

# GLScan<sup>®</sup>

## Gellifter imaging system

**Easy to operate**  
and results in less than a minute

**Detect the weakest of traces**  
excellent illumination

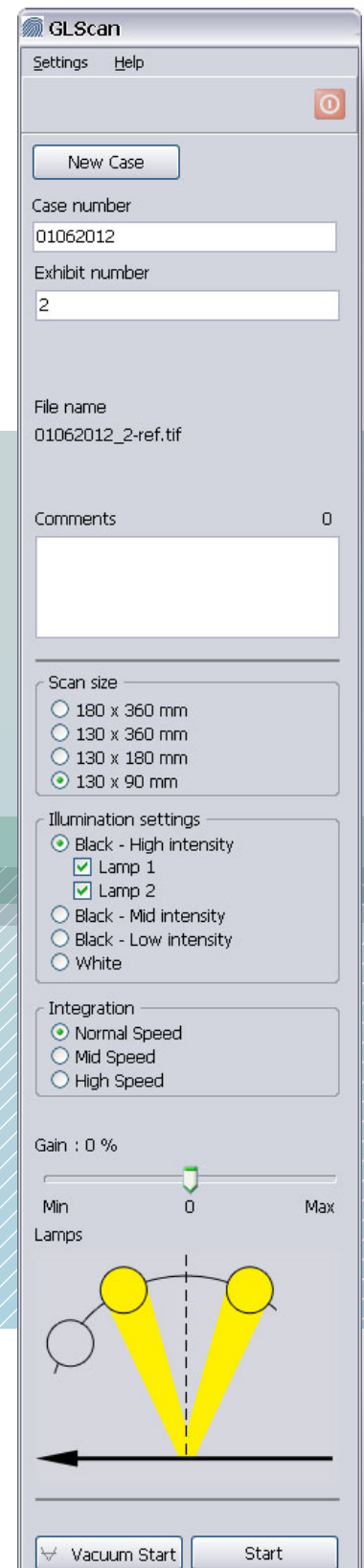
**Identify the finest details**  
high resolution



# Easy to operate

Digital imaging has made major inroads in crime-scene units and forensic departments all over the world. Digital photography has many advantages over traditional photography: savings on material costs, film development, storage space and time. Results are available instantaneously and, if not satisfactory, a new image can be taken immediately.

However, there is one downside: the resolution of certain images. In most cases, like shots of a single fingerprint or overviews of a crime scene, the resolution is sufficient for the intended use. A problem is encountered when a shoeprint needs to be photographed. Enlargement of this kind of trace may result in dpi (dots per inch) resolution that is low and unsuitable for making comparisons. The GLS<sup>CAN</sup> is the first digital system for the recording of Gellifter shoeprint traces that can surpass traditional photography.



# Amazing results

## High resolution

With the GLS<sup>CAN</sup> (Gellifter scanner), traces obtained by Gellifters are recorded in a high resolution. The GLS<sup>CAN</sup> is the first system to be specially designed for digital recording of traces lifted with black Gellifters. Its operation is of such simplicity that even 'non-professional photographers' will obtain excellent results. The GLS<sup>CAN</sup> captures images with a resolution of approximately, but not less, than 1000 dpi. This high resolution makes it possible to view (on screen) or print greatly enlarged details. On a 30" monitor, the image is enlarged about 11 times when viewed at 100%.

## Operating

The GLS<sup>CAN</sup> is operated by a PC running Windows. The command window on the screen is well-organized and simple to operate allowing choice/selection of scan size, illumination, whether vacuum is used during scanning, and the camera sensitivity (gain). Case and item number can be entered for use in the file name of the image (important for archiving). Additional data can be entered, such as place and date/time of obtaining the evidence, which is stored together with the image file (EXIF information in the TIFF format).

## Right results quickly

In contrast to traditional photography, in which a lot of effort is spent finding the correct illumination and exposure time, developing film, et cetera, the GLS<sup>CAN</sup> is very efficient. A shoeprint can be scanned in less than 1.5 minutes. The image is automatically saved on the hard disk of the connected computer. If an image processing program is installed, the scanned image will be opened directly in that program for evaluation and adjustment/fine-tuning.

## Distortion free results

Distortion of an image, the so-called fish-eye effect, is limited to the absolute minimum with the GLS<sup>CAN</sup>. A cleverly placed high-quality lens ensures an image that is distortion-free along both the x and y axes.

## Delivery

The GLS<sup>CAN</sup> is delivered with an up-to-date PC and a 30" monitor, GLS<sup>CAN</sup> software, a vacuum pump (mounted in a sound-absorbing cabinet) and two vacuum tables of 13 and 18 cm width (maximum scan length 36 cm). Each vacuum table is fitted with a ruler on a long and a short side. Image processing software is not included but is available as an option.



A man in a striped shirt is shown from a high angle, focused on using a Gellifter device to lift a sample from a surface. The device is a black, rectangular tray with a clear lid, and the man is holding it with both hands. The background is a bright, slightly blurred indoor setting, possibly a laboratory or office. The overall tone is professional and scientific.

**BYDA**

- Risk-free lifting
- Easy to use
- One product, many applications
- No air bubbles
- Lift from virtually every surface
- Weak traces are clearly visualized
- Quality from start to finish

