



SCENE OF CRIME INVESTIGATION EQUIPMENT AND MATERIALS

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TRANSFARM is Polish company operating on the Polish market uninterruptedly since January 1990. TRANSFARM's operations consist of providing forensic materials, equipment and device supplies to specialised State services protecting internal order and security. TRANSFARM supplies crime scene and forensic lab materials, equipment and devices to the Police Headquarters in Warsaw, Regional Police Headquarters, the Polish Border Guard, Military Police and other uniformed services in Poland and abroad. The Company also cooperates with universities, specialist training establishments other stakeholders interested in the TRANSFARM offer. The supplies address the needs of biology, biochemistry, chemical, fingerprinting, mechanoscopy and other laboratories, offering a wide range of products (incl. powders and lifting tapes, instruments, inspection kits, forensic light sources, photography supplies and equipment, alcohol and drugs tests and many others). The specially trained team at TRANSFARM also provides trainings in issues relating to our activity at conferences, seminars, symposia and other forms of exchange of knowledge and experience. We offer our Clients:

THE HIGHEST QUALITY OFFERED PRODUCTS of renowned US and European companies. The quality of the offered products has been confirmed over many years of use in forensic technique structures around the world.

RELIABILITY OF SUPPLIES are always 100% compliant with the submitted orders and unflinchingly meet the high expectations of our Customers. We only stock the highest quality products, materials and devices and all our orders are delivered on time according to concluded contracts.

PROFESSIONAL TECHNICAL CONSULTING SERVICES in the selection of the most optimal products for the specific task and customer requirement are provided by the highly specialised TRANSFARM team with many years of experience in the use of forensic technique products.

CUSTOMER SERVICES are provided by a professional team of highly trained TRANSFARM staff. The TRANSFARM team has the support of experienced police specialists in the scope of crime scene investigations and many other experts in the field.

ONGOING QUALITY CONTROL OF OFFERED PRODUCTS through the performance of regular customer satisfaction surveys with the provided products. The survey findings are used to ensure that the only the best products are included in our offer, withdrawing sub-standard products if necessary, providing an efficient tool to suitably profile our trading policies.

ONGOING ACCESS TO THE LATEST NEWS AND ADVANCES IN THE FORENSIC FIELD FOR CLIENTS thanks to our Team following all the latest developments and advances in the field around the globe. All products are thoroughly tested by TRANSFARM experts and our professional forensic partners prior to being made available and recommended to our Clients.

Transfarm's detailed offer includes:

I. FINGERPRINTING PRODUCTS

TRANSFARM also has a wide range of materials used for revealing and securing fingerprint traces in its offer. They include fingerprint powders and tapes, fingerprint brushes, and chemical treatments revealing fingerprints and fingerprint development chambers stabilising conditions and accelerating fingerprint development processes.

Fingerprint powders

Fingerprint powders are most commonly used to detect fingerprints. The type of powder that should be used varies depending on the scene (type of bedding, colour, age of fingerprint). This is why the TRANSFARM offer includes over 40 types of fingerprint powders, divided into the following groups:

- **non-magnetic fingerprint powders** available in black, grey, white, silver, red, gold, copper;



non-magnetic fingerprint powders

- **bichromatic non-magnetic fingerprint powder** (fingerprint left on dark bedding is light in colour, fingerprint left on a light bedding is dark in colour) available in silver/black, silver/grey, silver/red;



bichromatic non-magnetic fingerprint powders

- **non-magnetic UV powders** available in fluorescent red, yellow, orange, green, pink and silver/red;



non-magnetic UV fingerprint powders

- **magnetic powders** available in black, grey, white, silver and red;



magnetic fingerprint powders

- **bichromatic magnetic fingerprint powder** (fingerprint left on dark bedding is light in colour, fingerprint left on a light bedding is dark in colour) available in silver/black, silver/grey, silver/red;



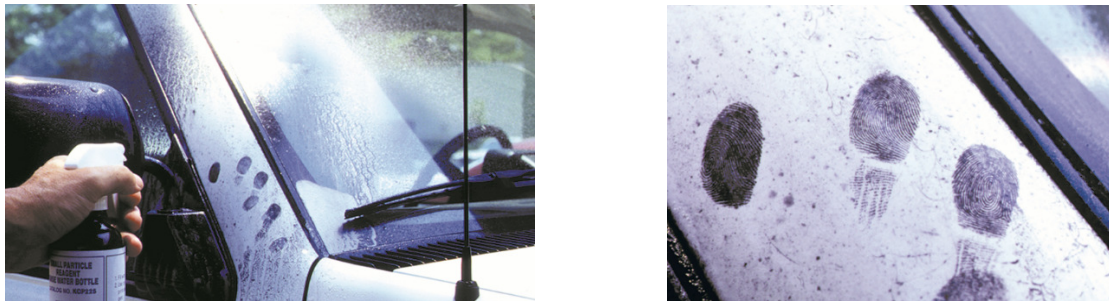
bichromatic magnetic fingerprint powders

- **magnetic UV powders** available in fluorescent red, yellow, orange and green;



UV magnetic fingerprint powders

- **SPR aqueous solution** available in white, black and UV, for latent fingerprint development on wet bedding;

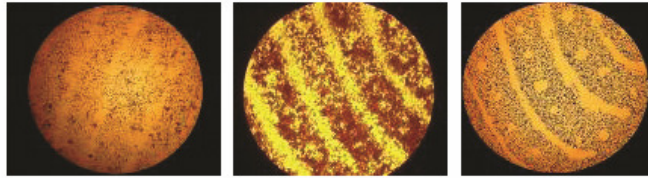


SPR aqueous solution

- **spray powders** available in black, silver or gold, applied under pressure:
 - non-magnetic nanopowder available in black and white,
 - magnetic nanopowder available in black,
 - non-magnetic nanopowder available in black and white;



*Commercial Aluminium Powder
SupraNano™ Black Magnetic Powder*



*Commercial Powder
Supranano™ Powder
SupraNano™ Suspension*

- **UV SPR NANOPOWDER aqueous solution** available in fluorescent red, yellow and green, for latent fingerprint developing on wet bedding.

