

A DIRECT TRANSFER TECHNIQUE USING COPY PAPER

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Introduction

A direct transfer medium is defined as any substrate placed directly on the surface of the skin where a latent fingerprint may be in order to transfer the latent fingerprint from the surface of the skin to the medium itself. The direct transfer method began with silver iodine and electrographic techniques in which the transfer mediums were rolled against the surface of human skin. It subsequently evolved to the use of a KromeKote® card in the early 1970s.

The use of bond paper is merely a variation of these techniques. It has been found that there are many substrates that will transfer a latent print from the surface of the skin to the surface of the medium. Successful case recoveries have been made with KromeKote® cards, cash register tape, fixed photo paper, 20 lb. bond paper, and the silver plate.

Before applying a transfer medium, a target area of the skin should be established. A target area may be defined, for the purposes of processing human skin for fingerprint evidence, as an area of the exposed surface skin that is suspected as having been touched by the perpetrator. If a target area is not established, then the process is simply a fishing expedition.

Target areas are predicated on indicators such as the position of the body; partially clad remains; a nude body; evidence that the body was moved or dragged; evidence that the body was re-dressed; eye witness account or, in the case of a living person, the information provided by them. Bruising or underlying tissue damage and swelling are also indicators. In addition to bruising, redness of the skin surface may be especially prevalent in living persons.

The mediums described for use in this direct transfer method were originally designed for a different end use. When these mediums are used for direct transfer of fingerprint residue from the skin surface to the transfer medium, the application and guidelines may be new to

the user or observer. An understanding of this process is essential for potential success in the recovery of fingerprint evidence from the surface of the skin.

Paper products as direct transfer mediums

(Note: Fingerprints recovered through this method may be laterally reversed or color reversed.)

Bond paper (20 lb. stock), copy paper, and computer paper (ink jet or laser quality) have all worked well in studies and testing. The use of these mediums has also been successful in the field. The application and use of these types of paper are the same as that for the use of KromeKote® cards.

The recommended technique of applying any transfer medium to the surface of the skin is as follows:

Press the paper or card to the surface of the skin with an evenly distributed light to moderate pressure. A "Cello-brand" sponge was found to be an excellent source for application. Another method is to use a small medium-nap paint roller. Roll the paint roller in a swift motion over the back of the paper or card after it is applied to the skin using even pressure.

Immediately remove the paper or card by carefully starting at one corner. The transfer medium is lifted in one continuous motion until it is clear of the skin. Support of the transfer medium is needed during removal to reduce or prevent slippage. This technique applies to all cases using paper or cards.

A second application using a new transfer medium to the same area of the skin is recommended. There have been occasions where the second transfer produced a better quality print. This has been attributed to the first lift or transfer removing excess moisture from the surface of the skin.

Set the lifts aside in a suitable environment (ambient temperature range of 68-72° F and a relative humidity

range of 40 - 60%) and process with a fingerprint brush and powder two to three hours later.

If you are worried about destroying the print by reapplying another medium, don't be. If the print is there it may be more durable than you think. It is documented that the original successful case that resulted in a conviction (a ring removed from a cadaver) was accomplished with two sequential direct transfer lifts. The lifts were followed by application of magnetic powder to the surface of the target area of the skin.

Special considerations

If the surface of the skin is cool or cold it is recommended that the surface of the transfer medium be heated prior to its application. This can be as simple as placing the paper in a Ziploc® bag and placing the bag and contents under your clothing to be heated by body heat. The best method which we have found is to use a compact travel hair dryer to warm the medium to at least 6 to 9° above the surface temperature of the skin of a **deceased** person before applying it to the surface of the skin. In the field we have also used the heater in a vehicle to warm the transfer medium(s). Chemical generated hand warmers also work well and can be purchased at stores such as Wal-mart in the sporting goods section. In addition, a small insulated lunch bag (one with a silver liner) can be used to place the hand warmer in with the transfer paper or medium. This will keep the transfer medium at the necessary warmth until applied to the surface of the skin. (This technique is not restricted to deceased bodies alone. It also works on living people who fit the parameters of cool or cold surface areas of the skin).

If paper or other similar direct transfer mediums are applied to the surface of the skin and held in place or applied with a bare hand in lieu of a sponge or paint roller, outlines of the fingers may be developed without ridge detail. It has been determined that these outlines are usually, if not always, those of the person applying the medium to the victim's skin due to the heat of their own fingers. Heat attracts cold (surface residue of the skin) to the warm areas of the paper or card. This is merely a transfer of surface residue of the decedent to the outline of your fingers on the medium. The residue found on the surface of the skin is called the acid mantle or hydrolipid film.

If the transfer medium is not held or correctly applied it may slip or shift resulting in what appears as a smudge when the transfer medium is processed with fingerprint powder. This can also occur if the medium is not lifted from the surface of the skin by one edge in a smooth and continuous motion. Closely following the above mentioned directions helps to alleviate possible distortion or smudging of the transferred print.

Although the direct transfer method is **nonintrusive** to the body, it is strongly recommended that the coroner or medical examiner be contacted and agree with your protocols before you start processing.

In summary, many different types of smooth materials have worked in the direct transfer technique in clinical and field application. This includes 20 lb. bond or copy paper. To become proficient with the application and use of direct transfer mediums, practice is needed. Proficiency will come with practice.

Editor's note: I would like to thank Bill and Karen for putting this article together to elaborate on the article "Latent Lifted from Skin of a Dead Body" reprinted in the last issue.

For additional information on this technique the Sampsons have a book "Recovery of Latent Fingerprint Evidence from Human Skin: Causation, Isolation and Processing Techniques" available from ODV, Lightning Powder, or Lynn Peavey, Co.

The Sampsons will be giving a general presentation and two workshops at the Parent Body meeting this summer in St. Louis. They also have a second book coming out soon which will include new research.