BlindSite®

BlindSite is a handheld, portable, non-contact-non-destructive (NCND) and easy to use forensic platform technology for crime scene search and evidence recovery. Whether in **scene search mode** or **evidence capture mode**, no prior chemical or physical treatments are needed and no specialist scene setup is required, being able to be used in bright sunlight or completely dark conditions. BlindSite can be used with minimal-to-no light or noise emission and is NCND, making it perfect for **covert evidence recovery** without leaving a trace. BlindSite is a small, light-weight, handheld technology that can be used on its own, or as a complementary technique. It can also be used directly at the scene, or in the laboratory. It also helps preserve evidence and enables a practitioner to attempt additional analyses on a single piece of evidence, for example fingermark recovery and DNA analysis.

BlindSite can locate, identify and capture the following evidence types:

- Latent fingermarks including from post-blast IED fragments and debris
- Bodily Fluids – blood, semen, saliva, urine
- Illicit drugs, explosives and post-blast explosive residues

Latent Fingermark Evidence

BlindSite can recover identification quality fingermarks from hundreds of different porous and non-porous surfaces, including: metals, plastics, glass, electronics, adhesive tapes (both sides), furniture (including painted or varnished), walls, doors, door handles, crockery, papers, foliage, and many more common surfaces.

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Validation Testing

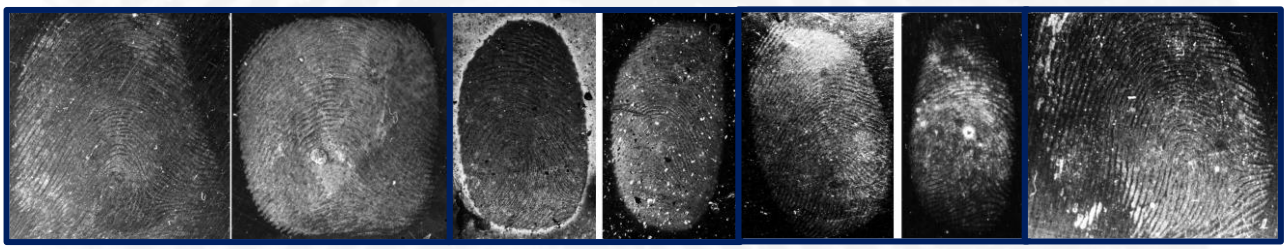
Smytec have performed validation & verification testing against common fingerprint retrieval powders, with assistance from fingerprint examiners from Europe, USA, Canada, Australia and New Zealand. BlindSite greatly outperforms fingerprint powders:

Average Number of Minutiae		Average CAST Score		Suitable for Comparison & Identification	
BlindSite	Powders	BlindSite	Powders	BlindSite	Powders
30	20	3.2	2.6	97%	83%

To corroborate these results, Smytec performed an AFIS-validation study which found that 96% of fingermarks recovered with BlindSite provided a "match"; a similar success rate to the fingerprint examiner validation.

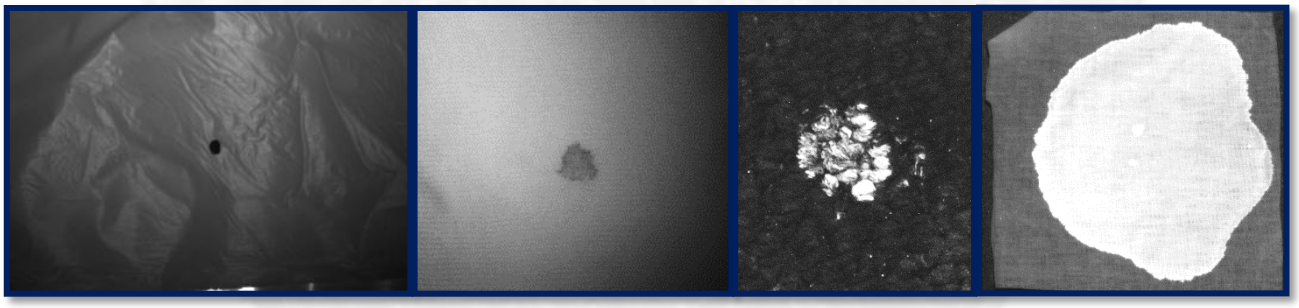
Fingermarks from Post-Blast IED Fragments & Debris

Fingermarks are believed to be destroyed during IED bomb blasts. **Current fingerprint techniques have a very poor success rate of 2%** for post-blast fingermark recovery. **BlindSite has a success rate of 65%** in successfully recovering fingermarks from metal components of post-blast fragments and debris, including directly from the shattered IED components. Additionally, **44% of recovered post-blast fingermarks using BlindSite are suitable quality for identification**. Touch DNA can also be recovered as fingermarks are preserved using BlindSite. Through the remote deployment on an EOD robot, or by an EOD officer, BlindSite can be used to recover fingermarks from suspect IEDs before they are rendered safe.