Fingerprint brushes

The selection of fingerprint brushes is made based on the type of fingerprint powder and surface area where the fingerprints are to be detected. The type of powder (magnetic or non-magnetic) determines which group of fingerprint brushes will be used, i.e. magnetic brushes used in the application of magnetic brushes and brushes for applying non-magnetic powders made of different types of animal hair, down, fibreglass fibres, carbon fibres, or synthetic fibres.

- **applicators for magnetic powder** round, in a variety of diameters, hair fibre length and amount of powder picked up by them. There are also flat brushes used to apply magnetic powders on large surface areas;



applicators for magnetic powder - various types

- **brushes for non-magnetic powders** constitute a diverse group of products. They differ in shape (flat or round), size and brush end material.



round brushes made of squirrel or beaver hair



round brushes made of marabou feathers, fibreglass, carbon fibres and synthetic fibres

Fingerprint lifting tapes and lifters

Fingerprints developed using powders can easily be damaged or destroyed. This is why fingerprints have to be protected against damage as quickly as possible. This can be done using a wide variety of fingerprint lifting tapes and lifters that replicate the developed fingerprints by transferring the powder used in developing them to a tape or lifter. Fingerprint lifting tapes and lifters have one surface coated with glue or gelatin and are divided into gelatin coated or adhesive coated. Regardless of these two types of lifting tapes/lifters, they also have to come in contrasting colours with the powder used to develop the fingerprint trace. Hence, they also come in different colours, ranging from black, white and transparent. The TRANSFARM offer includes all the different types of fingerprint lifting tapes and lifters. They include:

- **double-layer gelatin lifters** (composed of a gelatin carrier layer and a protective cover sheet), available in black, white and transparent, in the following dimensions: 5x5 cm / 7.5x10 cm / 10x10 cm / 9x13 cm / 13x18 cm;
- **double-layer adhesive lifters** (composed of an adhesive carrier layer and a protective cover sheet), available in black, white and transparent, in the following dimensions: 3.8x5 cm / 5x5 cm / 5x10 cm / 10x10 cm / 13x18 cm;

- **single-layer transparent adhesive lifting tape** available on a roll width of 3.8 cm / 5 cm / 7.5 cm / 10 cm, 9-10 m long. These tapes do not have a protective cover sheet; therefore, tapes containing fingerprints are placed on special pads that have a contrasting colour to the colour of the fingerprint powder;
- **single-layer, flexible, lifting tape** available on a roll width 3.8 cm / 5 cm / 6 cm, 9-10 m long. These tapes do not have a protective cover sheet; therefore, tapes containing fingerprints are placed on special pads that have a contrasting colour to the colour of the fingerprint powder.

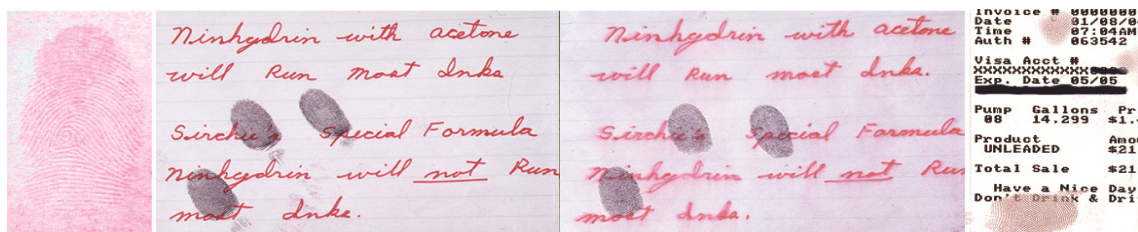


various fingerprint lifters

Chemical reagents used to develop fingerprint traces

The development of fingerprints with fingerprint powders is one of the more traditional methods that are used. However, the use of fingerprint powders requires a relatively large amount of sweat, fat and oil marks to be left behind. Also, the marks have to be relatively new otherwise the use of fingerprint powders will not be effective. The development of forensic science has led to the use of chemical reagents to develop fingerprints. These methods turned out to be more effective even with unsuccessful fingerprint powder outcomes. This is because chemical reagents react with specific components in the fingerprint forming substance like: α -amino acids, proteins, chloride ions or vitamins. The use of chemical reagents also helps in developing fingerprints left on a bedding with organic and inorganic fats, traces on adhesive tape, traces containing blood molecules and many others. The TRANSFARM offer includes ready-made fingerprint developing solutions as well as chemical compounds for individual preparation of working solutions. TRANSFARM offers the following chemical reagents for fingerprint development:

