

Michael F. Carrick  
Managing Director  
Lightning Powder Company, Inc.  
Manufacturers and Distributors of Equipment  
For Crime Scene Investigators  
1825 Front St. N.E.  
Salem, Oregon

### PRINTS FROM MUMMIFIED FINGERS

Michael F. Carrick wrote this article after visiting a police crime lab in Bolivia a few years ago.

During the month of September, 1978, I had the opportunity to visit several of the police agencies in Bolivia under the direction of Colonel Ovidio Aparacio Coca. While visiting the National Criminalistics Laboratory, I had the pleasure to speak at length with Inspector Enrique Augustin Penaranda. He told me of a technique that he had developed to take fingerprints from desiccated mummified fingers. He explained that in using this technique it is not necessary to amputate the fingers, to soak the fingers, to inflate the fingers, or to treat them in any way. His method allowed the prints to be taken with the fingers as found.

Naturally I was quite interested and he offered to demonstrate the technique to me. From the laboratory collection a dried, withered hand was obtained. This was from a cadaver found in the surrounding mountains. All of the fingers were in a hard, dark-brown, wrinkled, mummified condition.

The technique is as follows: After brushing and cleaning the fingers in a normal manner, the finger to be worked on is painted with a lubricating release agent, such as lightweight machine oil, e.g., sewing machine oil, etc. This solution is applied with a small artist's brush, and a very thin film is brushed on the finger.

At this point, Senor Augustin emphasized that he could be working on the hand still attached to the cadaver, and he need not be in the laboratory. This could be done immediately at the time of discovery of the cadaver or at any other convenient time and place. His technique is as easy to use in the field as in the laboratory.

After the initial preparation of the finger, a second artist's brush and a second jar of solution is taken. This solution is a white solution with about the consistency of maple syrup, and is applied to the finger with the artist's brush to form a uniform, thin coating on the finger. Care must be taken to cover the entire area of interest of the fingerprint adequately with the material. During the demonstration he did only one finger, but under normal field circumstances he would have progressed from finger to finger while the preceding ones were drying.

In the laboratory it took about 15 minutes for the solution to dry. Senor Augustin tells me that this can be accelerated either by fanning or by the use of a hot air dryer. When the solution has dried completely it has turned from a white color to transparent.

When the solution has dried to a transparent film, a small probe, similar to a fingerprint ridge counter, is used to pick the edges of the film and raise it from the finger so that it can be peeled off.

When Senor Augustin peeled off the thin transparent layer of material, it had of course, followed the wrinkles that were in the finger, and it appeared that he had a small replica of the badly wrinkled finger. But, at this point one of the most useful properties of the solution was made apparent. He was able to stretch and flatten the material, very carefully working it with his fingers.

He then applied it to a glass microscope slide. When the slide is placed upon a white piece of paper, or viewed over an illuminated table, you have a very fine molded print which is quite easy to read.

The print can be enhanced and made easier to read by dusting it lightly with fingerprint powder. Remember, you have here a molded print, as if it were a latent print made in butter or clay, or similar material.

One of the traits of a skilled scientist is the ability to discover simple answers for complex problems. Senor Augustin possesses this trait for the "second solution" that is applied to the fingers is only common white glue, such as Borden's Elmer's Glue that is available in hardware stores and markets throughout the world.

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