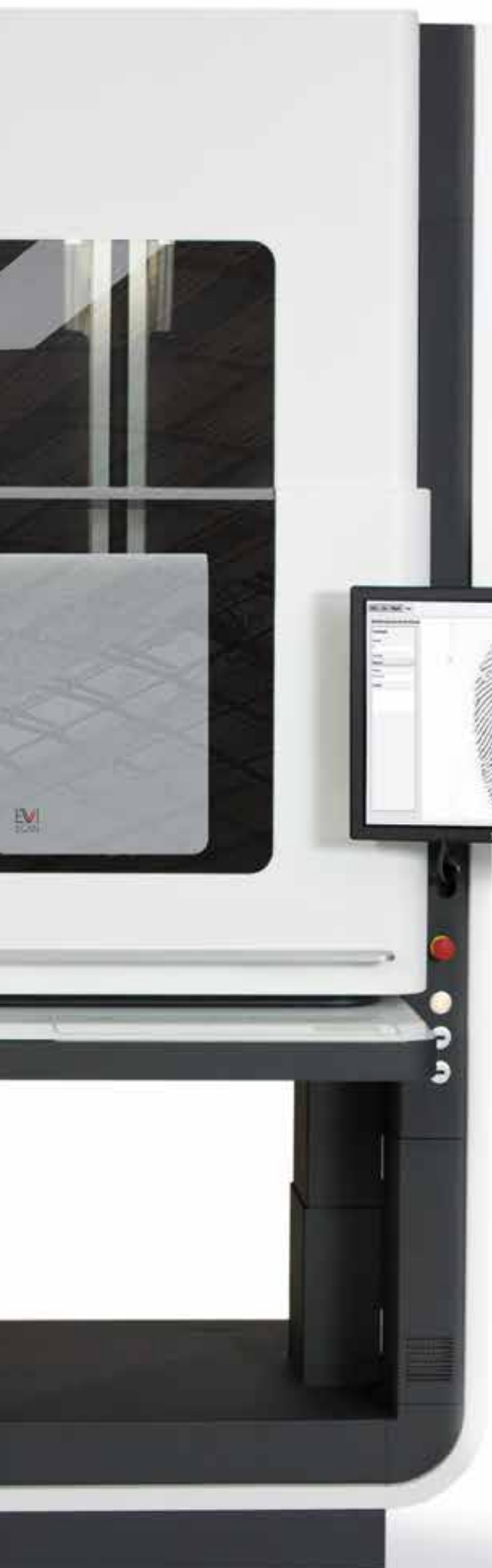




CONTACTLESS EVIDENCE DETECTION



NON-INVASIVE
NON-CONTAMINATIVE
IMMEDIATE RESULTS





AN INNOVATION FOR FORENSICS

Fingerprints have long been the most important means of identifying individuals, and they can be expected to retain their key role in criminal investigation regardless of how widespread and sophisticated DNA analysis becomes. Fingerprints still provide the strongest way of connecting specific persons with specific scenes.

Forensic investigators typically use a range of different techniques – including techniques relying on adhesives, chemicals and UV excitation – to detect, visualize and preserve latent fingerprints on surfaces. While such techniques can be highly effective, they require surfaces to be physically contacted in ways that ultimately can alter them. Altering of surfaces or prints, in turn, can hinder the use of new forensic technologies such as touch DNA and of evolving methods for determining the age and composition of fingerprints. Today's crime scene experts thus seek to analyze exhibits with no physical contact whatsoever, in order to preserve both exhibits and any latent prints in their original, unaltered condition, and to safeguard them for subsequent analysis.

THE OLD WAY

Latent prints on exhibits are acquired with the help of adhesives or chemicals – and are altered in the process.



THE CHALLENGE

The application of adhesive powders, chemicals or even UV light to an exhibit will alter the evidence. Furthermore, the lifting of a fingerprint from a surface is an irreversible, unrepeatable procedure that separates the fingerprint from its associated exhibit.