# Gellifters<sup>®</sup>

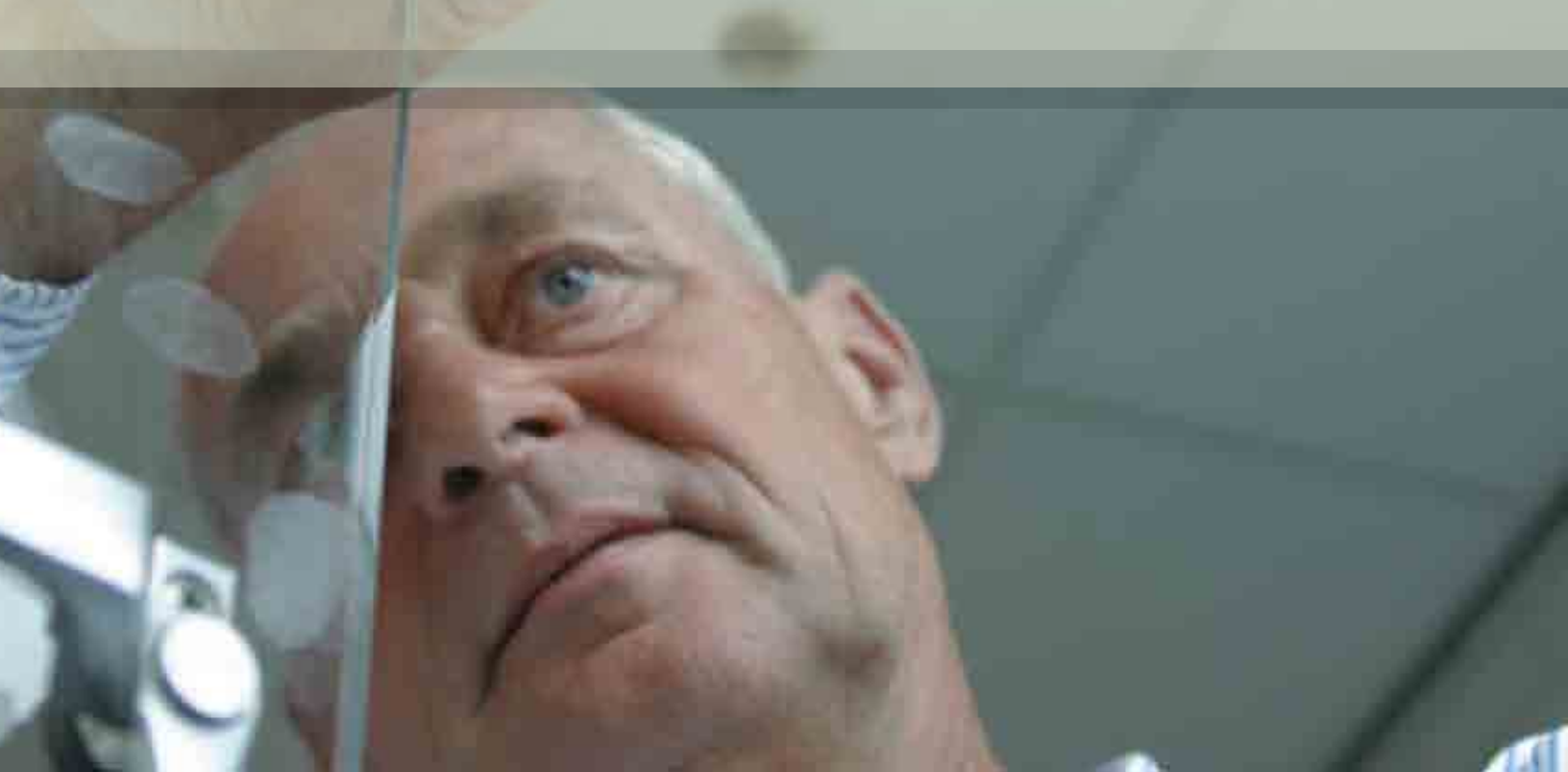

Lift your evidence  
to the highest level



A close-up photograph of a person's hands holding a black, rectangular gelifter. The gelifter has several white, oval-shaped fingerprints on its surface. The background is a blurred indoor setting with a ceiling light fixture.

# lift from virtually every surface

Unlike other lifting media, BVDA Gellifters have been especially developed for the lifting of fingerprints, shoeprints, dust marks and micro traces. The thick, non-aggressive, low-tack gelatin layer allows traces to be lifted from almost every surface, including porous material such as paper and cardboard. Lifted prints can be transported for photography or closer examination.

A photograph of a man with a serious expression looking up at a gelifter held in front of him. The gelifter is the same black one with white fingerprints seen in the top image. The man has a blue watch on his left wrist. The background is a blurred indoor setting with a ceiling light fixture.A close-up photograph of the black gelifter with several white fingerprints on its surface, held in a hand.

## Black Gellifters

The gelatin layer of these Gellifters features two special qualities: jet-black color and the high-gloss finish. The high-gloss provides for a reflection of light from the illumination source. Any light not reflected by the gelatin layer will be absorbed. Traces picked up by the Gellifter, however, will reflect the light in all directions. The end result is a high contrast between the lifted material and the gelatin layer. Black fingerprint powders, lifted with a black Gellifter yield images that are sharp and rich in contrast.

## Transparent Gellifters

These Gellifters are used mainly to lift fingerprints and to make comparison shoeprints. Their advantage is that they provide positive image of a print. Unlike tape products for lifting prints, the Gellifter has a low-tack adhesive layer which is thick enough to lift complete prints from rough or polluted surfaces. Fingerprint powder and impurities that may remain on a print after powdering do not cause missing spots in the lift due to bubbles caught between the adhesive layer and the surface.

## White Gellifters

The gelatin layer of the white Gellifter absorbs blood and dyes from staining solutions. These traces can easily be copied onto the gelatin layer and then viewed free from a interfering background. The extreme white color of this Gellifter has a low fluorescence. Staining solutions which fluoresce when excited with green light (e.g., Hungarian Red) will therefore show up in high contrast to the gelatin layer. We advise that shoeprints in dust be lifted with the black Gellifters, even when lifting dark-colored prints that intuitively would seem to contrast better on white Gellifters. A clearer and better contrasting result is always obtained with a black Gellifter.

## Risk-free lifting

Gellifters make it possible to lift the same print multiple times without the risk of destroying it. Also, there is minimal or no risk of damaging the surface of the exhibit.

## Easy to use

The flexibility of the Gellifter makes it easy to apply on any surface. The low-tack adhesive makes it easy to remove.

## One product, many applications

Lift powdered fingerprints, untreated fingerprints, fingerprints developed with cyanoacrylate, fingerprints in/on latex and vinyl gloves, shoe impressions in dust, traces in blood, dye-stained finger- and shoeprints in blood, earprints, indented writing, micro traces and fibers.

## Lift from virtually every surface

Porous or non-porous, flat or curved, smooth or rough: a black, white or transparent Gellifter will do the job.