- **Ninhydrin** (1, 2, 3-Triketohydrindene, 2,2-dihydroxy-1H- indene) - working solution 500 ml, spray 473 ml or powder 25 g / 100 g / or 500 g;



Ninhydrin - effect and application

- **Zinc Chloride (ZnCl₂)** - working solution 500 ml.;
- **Diazafluorenone - DFO** (1,8-Diazafluoren-9-one) - working solution spray 100 ml. or powder 1 g / 5 g / 50 g;



DFO – application

- **1,2 IND** (1,2 - indanedione, 1,2-Dioxindan) - powder 1 g / 10 g;



1,2 IND – application

- **Hungarian Red** - working solution 500 ml.;



Hungarian Red – application

- **Amido Black** (Black acid 1, Amido Black 10B) - working solution 500 ml. or powder 25 g / 100 g;



Amido Black – application

- **DAB** (3,3'-diaminobenzidine tetrahydrochloride) - powder 10 g;
- **5-Sulfosalicylic acid** - working solution 500 ml.;
- **LCV** (Leuco Crystal Violet, 4',4',4"-methyldiye-tris) - powder 10 g;



latent footprint before and after application of LCV

- **Wet Powder** - working solution available in black and white - pack 250 ml.;
- **Photo Flo 200** - solvent Sticky Side Powder 250 ml.;
- **Tape Glo** - working solution 500 ml.;
- **DMAC** (4-Dimethylacetamide) Cinnamaldehyde, 4-(Dimethylamino)cinnamaldehyde) – 5 g;
- **RTX** (Ruthenium Tetroxide, RuO₄) - 5 g;
- **Sudan Black** (Fat Black HB, Solvent Black 3) - working solution 500 ml. or powder 25 g;

- **PD** (PhD, Physical Developer) - set 1.000 ml / 3.800 ml;
- **Crystal Violet** (Hexamethylpararosaniline chloride) - powder 25 g / 100 g;

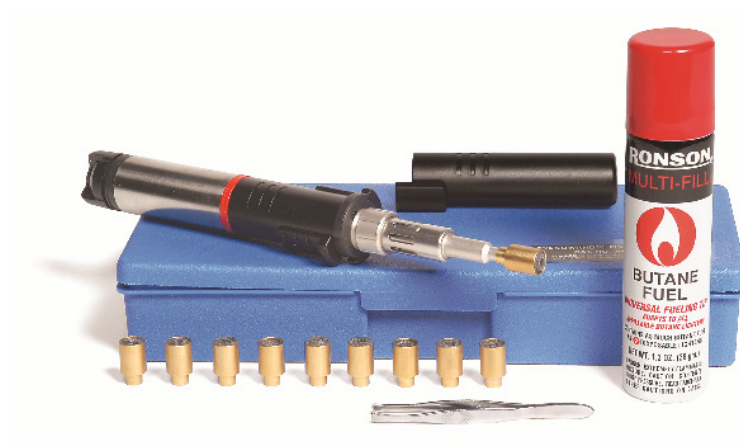


Crystal Violet - application

- **Cyanoacrylate** - 20 g / 500 g, cartridge;

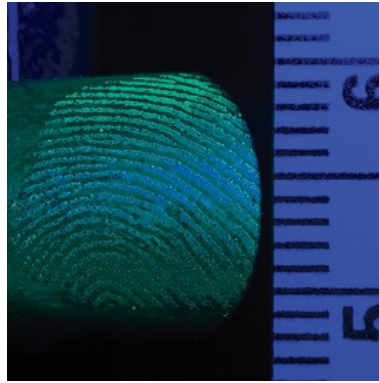


Cyanoacrylate – application



Cyanoacrylate cartridge standard set

- **Ardrox P133** - working solution for dyeing cyanoacrylates 500 ml. - concentrate 946 ml.;



Ardrox P133 - application

- **Safranine O** - working solution for dyeing cyanoacrylates 100 ml. / 500 ml. and powder 25 g;



Safranine O - application

- **TEC** (Thenoyl Europium Chelate) - powder for dyeing cyanoacrylates 500 ml. or 5 g;
- **Basic Yellow 40** (Penacryl Brilliant Flavine 10GFF) - working solution for dyeing cyanoacrylates 100 ml. / 500 ml. or powder 25 g;
- **Liqui-drox** - working solution for dyeing cyanoacrylates 500 ml.;
- **Basic Red 14** - working solution for dyeing cyanoacrylates 500 ml., powder 10 g / 25 g;
- **Basic Red 28** - powder for dyeing cyanoacrylates 25 g;
- **Rhodamine 6G** - working solution for dyeing cyanoacrylates 500 ml., powder 25 g;
- **Acid yellow 7** - working solution for dyeing cyanoacrylates 500 ml., powder 25 g / 1.000 g;
- **RAM** - working solution for dyeing cyanoacrylates 500 ml.;
- **RAY** - working solution for dyeing cyanoacrylates 500 ml.

