a hazard.

**CHEMICAL HAZARD**

Chemical agent or condition that constitutes a hazard.

**CITRIC ACID**

Chemical used in the preparation of Physical Developer and other friction ridge development reagents.

**COOMASSIE BLUE**

Blue protein stain used to enhance bloody friction ridge detail.

**CRYSTAL VIOLET**

See *Gentian violet*.

**CROWLE'S DOUBLE STAIN**

Blue protein stain used to enhance bloody friction ridge detail.

**CA or CAE**

Cyanoacrylate Ester (Superglue). An adhesive used in a fuming method to develop friction ridge detail.

**CYCLOHEXANE**

Solvent used in the preparation of liquid Iodine reagent.

**DAB**

Diaminobenzidine. Reagent used to detect/enhance bloody friction ridge detail.

**DICHLOROMETHANE**

Solvent used in the preparation of liquid Iodine reagent. See *Methylene chloride*.

**DFO**

1,8-Diazafluoren-9-one. Compound that reacts with amino acids to produce friction ridge detail with fluorescent properties when exposed to excitation wavelengths of 352-591 nm.

**ETHANOL**

Solvent used in preparation of reagents, dye stains and rinses (ethyl alcohol).

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**FERROUS AMMONIUM SULFATE**

Chemical used in Physical Developer and Multimetal Deposition solutions.

**FERRIC NITRATE**

Chemical used in Physical Developer and Multimetal Deposition solutions.

**FINGERPRINT POWDERS**

Powders used to visualize friction ridge detail; Can be magnetic, non-magnetic, fluorescent, bichromatic, or a variety of mono-chromatic types.

**FLAME TECHNIQUE**

Many common materials (e.g. camphor, magnesium, masking tape, nitro-cellulose, pine tar, titanium tetrachloride) burned to produce soot for detection of friction ridge detail.

**FLS**

Forensic Light Source. Common term for all light sources including lasers used in forensic examinations.

**FLUORESCENCE**

Emission of light, resulting from the absorption of radiation from another source.

**FLUORESCEIN**

Fluorescent reagent used to develop bloody friction ridge detail.

**GENTIAN VIOLET**

Violet stain used to develop or enhance friction ridge detail, which can be viewed by either fluorescence or nonfluorescence. Also known as Crystal Violet.

**GOLD TETRACHLORIDE/COLLOIDAL GOLD**

Initial suspension used in the Multimetal Deposition Process.

**GUN BLUEING**

A solution consisting of acetic acid, selenious acid and cupric salt, used to develop friction ridge detail on metal surfaces.

**HFE 7100®**

A commercial solvent by 3M used as carrier in reagents such as ninhydrin, DFO, and Indanedione.

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**HUNGARIAN RED**

A red protein stain used to visualize bloody friction ridge detail.

**HYDROGEN PEROXIDE**

Chemical used in friction ridge development reagents.

**1,2-INDANEDIONE**

Compound that reacts with the amino acids present in print residue, producing a fluorescent product when exposed to excitation wavelengths of 352-591 nm.

**INFRARED**

Light wavelengths longer than the visible spectrum, 700 to 1,000,000 nm.

**INHERENT LUMINESCENCE**

Luminescence resulting from selected wavelength illumination without chemical treatment.

**IODINE**

Element used as either a vapor or solution; binds with fats and oils to visualize friction ridge detail

**LASER**

Light Amplification by Stimulated Emission of Radiation. Devices such as Argon-Ion, Nd:Yg, Copper Vapor, that produce coherent wavelengths of light; used in forensic examinations. See *FLS*.

**LCV**

Leucocrystal violet. Reagent used to detect/enhance bloody friction ridge detail by either fluorescent or nonfluorescent staining.

**LEUCOMALACHITE GREEN**

Reagent used to detect/enhance bloody friction ridge detail.

**LIGROINE**

See *Petroleum ether*.