In addition, the conventional techniques for preparing fingerprints for automated identification systems (AFIS) are time-consuming. And due to the great variety of materials and surfaces crime investigators encounter, such techniques employ many different chemical agents, including several that are hazardous to health. Finally, such techniques must include painstaking preparation of documentation that will hold up against defense attorneys' challenges.

Now EVISCAN is supporting forensic professionals with a new approach to contactless acquisition of latent print evidence.

CONTACTLESS HIGH-TECH FOR FORENSICS

EVISCAN enables forensics experts around the world to acquire latent evidence without physical contact. It eliminates the need to process exhibits with adhesives, chemicals or harmful UV lights.

The EVISCAN system is a unique lab workstation that combines the latest detector technology with cutting-edge software for processing digital images. Now, forensics can detect, enhance and digitally preserve latent prints from most non-porous surfaces, including metals, plastics, glass, pottery and many more. Excellent results, ready for examination or AFIS-upload can now be achieved within minutes.

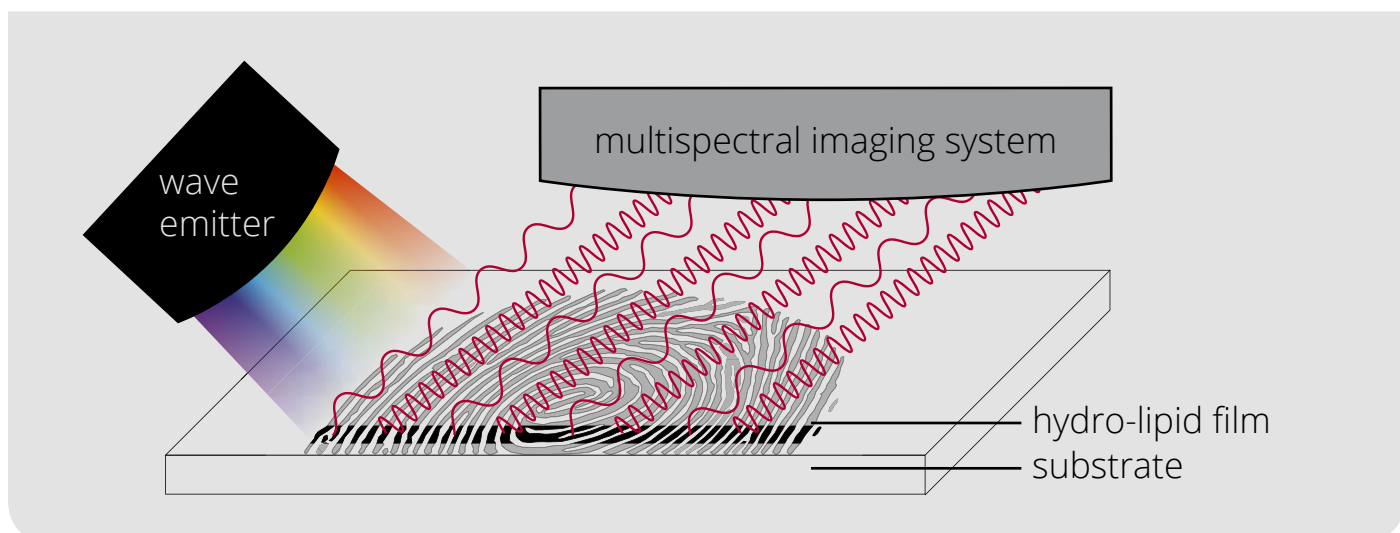
NON-INVASIVE AND NON-CONTAMINATIVE

EVISCAN processes exhibits and prints without any physical contact whatsoever. It does not affect, or cross-contaminate, exhibits and prints in any way. Evidence that is processed by EVISCAN remains available for all subsequent analyses, in its original condition and with its DNA material fully intact. With EVISCAN, therefore, forensic investigators can examine objects thoroughly and still retain all other analysis options, thereby improving their chances to achieve an identification.