## No air bubbles

The thick gelatin layer of Gellifters eliminates the risk of trapping air bubbles when lifting prints from rough surfaces. This ensures a complete lift of the print, without gaps.

## Weak traces are clearly visualized

Even the weakest traces become clearly visible when lifted with a black Gellifter. Its jet-black color and the high-gloss finish of its gelatin layer provide the right background to visualize the weakest traces.

## Sharpness and rich contrast

The jet-black color of the black Gellifters and the high-gloss finish provide a perfect combination of absorption and reflection. Used with the right illumination, it achieves a crisp image in which the print is perfectly contrasted with the background.

## Quality from start to finish

High standards of quality are maintained both in the production and packaging of Gellifters. We check every single Gellifter, just before packaging, to make sure that only the best ends up with you at the crime scene.

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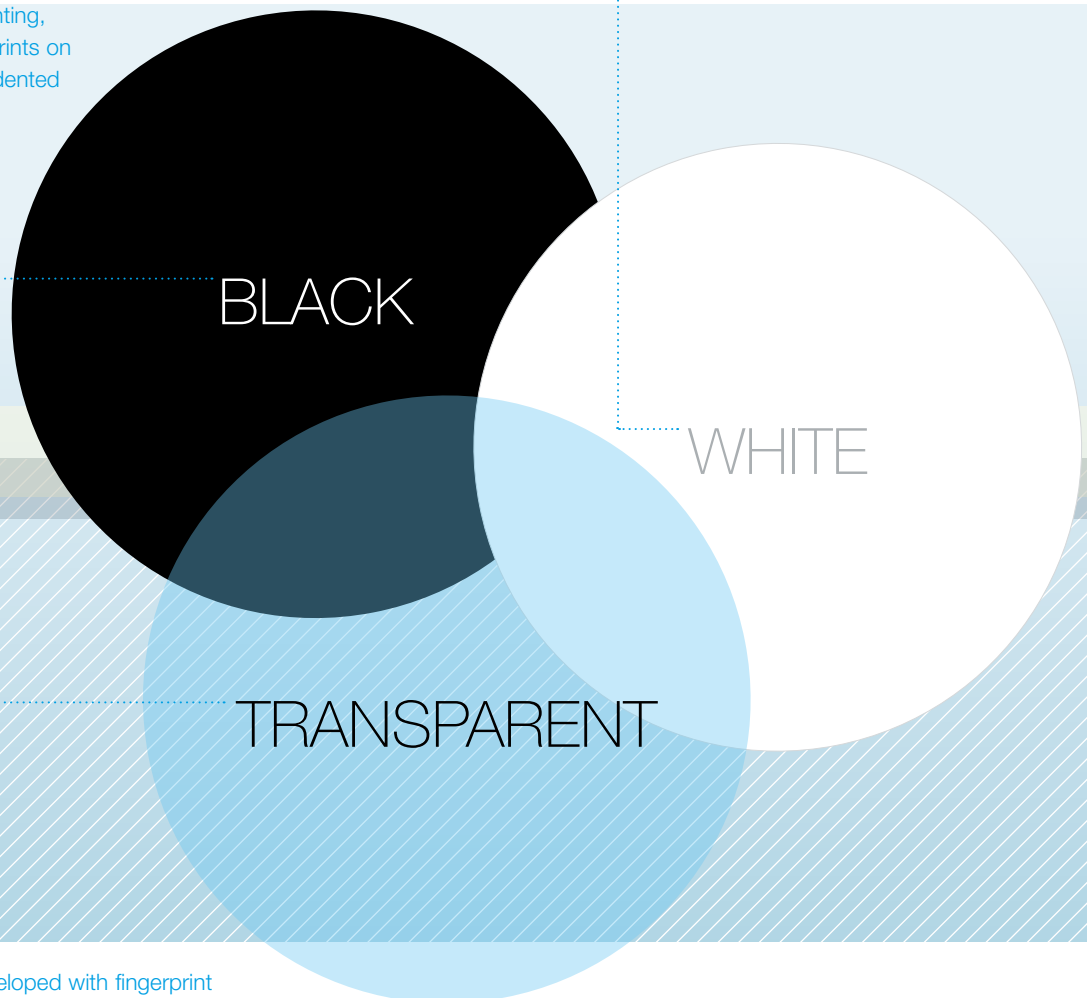
# Color selection chart

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When lifting a print, you are normally limited to only a few attempts. To make the most of your Gellifters, choosing the right color for a typical trace is therefore of utmost importance. The chart below helps you to make the best choice and achieve the best possible result.

● Untreated fingerprints / Fingerprints developed with: Powders (all types, even black), Cyanoacrylate, SPR, Powder used on the adhesive side of certain tapes, Fingerprints in/on latex and vinyl gloves, Old fingerprints (relifting or improving), Postmortem fingerprinting, Shoeprints in dust, Muddy shoeprints on paper, Earprints, Micro traces, Indented writing

● Traces in blood / Traces in blood after chemical enhancement / Old prints (improving) / Prints in staining solutions / Muddy shoeprints on non-porous surfaces stained with Safranin O



● Fingerprints developed with fingerprint powders (to obtain a positive image)  
Comparison shoeprints

## Easy to use - impressive flexibility

The transparent Gellifters have a clear polyester backing, the black and white, a backing of white rubberized linen. These backings give the Gellifters the impressive flexibility that together with the low-tack adhesive property of the gelatin layer makes the Gellifter so easy to use. In contrast to electrostatic techniques of lifting shoe impressions in dust, Gellifters require no additional equipment (other than perhaps a roller). The Gellifter has no residual charge that attracts dust and debris or draws the lifter toward another surface. The gelatin layer securely holds the print in place.

## Notation

The transparent Gellifters have non-stick paper edges that provide a space for notations. The paper also helps to separate the protective cover from the lifter. The white linen-rubber backing of the black and white Gellifters likewise provides ample space to make notes. All three types can be written on with a normal ball-point pen.

## Economy

The Gellifters come in various pre-cut sizes. However, they can simply be cut with scissors to a size that is needed to suit a particular job.