Specialist fingerprint development chambers and workstations

The described methods to develop fingerprints (powder and chemical methods) also require the use of suitable chambers and workstations in certain circumstances that ensure fingerprint development work safety and set, stable work parameters are maintained. Every forensic laboratory should be equipped with the chambers and workstations specified below. For this reason, TRANSFARM also offers the following:

- **workstation for processing with powders** - these workstations are available in varying dimensions depending on the requirements (W x D x H) 61 x 61 x 45 cm / 91 x 61 x 45 cm / 122 x 61 x 45 cm / 81 x 63 x 76 cm / 122 x 63 x 76 cm / 81 x 61 x 76 cm / 122 x 61 x 76 cm;
- **workstation for processing with chemical compounds** in order to develop fingerprints - these workstations are fitted with a set of internal filters that prevent toxic substances from escaping. These workstations vary in dimensions depending on the requirements: (W x D x H) 81 x 61 x 101 cm / 122 x 61 x 76 cm / 91 x 76 x 142 cm / 122 x 76 x 142 cm / 152 x 76 x 142 cm / 183 x 76 x 142 cm;
- **identification workstation providing set, stable development conditions** (temperature and humidity) - these workstations are vital when developing fingerprints using Ninhydrin, DFO, as well as 1,2-indanedione; these workstations vary in dimensions depending on the requirements: (W x D x H) 66 x 40 x 33 cm / 66 x 66 x 40 cm;
- **cianoacrylate fuming chamber** ensuring optimal conditions for fingerprint development (temperature and humidity). The fuming chambers have been fitted with suitable internal filters for maximum work safety. These workstations vary in dimensions depending on the requirements: (W x D x H) 61 x 46 x 81 cm / 76 x 76 x 137 cm / 76 x 76 x 213 cm / 122 x 76 x 137 cm / 122 x 76 x 213 cm / 152 x 76 x 213 cm / 183 x 76 x 213 cm;
- **material evidence drying cabinets** comprising of a group of cabinets of various dimensions depending on the requirements: (W x D x H) 61 x 76 x 58 cm / 76 x 71 x 122 cm / 76 x 71 x 213 cm / 91 x 71 x 213 cm / 122 x 71 x 213 cm / 152 x 71 x 213 cm / 183 x 71 x 213 cm / 245 x 71 x 213 cm.

All the chambers listed above have been fitted with appropriate filters to ensure maximum work safety (pre-filter, HEPA filters and carbon filters). The ductless filtration system requires no connection to an outside exhaust.

II. MATERIALS FOR TAKING FINGERPRINTS

Fingerprint cards have to be prepared to conduct identification and comparative studies of developed and secured fingerprints. TRANSFARM offers a full range of materials and equipment for taking fingerprints from live persons and deceased individuals.

Fingerprint Stations

Fingerprint stations are a basic piece of equipment ensuring high quality fingerprints each time. Sturdy fingerprint stations guarantee impeccable fingerprint card results. The stations are equipped in all the materials and equipment necessary to apply the ink to the palms and fingers and record the prints on a fingerprint card. Fingerprint stations located at police stations require the person to be fingerprinted to be taken to the police station. When there are difficulties in taking the person to be fingerprinted to a police station (e.g. hospitalisation, arrest, or being far from a police station), a portable fingerprint station can be used. Portable fingerprint stations can be used in any location and set up on or mounted to various surfaces. Portable fingerprint stations come with their own carrying cases. The stations enable correct fingerprint cards to be taken at all times.

Materials for fingerprint taking

- **round ink pad for recording fingerprints and palm prints using fingerprint ink** diameter 40 mm / 50 mm / 64 mm;
- **rectangular ink pad for recording fingerprints and palm prints using fingerprint ink** dimensions: 4.5 x 5.5 cm / 5 x 10 cm / 5.5 x 12 cm / 6.5 x 9.5 cm / 7.3 x 13.7 cm / 7.5 x 15.9 cm / 14.6 x 10.05 cm;



fingerprint pads for recording finger and palm prints using fingerprint ink

- **fingerprint ink roller perpendicular to handle** width 7.6 cm x 4.4 cm diameter;
- **horizontal fingerprint ink rollers** width 7.6 cm x 4.5 cm diameter;
- **image transfer roller assembly, bearing-mounted;**



