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| **Method** | Process | Type of material | Precautions/Tips |
| Powder Enhancement using black, white or gray powders | Enhances latent (non-visible) print. Powder sticks to sweat and oil in print to create an outline of the print. This process does not destroy the print.  | Use on non-porous or non-absorbent surfaces such as plastic, glass, wood, metal.  | Use gently brushing so the print isn’t smudged. Lift using tape and transfer to card with labels.  |
| Fluorescent Powder Enhancement (orange, green, yellow, blue) | Dust print lightly. Use a fluorescent light to make prints visible.  | Use on non-porous materials.  | Use gentle brushing. Lift with tape and transfer to card.  |
| Magnetic Powder | Uses special magnetic wand and powder containing iron. The powder is applied. The remainder of powder on the wand is returned to the jar. The empty wand is used to clean up excess powder on the print.  | Non-porous materials | Use care with magnetic powder. Use light application. Iron may damage print if brushed on too heavily.  |
| Superglue or cyanoacrylate fuming | The evidence item to be tested is placed in a closed chamber. Superglue is placed in a small dish or a wand may be used. The container is closed and the superglue is allowed to vaporize for about 30 minutes. The vapors react with the amino acids in the print to produce a white coating on the print. This can then be dusted with a powder to enhance more.  | Use on non-porous materials.  | Lift with tape and transfer to card. Label with identifying information.  |
| Iodine Fuming(oldest method in use) | Iodine crystals or tincture of iodine liquid is placed in a container. The evidence item is placed in the chamber and it is closed tightly. The iodine is allowed to sublimate to produce vapor that react with the sweat and amino acids in the print. The print will turn a brown color.  | Use on porous materials such as papers, checks, documents.  | Prints will fade quickly so they need to be photographed. Prints may be treated with a starch solution to preserve them for longer time. The iodine reacts with the starch to produce a purple color on the print. Apply tape over the fixed print to keep dry.  |
| Ninhydrin fuming | Ninhydrin is mixed and sprayed on the item. The ninhydrin reacts with the amino acids in the print. The print appears as a light gray. The development can be done at room temperature but will take several hours to possibly days. Process may be accelerated by placing the prints between damp paper towels and applying heat with an iron.  | Use on porous materials.  | This method CANNOT be done before Iodine fuming or Physical Developer (silver nitrate).  |
| Silver Nitrate or Physical Developer | Silver reacts with the sodium chloride in the sweat to produce an insoluble white silver chloride compound that adheres to the print.  | Use on porous surfaces | Method must be done before attempts to use ninhydrin.  |
| Special Lighting/lasers | Based on the excitation of electrons in atoms from ground state to high energy. When energy is released it can be in the form of a visible light wavelength.  |  |  |

You Tube videos available to see demonstrations of each technique.