Cat. No.	Gellifters Black	Cat. No.	Gellifters White	Cat. No.	Gellifters Transparent
B 10400	5 x 5 cm / 2 x 2", 12/p	B 13400	5 x 5 cm / 2 x 2", 12/p	B 17022	5 x 5 cm / 2 x 2", 12/p
B 10500	5 x 10 cm / 2 x 4", 12/p	B 13500	5 x 10 cm / 2 x 4", 12/p	B 17024	5 x 10 cm / 2 x 4", 12/p
B 10600	7.5 x 10 cm / 3 x 4", 12/p	B 13600	7.5 x 10 cm / 3 x 4", 12/p	B 17034	7.5 x 10 cm / 3 x 4", 12/p
B 11500	9 x 13 cm / 3.6 x 5.2", 10/p	B 14500	9 x 13 cm / 3.6 x 5.2", 10/p	B 17100	9 x 13 cm / 3.6 x 5.2", 10/p
B 11000	13 x 18 cm / 5.2 x 7.2", 10/p	B 14000	13 x 18 cm / 5.2 x 7.2", 10/p	B 17000	13 x 18 cm / 5.2 x 7.2", 10/p
B 12000	13 x 36 cm / 5.2 x 14.4", 2/p	B 15000	13 x 36 cm / 5.2 x 14.4", 2/p	B 18000	13 x 36 cm / 5.2 x 14.4", 2/p
B 12500	18 x 36 cm / 7.2 x 14.4", 2/p	B 15500	18 x 36 cm / 7.2 x 14.4", 2/p	B 18200	18 x 36 cm / 7.2 x 14.4", 2/p
B 12900	36 x 45 cm / 14.4 x 18", 4/p	B 15900	36 x 45 cm / 14.4 x 18", 4/p		



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# Direct lifting

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The direct lifting method is a good method for speculative searching and an excellent aid in instances where the use of fingerprint powder is not an option. Also the method can be used when the surface is not accessible for a fingerprint brush. An example is a door handle of a car.

**Exhibit:** used coffee mug.

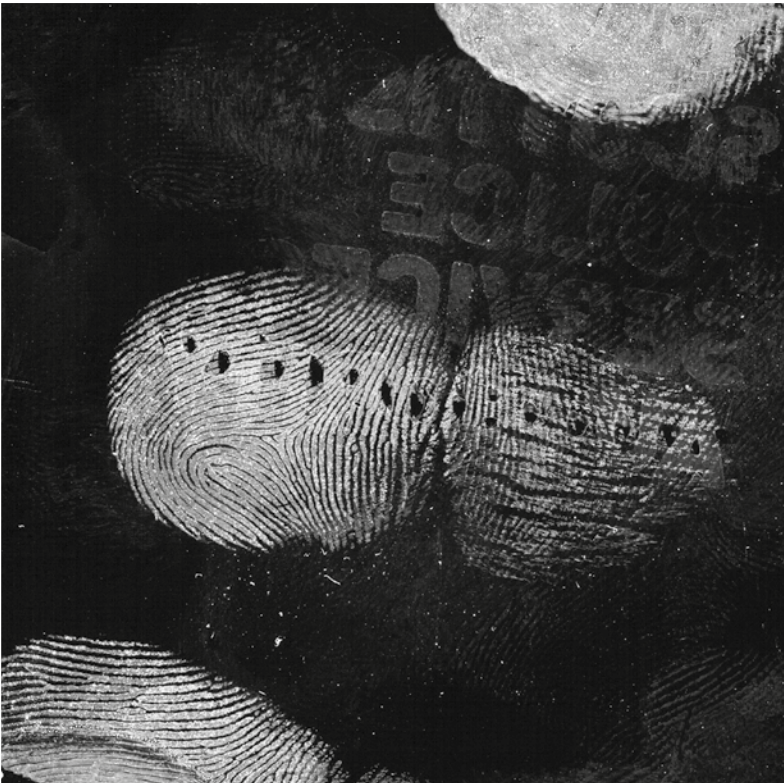
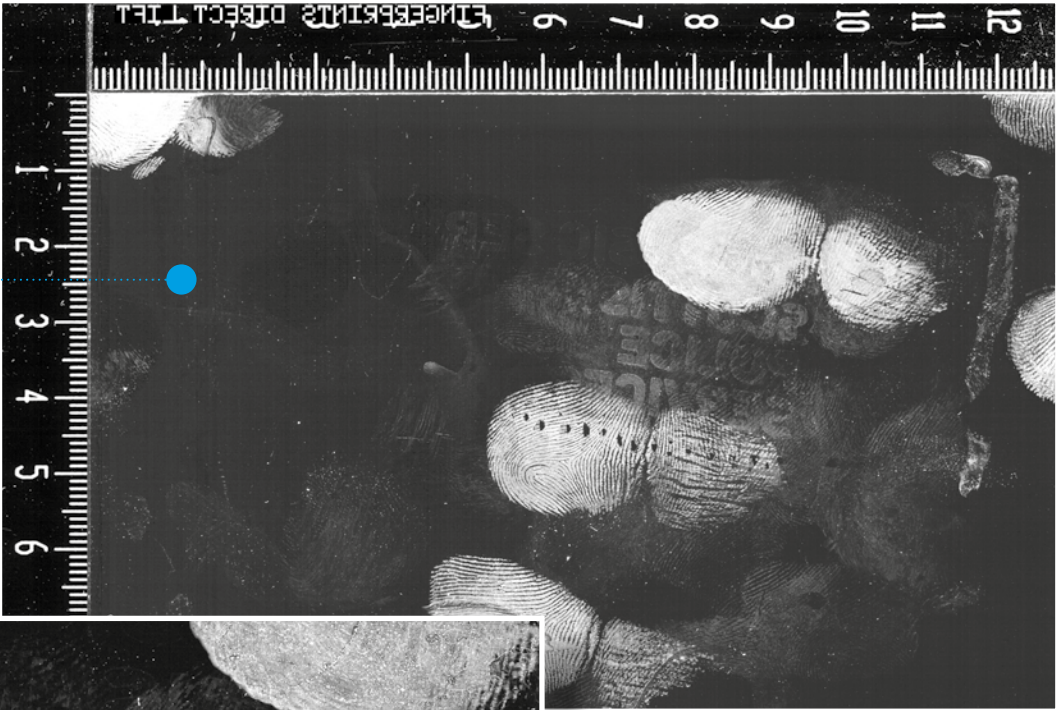
**Problem:** curved surface, fingerprint powder may not only adhere to the fingerprints but also to the coffee stains on the surface.