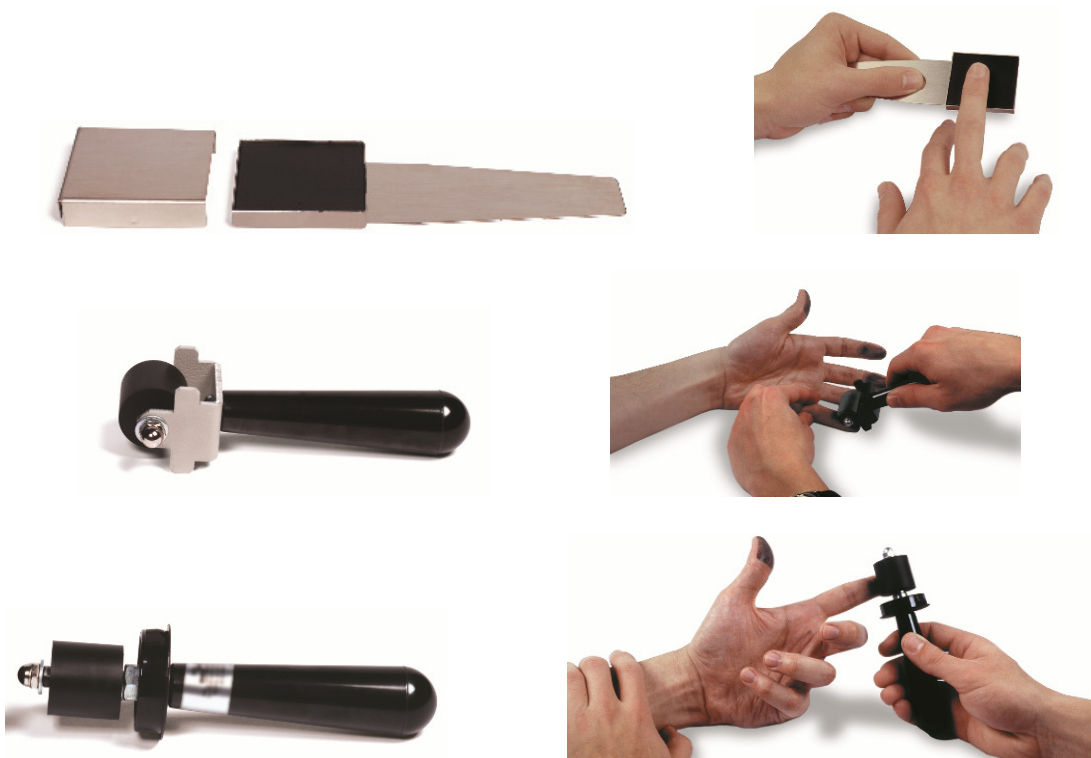
fingerprint ink rollers

- **rubber fingerprint ink rollers** width 5 cm x 3.8 cm diameter / width 7.5 cm x 3.8 cm diameter / width 10 cm x 3.8 cm diameter / barrel shaped width 6 cm;



rubber fingerprint ink rollers

- **postmortem printing devices** - rectangular ink pad / ink roller system perpendicular to handle / horizontal ink roller system / a.k.a. the “spoon”/ finger straightener kit;



postmortem printing devices

- **cleaning solutions for removing ink from devices, hands and fingertips** in the form of disposable towelettes soaked in the solution, in bottles of 250 ml. / 500 ml., 946 ml. / 3.780 ml.

III. DEVICES FOR LOCATING AND DETECTING FINGERPRINTS

Devices used to locate and detect fingerprints offered by TRANSFARM are unique worldwide. The advantage of these devices is that they can locate fingerprints on a given bedding and record them without having to develop them using any other methods. The kit on offer contains an opto-electronic device and a UV light source. These two elements are essential to locate and detect fingerprints that are visible to the operator. To facilitate the search for fingerprints the kits contain auxiliary elements like tripods, stabilisers, photo scales, camera adapters and many others.

The detection of fingerprints with the use of the device described above takes place in two stages:

Stage one involves observation of bedding in terms of identifying features suggesting presence of latent fingerprints. Fingerprints themselves are not visible at this stage, only spots can be seen which, due to their characteristic shape, may indicate that fingerprints have been left.



stage one - trace detection

Stage two observation of single trace. Fingerprints and their characteristic features (minutiae) can be seen through the lens of the device. The device design enables it to be mounted on a camera lens and for these fingerprints to be recorded. Once photographed, the fingerprint trace can be developed with the use of selected methods.



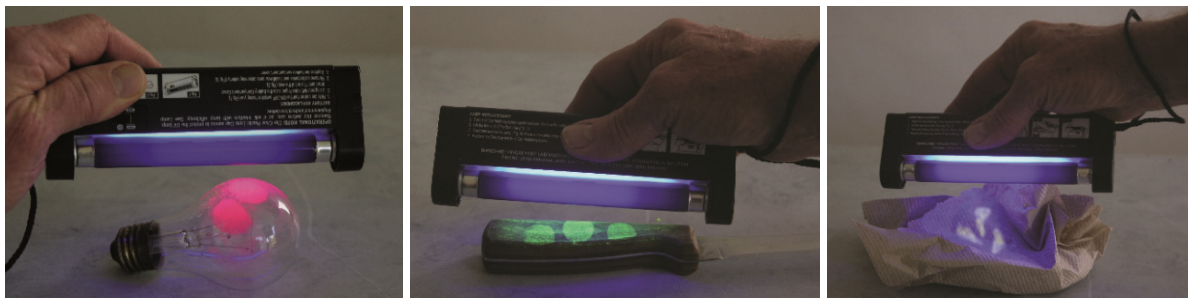
stage two - observation of single trace

The TRANSFARM offer also includes a range of fingerprinting kits that can be used in different configurations and have been adapted to the specific individual needs of the end customer.

IV. ALTERNATE LIGHT SOURCES

Modern forensics requires a range of different light sources to detect latent prints in white light. The use of special light sources requires chemical detection methods and cyanoacrylate markers in fingerprinting. Similarly, biological marks (urine, saliva and semen) require the use of a suitable light wavelength with a specific light beam. The TRANSFARM offer includes:

- **UV lamps emitting radiation at 254nm.** These lamps differ in terms of radiation power (4W / 6W / 13W / 30W bulbs) and power supply (battery powered/ mixed – battery and 230V adapter / 230V mains supply);
- **UV lamps emitting radiation at 365nm.** These lamps differ in terms of radiation power (4W / 6W / 13W / 19W / 30W bulbs) and power supply (battery powered/ mixed – battery and 230V adapter/ 230V mains supply);
- **UV lamps emitting radiation at 254nm and 365nm.** These lamps differ in terms of radiation power (4W / 6W bulbs) and power supply (battery powered/ mixed – battery and 230V mains supply);



UV lamps - application

- **set of 4W LED torches**, emitting radiation at 455 nm, 470 nm, 505 nm, 530 nm, 590 nm, 625 nm and white light. These torches are part of a kit that comes in its own portable case, which also contains photographic filters (yellow, green and orange), filter goggles (yellow, green and orange), photo scales and CR123 batteries;
- **Xenon lamp**, produces light at 365 nm, 415 nm, 450 nm, 470 nm, 505 nm, 530 nm and white light. 12V battery powered. The kit also includes photographic filters (yellow, green and orange), viewing goggles (yellow, green and orange), photo scales and a carrying case;

- **kits with UV torches** emitting radiation at 395 or 455 nm with a set of photographic filters and filter goggles.