**LIQUI-DROX**

Fluorescent yellow solution used to develop friction ridge detail on the adhesive and non-adhesive sides of dark colored tape.

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**LIQUI-NOX®**

Detergent used in a solution to develop friction ridge detail on the adhesive and non-adhesive sides of tape; cleaning agent.

**LIQUID NITROGEN**

An element used in its liquid state (-195°C) for the separation of adhesive surfaces, as well as to enhance the fluorescence of Zinc Chloride and Zinc Nitrate treated prints for visualization and photography.

**LUMINESCENCE**

Emission of light by energy from non-thermal sources (i.e., chemical, biochemical, electrical), including both fluorescence and phosphorescence.

**MALEIC ACID**

Weak acid used in an aqueous solution as a pre-wash step for the Physical Developer process.

**MAXILON FLAVONE 10GFF**

See *Basic Yellow 40*. See *Panacryl Brilliant Flavone 10GFF*.

**MBD**

7-(P-Methoxybenzlamino-4Nitrobenz-2-Oxa-1,3-Diazole). Yellow dye which produces a fluorescent product when exposed to selected wavelengths of light; used to visualize cyanoacrylate fumed friction ridge detail.

**MERBROMIN**

Reagent used to detect/enhance bloody friction ridge detail; produces a fluorescent product when exposed to excitation at selected wavelengths.

**MERCURIC NITRATE**

Chemical used as a clearing agent for silver staining.

**METAL ETCHING**

Technique utilizing acidic solutions or vapors in the development of friction ridge detail on select metal surfaces.

**METAL SALT**

Secondary treatment of ninhydrin developed friction ridge detail for visualization (e.g. Zinc Chloride, Zinc Nitrate, or Cadmium Chloride); produces a fluorescent product when exposed to selected wavelengths of light.

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**METHANOL (METHYL ALCOHOL)**

Solvent used as a carrier in reagents, dyes, stains, and rinses; also used as a cleaning agent.

**METHYLENE CHLORIDE**

Solvent used in the preparation of liquid iodine. See *Dichloromethane*.

**MOLYBDENUM DISULFIDE**

Chemical used in the preparation of Small Particle Reagent (SPR).

**MMD**

Multimetal Deposition. Two step process using a colloidal gold and a modified Physical Developer solution to visualize friction ridge detail.

**MRM-10**

Combination of Basic Yellow 40, Rhodamine 6G and MBD dyes which produce fluorescence when exposed to selected wavelengths of light; used to visualize cyanoacrylate fumed friction ridge detail.

**MSDS**

Material Safety Data Sheet. Manufacturers' information concerning the handling and use of a chemical.

**N-DODECYLAMINE ACETATE**

Chemical used in the preparation of the detergent solution in Physical Developer.

**NAPHTHALENE BLACK**

See *Amido black*

**NINHYDRIN**

1,2,3-triketohydrindine hydrate. Reagent that reacts with amino acids to develop friction ridge detail.

**NITRIC ACID**

Acid used in a fuming technique to visualize friction ridge detail on select metal surfaces.

**NON-POROUS**

Non-absorbent.

**PANACRYL BRILLIANT FLAVONE 10GFF**

See *Basic Yellow 40*.

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**PDMAC**

Para-dimethylaminocinnamaldehyde. Reagent that reacts with urea, amines and their salts to develop friction ridge detail with fluorescent properties when exposed to selected wavelengths of light.

**PETROLEUM ETHER**

Solvent used as a carrier in reagents; also as a rinse or cleaning agent.

**PHOTO-FLO™**

Surfactant developed by Kodak, used in powder suspension techniques for the development of friction ridge detail.

**PHYSICAL DEVELOPER**

Silver physical development process which reacts with some components of friction ridge secretions, as well as fatty or oily contaminants.

**POLYMERIZATION**

Chaining together many simple molecules to form a more complex molecule with different physical properties.