**Development technique:** no development, only a Gellifter is applied.

**Gellifter used:** black, 9 x 13 cm / 3.6 x 5.2".

**Imaging device:** GLScan (results can also be obtained using a digital camera and high intensity light source).





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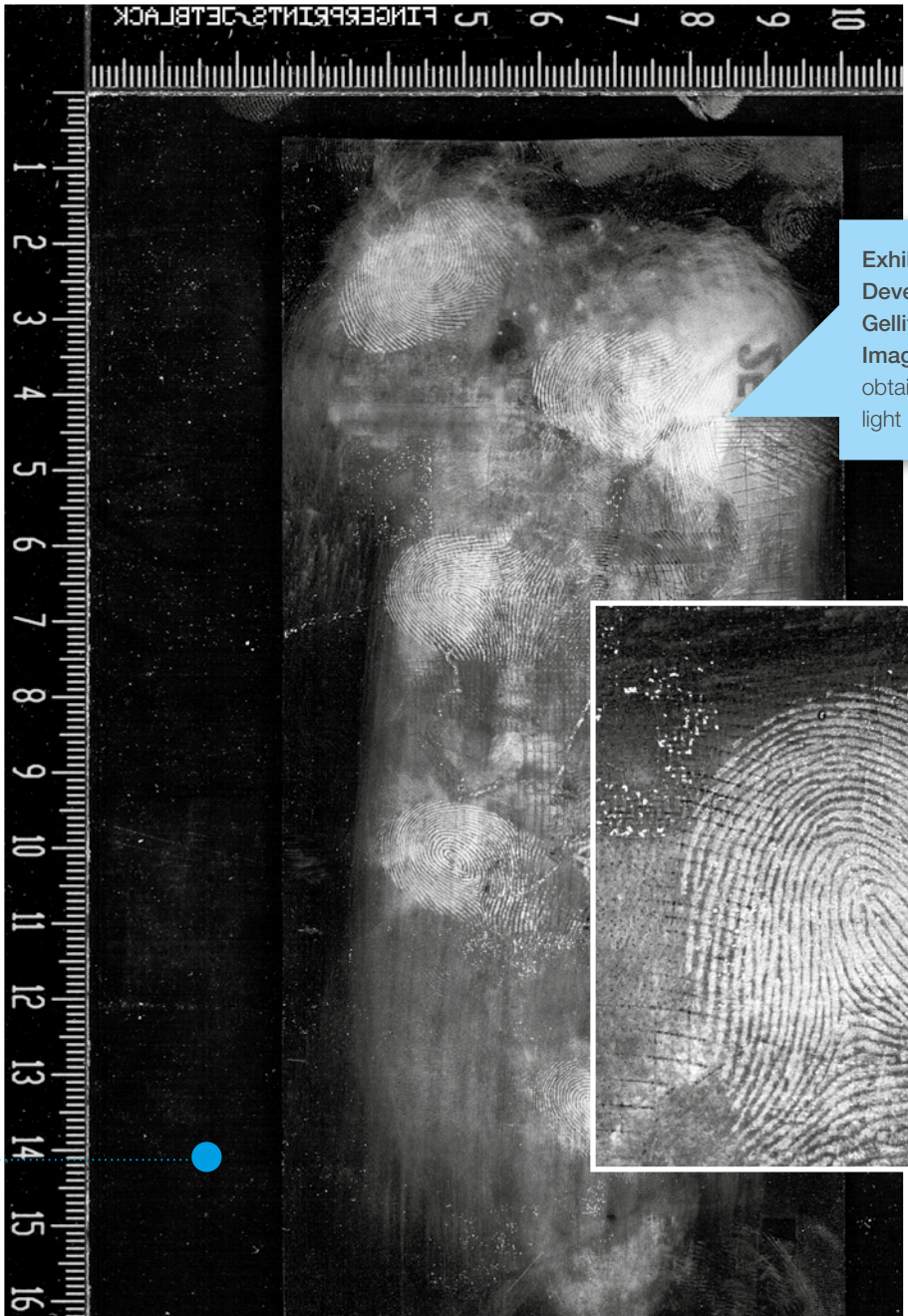
# Perfect contrast

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The obvious choice for lifting black fingerprint powder is a white lifter. However, the deep black color and the highly reflective surface of the black Gellifter is a better choice. Using a good light source emitting white light, the contrast against the black background is not only better, it also gives a crispier and clearer image. BVDA recommends the use of a black Gellifter with fingerprints developed with any color of fingerprint powder, even the black colored ones.