UV torch - application

V. OPTICAL PRODUCTS

Optical equipment is a vital part of every forensic kit enabling magnification of the examined traces. The TRANSFARM offer has a wide range of magnifying glasses and other optical equipment and devices.

- **magnifying glasses with handle** diameter ranging from 63 to 144 mm and magnification from 3 to 1.75;
- **illuminated magnifiers;**
- **freestanding magnifiers;**



various magnifiers with handles, illuminated magnifiers and freestanding magnifiers

- forensic comparators.



comparator - examination station



comparator - application

VI. SECURING FOOT/FOOTWEAR MARKS AND TYRE TRACKS

Motion or movement tracks are always encountered at a crime scene. This is because the perpetrator(s) has to travel or walk to the crime scene, move around on the crime scene, and then leave the crime scene on foot or with the aid of a vehicle. The footwear or tyres leave behind two-dimensional surface imprints or deeper, three-dimensional impressions. These tracks can be transferred using a lifting technique to transfer the medium on which they were left using a gelatin lifter or a 3D replica can be created through executing a cast. Increasingly more efficient methods and materials are being used to secure footmarks and tyre tracks with the development of forensic science. TRANSFARM currently offers:

- **gelatin lifters** available in white, black and transparent, dimensions 13 x 38 cm and 15 x 38 cm.; these lifters allow the entire foot or footwear print to be secured;
- **plaster casting kits use improved plasters** to create casts of foot, footwear or tyre track 3D impressions; the plaster cast mix comes in airtight 0.5 kg and 1 kg packages or 6 kg and 25 kg containers;



plaster cast mixes - application

- **silicone casting kits** used to create casts of foot, footwear or tyre track 3D impressions. Silicone casts are made when plaster casts cannot be taken. Silicone cast mixes come in 0.5 kg / 1 kg / and 5 kg packages;
- **electrostatic dust print lifter** - this device is used to recover prints left in dust on furniture upholstery, carpets, etc.



electrostatic dust print lifter - application

VII. SECURING MICROTRACES, FIREARM AND EXPLOSIVE MARKINGS

The increase in crimes involving the use of firearms and explosives has caused a public enforcement action response of developing more efficient methods of detecting these markings and traces. Both the use of firearms and contact with explosives leave microtraces on human skin and clothing that must be suitably secured and submitted for laboratory tests. For this purpose, the TRANSFARM offer comprises:

- **evidence vacuum kits;**



specimen evidence vacuum kit



selected evidence vacuum kit elements

- **combustible gas detector testing for substances occurring at an arson scene:** Acetylene, Methyl Chloride, Iso-Butane, Hydro Sulfide, Methane, Acetone, Ethane, Methanol, Propane, Ammonia, Ethylene, Gasoline, Hydrogen, Chlorine, Methyl Ether, and Vinyl Chloride;



combustible gas detector at arson scenes

- **atomic absorption analysis test kit** for detection of firearm discharge residue on hand - the elements sampled from the skin are tested using Atomic Absorption Analysis;
- **set of preservation tubes for securing the firearm discharge residue recovered** from the hand - the collected residue is tested using SCANNING ELECTRON MICROSCOPY (SEM);



firearm discharge residue detection kit

- **gunpowder particle detection kit** for collecting gunpowder particles from clothing and skin; in the event of gunpowder particles being detected, a colour reaction takes place;



gunpowder detection contact papers - application

- **trace metal detection kit on hands;**



trace metal detection kit - application

- **explosives residue test kit.**

VIII. SPECIALIST KITS FOR PRESERVING AND PROTECTING CRIME SCENES

A suitable kit enabling performance of vital actions at the crime scene is essential to every crime scene investigator. TRANSFARM offers a wide range of specialist kits that are configured to the specific inspection needs at a given crime scene. The advantages of these kits include:

- the equipment and devices used are manufactured only by the leading companies in the forensic and crime scene investigation industry in the world;
- the case containing forensic equipment and devices is made only of materials that are proven resistant to the extreme work conditions of crime scene investigators;
- the Kits can be configured to meet the individual needs and requirements of specific clients.

The extensive TRANSFARM offer also includes:

- universal crime scene investigation kit;
- traceology kit;
- fingerprint kit;
- biological material trace kit;
- mechanoscopic trace kit;
- microtrace kit;
- scent trace kit;
- postmortem / death scene investigation kit;
- arson evidence trace kit;
- kit for preserving / protecting crime scenes.