**POROUS**

Absorbent.

**2-PROPANOL**

Solvent used in preparation of reagents.

**RAM**

Combination of Rhodamine 6G, Ardrex, and MBD dyes, which fluoresce when exposed to selected wavelengths of light; used to visualize cyanoacrylate fumed friction ridge detail.

**REAGENT**

Substance used in a chemical reaction to detect, examine, measure, or produce other substances.

**REDOX**

Reduction-Oxidation. Chemical reaction in which one or more electrons are transferred from one atom or molecule to another. An important component of the Physical Developer and Multimetal Deposition processes.

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**RHODAMINE(S)**

Family of dyes that produce fluorescence when exposed to selected wavelengths of light; used to visualize cyanoacrylate fumed friction ridge detail.

**ROSANILINE CHLORIDE**

See *Basic Fuschin*.

**RUBBING TECHNIQUE**

Powdering technique that can develop friction ridge detail when substrates are rubbed with gloves or cotton dipped in powder, usually after surfaces are cyanoacrylate fumed.

**RUHEMANN'S PURPLE**

Colored compound that is the product of the reaction between amino acids and Ninhydrin.

**RUTHENIUM TETROXIDE (RTX)**

Reagent used in the visualization of friction ridge detail, especially on fabrics.

**RUVIS**

Reflective Ultra-Violet Light. Imaging system that allows visualization of friction ridge detail in the ultraviolet spectrum.

**SAFRANIN O**

Red dye which produces fluorescence when exposed to selected wavelengths of light; used to visualize cyanoacrylate fumed friction ridge detail.

**SEQUENTIAL PROCESSING**

Use of a series of development techniques in a specific order to maximize development of friction ridge detail.

**SHANNDON-XYLENE**

Technique used to separate adhesive surfaces.

**SILVER NITRATE**

Chemical used in the Physical Developer, Multimetal Deposition and Silver Nitrate processes. Used alone, silver nitrate reacts with salt to develop friction ridge detail.

**SPR**

Small Particle Reagent. Suspension in which molybdenum disulphide adheres to fats and oils, allowing for visualization of friction ridge detail.

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**SODIUM HYPOCHLORITE (HOUSEHOLD BLEACH)**

Solution used to clear ninhydrin stains and to darken the silver deposits of Physical Developer.

**STOCK SOLUTION**

Concentrated solution diluted to prepare a working solution.

**SUDAN BLACK**

Black dye that stains fats, oils, sebaceous components, and contaminants of friction ridge residue; can enhance cyanoacrylate fumed friction ridge detail.

**5-SULFOSALICYLIC ACID**

Chemical used in fixative solutions for a variety of blood enhancement reagents.

**SURFACTANT**

Surface-active substance; detergent.

**STICKY SIDE POWDER™**

Product used to develop friction ridge detail on adhesive surfaces and/or tapes.

**SYNPERONIC-N**

Chemical used in the preparation of the detergent solution in Physical Developer.

**TEC**

Thenoyl Europium Chelate. Treatment having fluorescent properties used with selected wavelengths of light to enhance cyanoacrylate fumed friction ridge detail.

**THERMOPLASTIC POWDER**

Toner powder used in copiers and printers.

**TMB**

Tetramethylbenzidine. Reagent used to detect/enhance bloody friction ridge detail.

**ULTRAVIOLET**

Wavelengths of light shorter than that of the visible spectrum, between 10 and 400 nm.

**UN-DU®**

Product used to separate adhesive tapes.

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**VACUUM CYANOACRYLATE ESTER**

Fuming method, conducted under vacuum conditions, in which cyanoacrylate polymerizes on friction ridge residue; used to visualize friction ridge detail.

**VMD**

Vacuum Metal Deposition. Process of selective condensation of metals under vacuum conditions; used to visualize friction ridge detail.

**WORKING SOLUTION**

Solution at the proper dilution for processing.

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