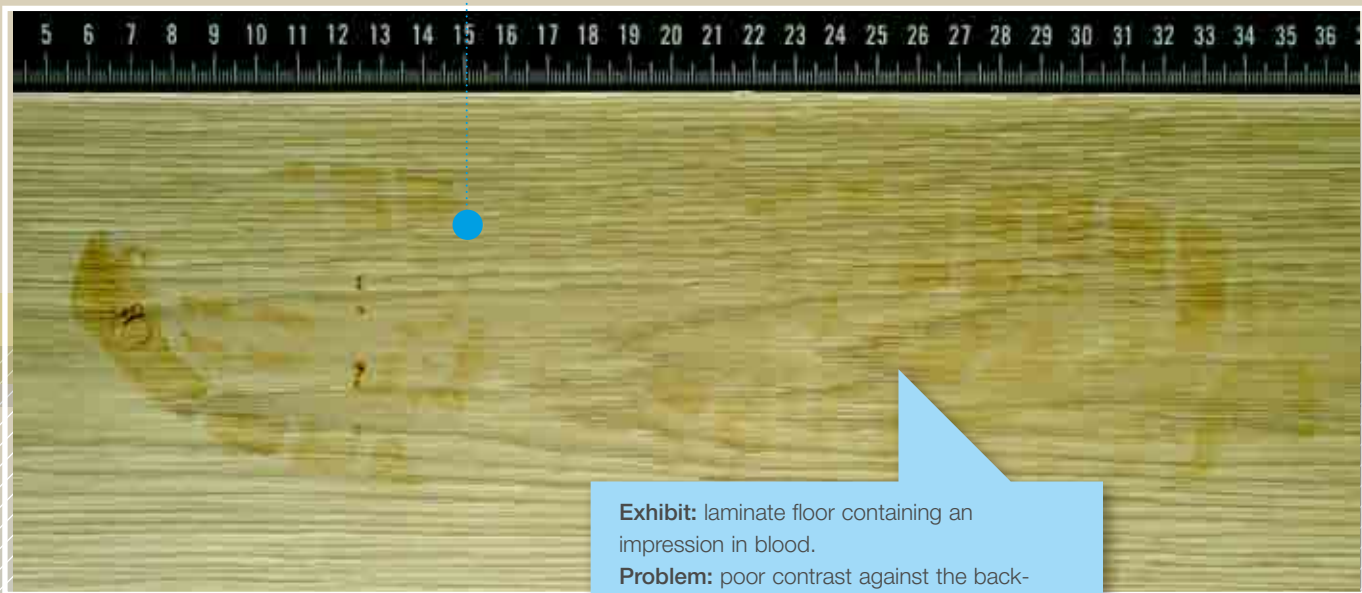


**Exhibit:** plastic bank note containing fingerprints.  
**Development technique:** black fingerprint powder.  
**Gellifter used:** black, 13 x 18 cm / 5.2 x 7.2"  
**Imaging device:** GLS<sup>can</sup> (results can also be obtained using a digital camera and high intensity light source).



# Footwear impressions in blood

This is an example where the white Gellifter is used. The white Gellifter is applied to the staining blood print and left on the print for about half an hour and then removed. The lifted print on the white Gellifter is then examined using an alternate light source. The white gelatin layer does not fluoresce thus providing a contrasting background for the fluorescent print. The same technique can be used for blood prints developed with Hungarian Red. Other non-fluorescent staining solutions which can be lifted are Acid Violet 17, Amido Black, Coomassie Blue and Crowle's Stain.



**Exhibit:** laminate floor containing an impression in blood.

**Problem:** poor contrast against the background, a staining solution is required to improve contrast. After staining also the background fluoresces, reducing the contrast.

**Development technique:**

Acid Yellow 7 staining solution.

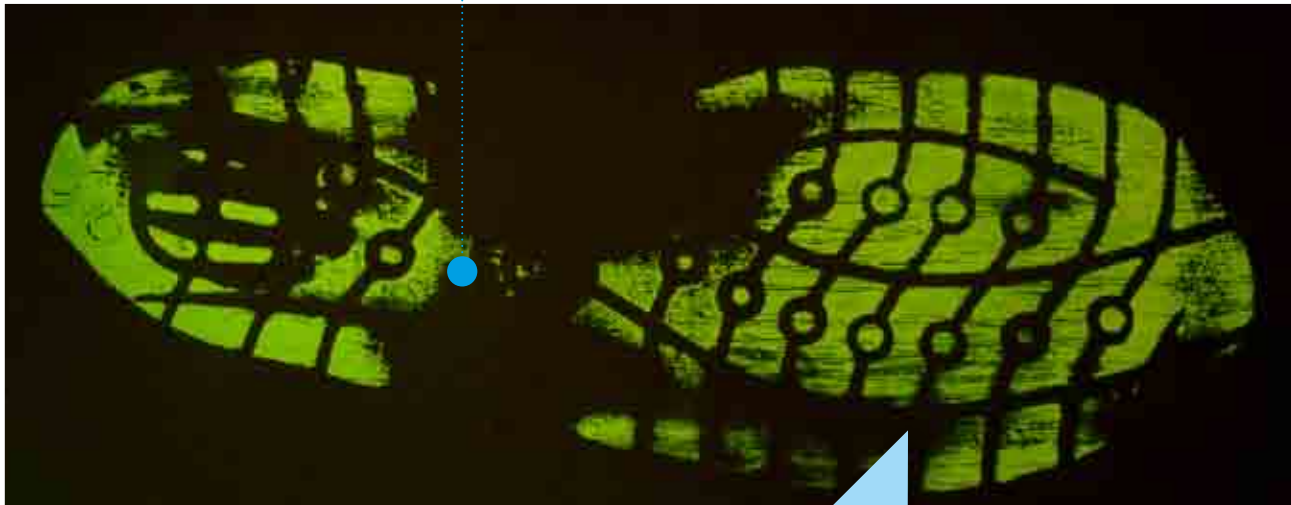
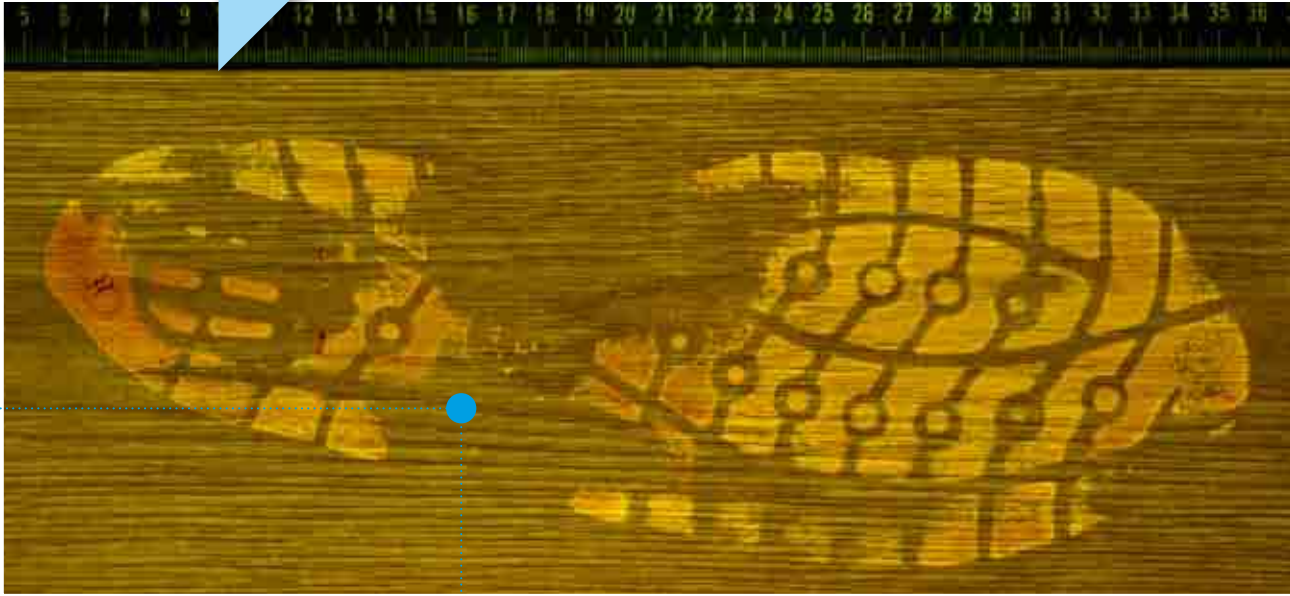
**Gellifter used:** white, 13 x 36 cm / 5.2 x 14.4".