Bodily Fluids

BlindSite can be used as a NCND method for search and identification of bodily fluids, including blood, semen, saliva and urine. No prior chemical or physical treatments are required. There is no need to darken conditions as BlindSite can be used in bright sun light or in the dark. Bodily fluids can be detected on hundreds of different surfaces, most notably high contrast detection of blood on black bin bags, as shown below, and aged blood spots.



blood on a bin bag | aged blood on red tshirt | semen on cream carpet | semen on white tshirt

Touch DNA

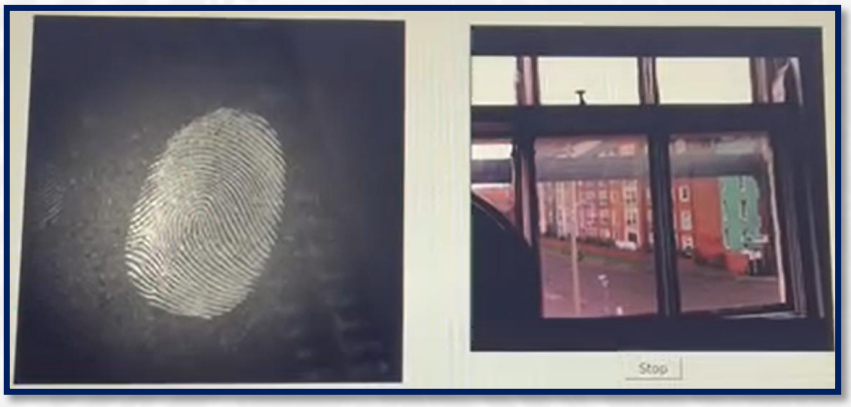
BlindSite can be used to locate, target and identify Touch DNA at the scene on a huge variety of surfaces, enabling faster and higher quality recovery of DNA material. This has major benefits for productivity and reduces the need for speculative techniques to be applied. No prior chemical or physical treatments are required.

Metadata and Case Management

Metadata is continuously logged, including **GPS time, date and position data**. Every second of use recorded, logged and digitally stored to ensure the highest integrity of evidence. All metadata, files and user functions can be easily & seamlessly transferred into various Case Management Systems.

Live Scene Recording Camera and 3D Reconstruction

A live video camera (like a dashcam or bodycam concept) continuously records the scene while BlindSite is being used, providing easy reference. A proprietary sensor provides a 3D reconstruction of the scene. Captured evidence can be overlayed into an image still from the video recording and the 3D scene reconstruction for easy interpretation and additional context.



Left: Latent Fingermark on window. Right: Live video feed from live video camera recording scene

AI for Blood Pattern Analysis

In combination with the live scene recording and 3D reconstruction, captured blood evidence can be analysed using our integrated proprietary BPA AI tool for immediately locating the origin of blood spatter at the scene, enabling the user to target that area of the scene.

In-Built AFIS

BlindSite hosts its own in-built AFIS system. Any fingermarks recovered using BlindSite can immediately be run through the in-built AFIS. This provides the user with a quality score of that fingermark, highlighting the number of minutiae and assessing whether the fingermark is of high enough quality for comparison. We offer an option to host a standalone exemplar database directly on BlindSite, enabling immediate comparison to a database even when used without connectivity. Alternatively, we offer direct connectivity to national AFIS databases for immediate identification of a perpetrator.

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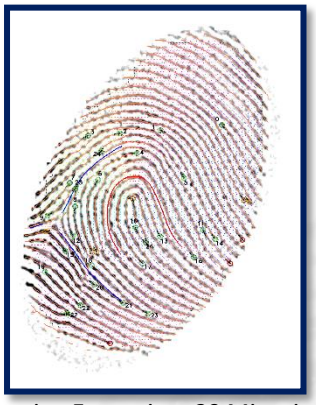
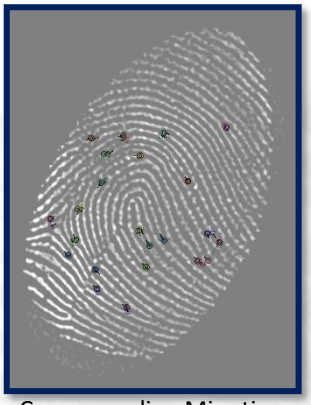
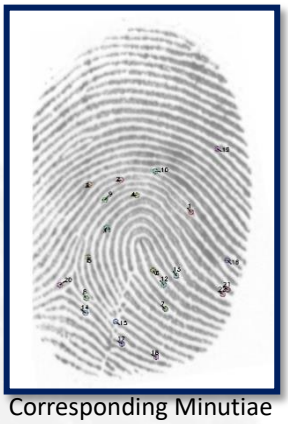


Minutiae Extraction: 29 Minutiae



Corresponding Minutiae overlayed on recovered fingermark: 22 minutiae



Corresponding Minutiae overlayed on exemplar fingermark: 22 minutiae

Connectivity and Data Transfer

BlindSite hosts physical data transfer interfaces, including USB and HDMI, as well as the option for wireless transfer via Wi-Fi and Bluetooth. For in-the-field connectivity, we provide an option for cellular connectivity as well. Remote operation is also possible to be integrated. Please contact us for more details on the various options available.

Ease of Operation

BlindSite can be used as a handheld unit or be attached to a tripod. Universal mounting points enable the user to attach a variety of handles, neck strap, tripods or gimbals to suit their needs. Please contact us to find out more about user comfort options.

Enquiries

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