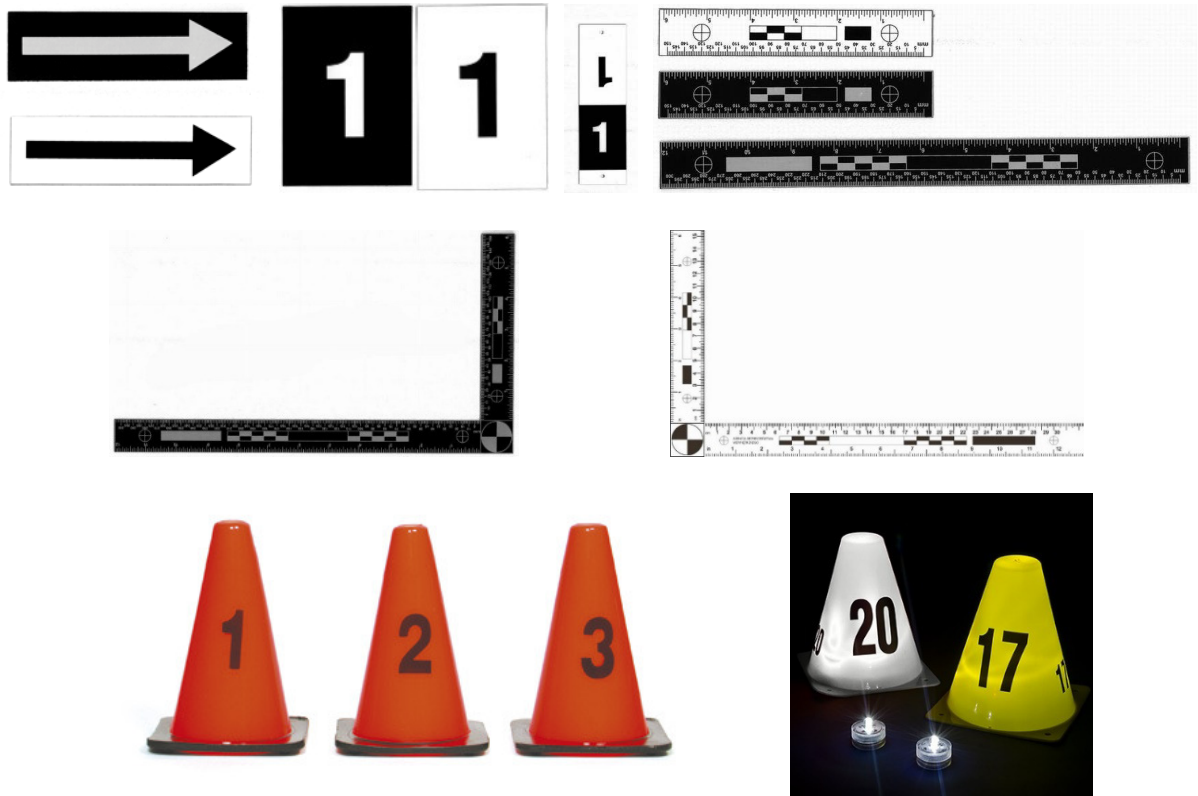
specimen TRANSFARM investigation kits

IX. IDENTIFICATION OF EVIDENCE AND TRACE EVIDENCE AT CRIME SCENE

Every piece of evidence and trace evidence at a crime scene must be clearly marked with a serial number, arrow and photo scales to record the precise location and its dimensions. Every crime scene investigator at a crime scene must be fully kitted out in arrows, numbers, ID markers and photo scales. TRANSFARM offers a wide range of arrows, numbers, ID markers, scales and locater cones used in precision forensic photography. These include:

- **double-sided plastic arrows** available in 3x9cm or other dimensions, according to customer requirements; arrows are black and are available on a white, black or yellow background;
- **magnetic arrows** available in 3 x 9 cm or other dimensions, according to customer requirements; arrows are black and are available on a white, black or yellow background;
- **arrows stickers** available in 3x9cm or other dimensions, according to customer requirements; arrows are black and are available on a white, black or yellow background;
- **double-sided plastic ID numbers** from 0-20, available in 2 x 3 cm / 3 x 4 cm / 7 x 10 cm or other dimensions, according to customer requirements; numbers are black and are available on a white or yellow background;
- **magnetic ID numbers** from 0-20, available in 2 x 3 cm / 3 x 4 cm / 7 x 10 cm or other dimensions, according to customer requirements; numbers are black and are available on a white, black or yellow background;
- **double-sided, standing plastic ID numbers** from 0-20, available in 7 x 10 cm or other dimensions, according to customer requirements; numbers are black and are available on a white or yellow background;
- **plastic, tetrahedron, illuminating ID numbers;**
- **self-adhesive ID numbers** from 0-20, available in 2 x 3 cm / 3 x 4 cm / 7 x 10 cm or other dimensions, according to customer requirements; numbers are black and are available on a white, black or yellow background;
- **double-sided photographic evidence scales** measuring 10 cm / 15 cm / 20 cm / 30 cm / 40 cm / 50 cm and 60 cm; these scales come in white, black or yellow; the offer also includes UV scales measuring 15 cm, lighting up in fluorescent green or orange;
- **magnetic photo evidence scales** measuring 10 cm / 15 cm / 20 cm / 30 cm / 40 cm / 50 cm and 60 cm; these scales come in white, black or yellow; the offer also includes UV scales measuring 15 cm, lighting up in fluorescent green or orange;

- **double-sided, angle photo evidence scales 15 x 30 cm.;** these scales come in white, black or yellow.