**Imaging devices and light source:**

Canon EOS 300D, Polilight PL500 at 450 nm band, yellow camera filter.



Fluorescent print on laminate floor.



Fluorescent print on white Gellifer.







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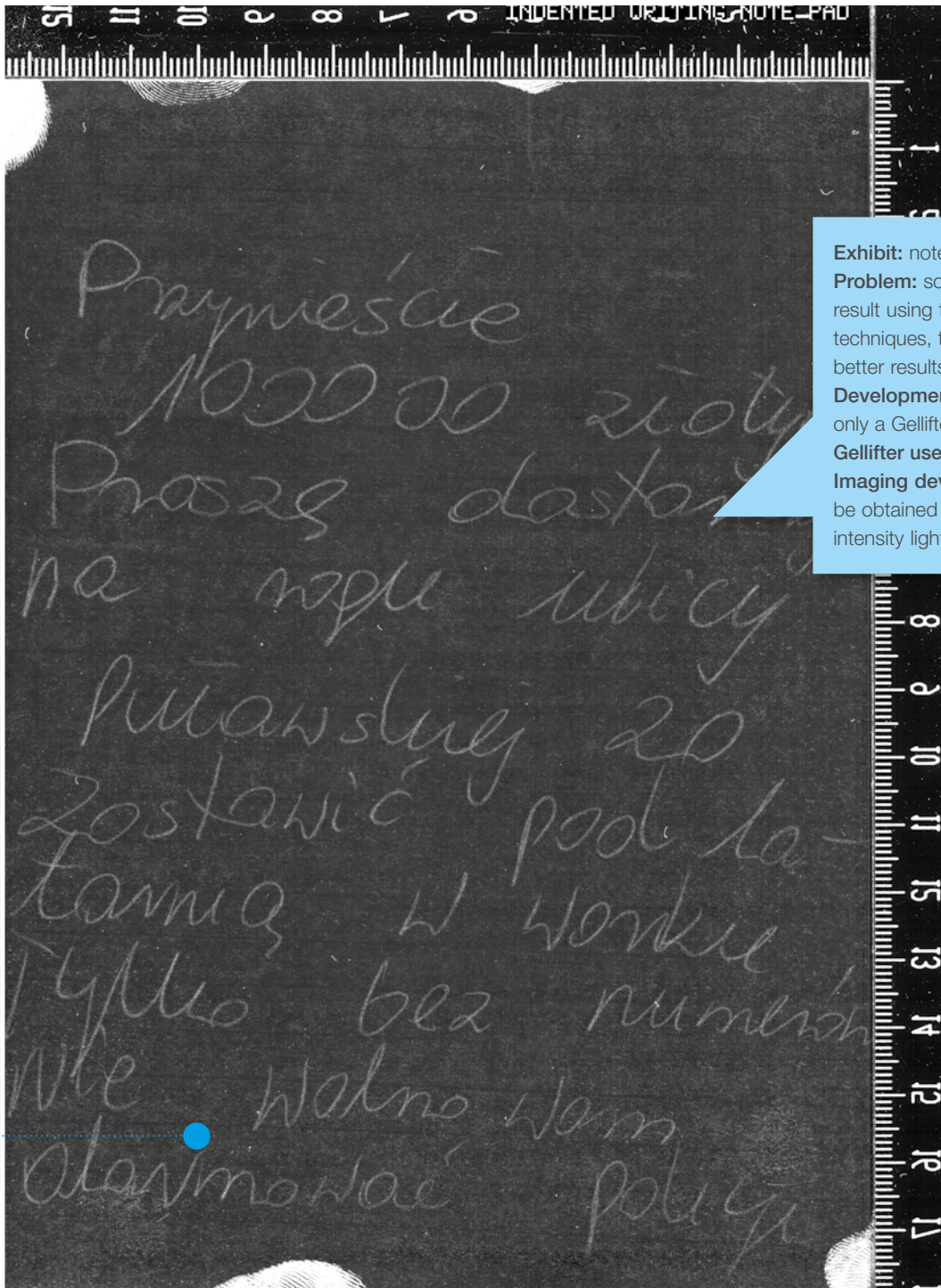
# Indented writing

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Indented writing on a note pad becomes visible using oblique illumination. Indented writing can be lifted from several pages underneath the page that was written on.







**Exhibit:** note pad containing indented writing  
**Problem:** some sorts of paper show a poor result using the common (electrostatic) techniques, the lifting technique generally gives better results on glossy and heavier paper.  
**Development technique:** no development, only a Gellifter is applied  
**Gellifter used:** black, 13 x 18 cm / 5.2 x 7.2"  
**Imaging device:** GLScan (results can also be obtained using a digital camera and high intensity light source).

