Dusting

Dusting is the most effective way to obtain a print from a ridged non-porous surface such as glass, plastic, or metal surfaces. Using a camel hair brush, black carbon or aluminum powder is placed over the location of a suspected print. The dust adheres to the sweat and oil left behind by the person who touched the surface. Next, wide transparent tape is smoothed over the dusted area. When the tape is then removed from the surface, the dust and the print will be attached. Finally, the tape is placed onto a white card for display and comparison. Below, the print on the left was developed by dusting with carbon powder; the print on the right, using aluminum powder.

Iodine Fuming

Iodine fuming is an excellent way to develop prints on porous and non-porous surfaces such as paper, index cards, magazines, and cardboard. To fume a suspected latent print, the surface must be placed into a container with solid iodine. The sublimation of iodine in a closed container will cause iodine vapors to concentrate, then be absorbed by the oil and sweat left behind by human skin. The temporarily-developed print will then be visible as an orange/brown outline. Upon development, the print should be photographed for documentation. The iodine will eventually sublime from the surface of the print, allowing the print to return to its latent state. The surface is then returned to its original appearance and can even be exposed to additional developing techniques. At right: a print developed using iodine fuming.
Ninhydrin Solution

Ninhydrin is a chemical that reacts with amino acids to form a purple compound. This development technique is used primarily on porous surfaces such as paper, tissue, and clothing. The white powder ninhydrin must be dissolved in acetone before it can be soaked into a surface for development. The reaction will then develop the print within twenty four hours. Left: developing a print with a ninhydrin-acetone soaked brush. Right: a print developed by reacting with ninhydrin.

Silver Nitrate

When exposed to ultra-violet (UV) light, silver nitrate reacts with the salt in sweat to form a blackish-brown compound. Using this reaction, a suspected object is sprayed with a silver nitrate solution and the left to develop under a UV bulb. The print should become visible in five to ten minutes. This type of development is best used on porous surfaces, like paper or drywall. Top left: Spraying print with silver nitrate solution. Top right: UV light hood. Left: a print developed using silver nitrate solution and exposed to UV light.
In recent years, there has been much advancement in the area of print developing. The use of advanced brushes and new chemical procedures make it possible to develop prints on a larger variety of surfaces. Some criminals wear gloves to avoid leaving fingerprints at a crime scene, but often they discard the gloves nearby. This is a picture of latent prints developed on the inside of a glove.