EVISCAN provides integrated detection, enhancement and preservation functionalities within a powerful, cleanly designed and user-friendly workstation. In each case, it reduces total processing time from hours – or even days – to just minutes. And because its processes are fully optical, they do not endanger the health of persons who process exhibits or are subsequently involved with them.

THE EVISCAN WAY

Latent prints on exhibits are detected and visualized instantly with contactless optical technology – and are not altered at all.



HOW THE SYSTEM WORKS



1 DETECT

With EVISCAN, non-porous and semi-porous items can be examined without any prior treatment. Simply place them on the height-adjustable working table, which is made of easy-to-clean, toughened glass, and take control of the scan head via mouse or keyboard. Some plane surfaces can even be inspected automatically, with EVISCAN auto-detecting fingerprint patterns and suggesting areas of interest to the operator. For very complex objects, xyz-positioning, excitation intensity and detector settings can be controlled manually, to optimize results. Even large and heavy objects such as fire extinguishers can easily be processed within minutes.





2 ENHANCE

Enhance detected prints on the spot, with cutting-edge image processing software, and with full control over parameters such as brightness, contrast and inversion. EVISCAN enhances prints with fingerprint-specific, state-of-the-art enhancement algorithms that boost ridge detail and suppress background interference. Other tools support digital-print isolation and preparation for later expert examination or for AFIS upload. And EVISCAN facilitates airtight documentation: every single operation to an original image is automatically saved to an encrypted log and can be reversed, even years later.

3 PRESERVE

Add a scale to a fingerprint automatically. Capture overview photos showing the position and orientation of traces. Save all traces as high-quality digital images with resolutions of up to 1,000 ppi, in a variety of different formats (TIFF, BMP, and others). Save reports, with case information, overview and output images, logs and even raw data, in secure project files. Forward results to examiners and AFIS workstations via networks, USB media or CDs – and complete identifications in record time. Remember: all steps preserve both exhibits and traces in their original condition, leaving them available for any further analysis. DNA material, and any other important evidence, remains entirely unaffected.

EXCELLENT RESULTS

EVISCAN acquires high-quality digital images of prints from a broad variety of relevant non-porous and semi-porous surfaces. Metals, pottery, glass or plastics can be processed even when they are wet, sticky or dirty. EVISCAN also can easily suppress interfering background patterns, hence isolating the print information from the noise. Resulting images can be calibrated, and exported in common lossless image formats such as TIFF or BMP, with resolutions of 1,000 ppi.



BOTTLE

Polyethylene
200 x 80 x 80 mm
Results within 9 minutes

METAL CUBE

Aluminum
50 x 50 x 50 mm
Results within 7 minutes

CD

Polycarbonate with metal layer
120 mm in diameter
Results within 3 minutes



"The presented fingerprint (on a computer mouse) looks good and fully qualifies for individualization according to identification guidelines. The print clearly shows the general direction of ridge flow, the deltas and a variety of minutiae."

(German BKA, Crime Scene Unit)



COMPUTER MOUSE

Convex plastic

60 x 120 mm

Results within 6 minutes



ADHESIVE TAPE

Polypropylene, sticky side

1,000 x 60 mm

Results within 6 minutes



SOOTED GLASS

Glass, heavily covered with soot

76 x 26 mm

Results within 2 minutes

SPECIAL CASE: ARSON

EVISCAN truly helps investigators see the world through different eyes. In arson cases, EVISCAN can even reveal latents invisible to the human eye and acquire them through unremoved layers of soot.



TOP FEATURES AT A GLANCE

1 DETECT

- Detects latent prints optically, with no contact required
- Eliminates the need for any pre-treatment of evidence
- Does not contaminate evidence

2 ENHANCE

- Supports brightness, contrast and inversion optimization
- Uses cutting-edge image-enhancement algorithms
- Suppresses interfering backgrounds

3 PRESERVE

- Yields excellent-quality digital results in minutes
- Simplifies transfer to AFIS or identification experts
- Includes documentation and report generation

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