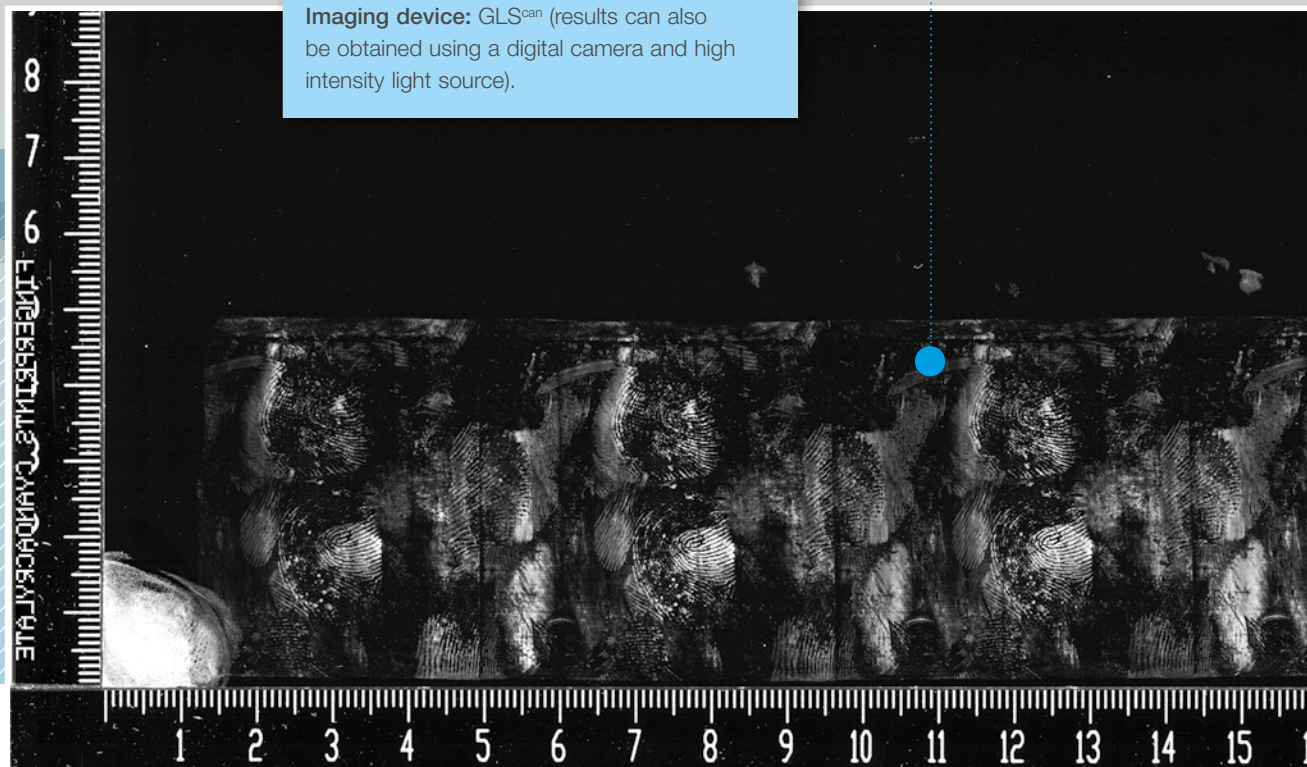


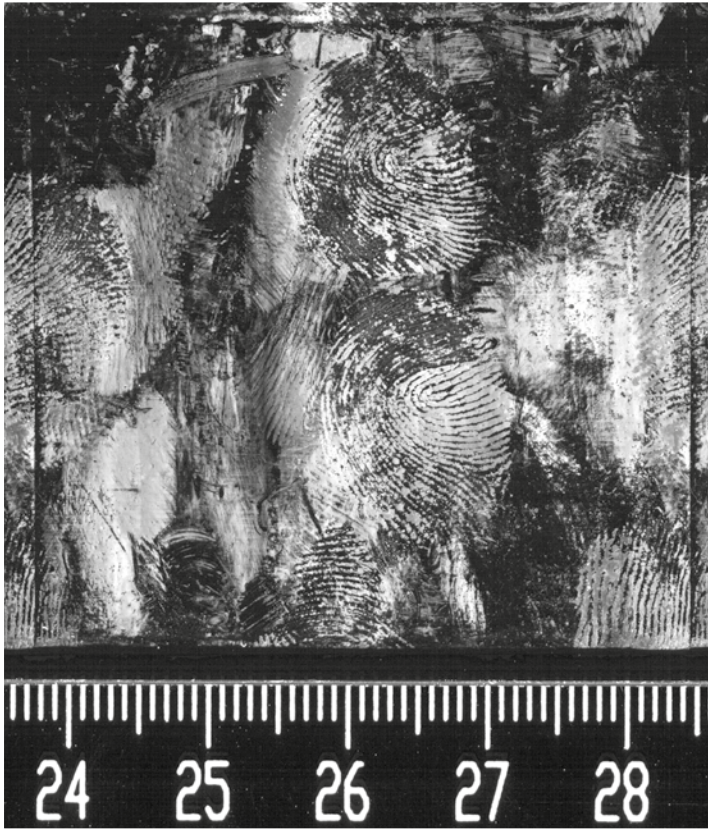
# Cyanoacrylate

Fingerprints on a battery are developed with cyanoacrylate.  
Without further treatment this battery is rolled over a black Gellifter.



**Exhibit:** battery containing fingerprints.  
**Problem:** poor contrast and curved surface.  
**Development technique:** cyanoacrylate fuming.  
**Gellifter used:** black, 13 x 36 cm / 5.2 x 14.4"  
**Imaging device:** GLS<sup>scan</sup> (results can also be obtained using a digital camera and high intensity light source).





**Advantages:** ■ fingerprints are now on flat surface and easy to photograph. ■ fingerprints contrast well against the deep black background. ■ any overdevelopment is removed bit by bit rolling the battery over the Gellifler. ■ no staining solutions are necessary to improve the contrast, this makes it possible to sample the exhibit for DNA after fingerprint development.