sample arrows, ID numbers, markers, scales, and cones

X. MUGSHOT PHOTOGRAPHY STATIONS

Mugshot photographs of arrested suspects are a routine procedural step. The guidelines for taking mugshot photographs date back to the 19th century and these photographs are still taken of suspects and criminals to this day. The problem was that due to the wide variety of cameras, lenses, different lighting, and photo set-ups of the person concerned that were used, these photos were not reproducible. The issue of the reproducibility of photographs is particularly significant when the photos are going to be used to for computer-assisted identification of a person. The TRANSFARM offer contains two types of mugshot photography stations that guarantee full reproducibility.



mugshot photography

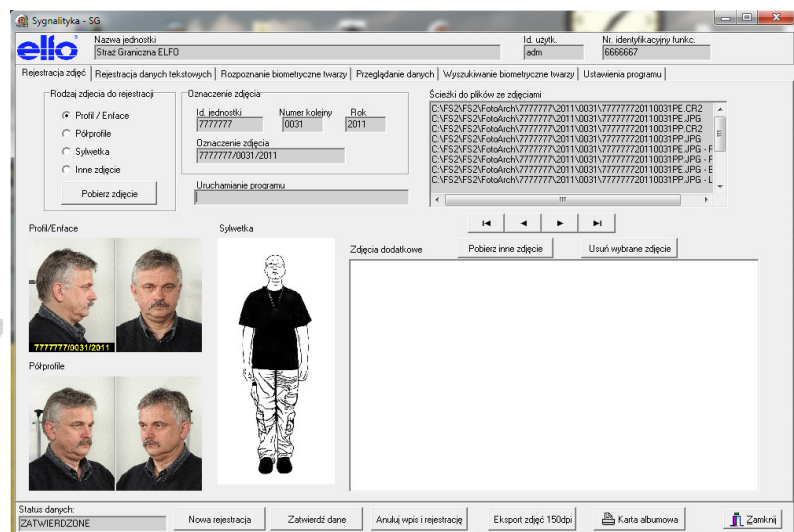
The first model is a fully automated photography station. All operations from correct positioning of the person to be photographed in relation to the axis of the lens, turning of the person in order to capture a profile shot, performance of the double-shot of both profiles and a front shot, and then verification of the correctness of the position of the head and possible execution of subsequent shots all takes place by computer from the operator's workstation. This is an important safety precaution preventing the photographer from coming into direct contact with the person being photographed. The photographs are recorded and saved on the computer hard disc along with all the accompanying data. The computer software also has a search option of all earlier photographs taken.

All the elements comprising the cabin, remote-controlled seat, photography and lighting system and computer with screen are linked by a common floor plate.



mugshot photography station

The second model possesses all the above mentioned station functions, the only difference being that the seat where the photographed person is sitting cannot be automatically raised by the operator. The proper adjustment of the lens axis in relation to the person being photographed is taken over by moving the camera in the “up&down” axis.



mugshot photography station and software

XI. “TOOLSCAN” SYSTEM FOR INVESTIGATING TOOLS AND TOOL MARKS

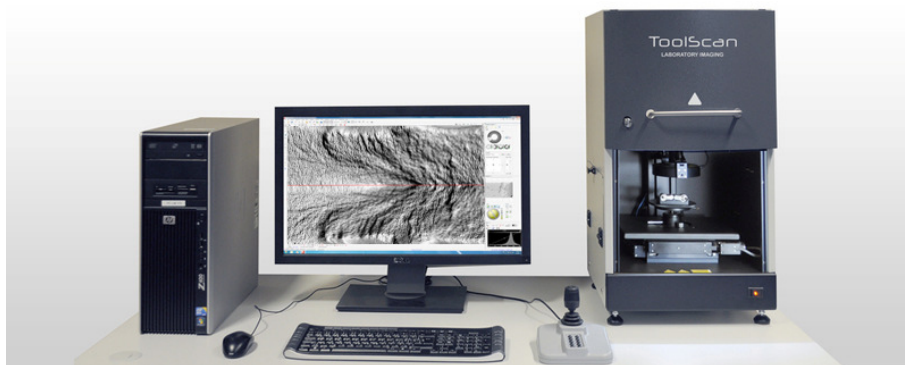
The ToolScan System scans tools and tool marks and is a comprehensive tool mark investigation solution used in forensics. It was devised to provide real time images through a convenient, easy-to-use, high-resolution 2D and 3D scanner that takes photometric data into account. A 3D image obtained through digital scanning corresponds to the silicone casting kit for crime scene impressions and has no material-specific lights and shades but emphasises the shape and size profile. Images can be saved in a database and made available wirelessly. A full set of comparative data is available to ensure precision matching. Barrel locks, padlocks, cables, tyre fragments, shells, plastic objects are only some of the examples of the items that are suitable for scanning.

The ToolScan System was developed to be as versatile as possible. It comes with a full set of grips, including clamping tools and swivel racks, enabling the precision set-up of objects inside the device and the best scanning results. Specific parts of objects (e.g. pincer jaws) can be scanned directly.

Apart from the standard measurements, there is a wide range of 2D and 3D comparative tools with a user-friendly and intuitive interface. Comparative modes include superimposition of images, aligning images side-by-side with a user-adjusted dividing line and maximum 8 image simultaneous preview.

The ToolScan System features:

- the highest quality monochrome digital camera (optionally colour);
- the highest quality telecentric lens;
- precision laser focus;
- LED illuminator;
- high 3µm/px resolution;
- full control through custom software and dedicated joystick;
- precision stepper motor, enabling operation in X and Y axis and lens focus;
- dedicated set of grips including clamping tools, swivel racks and magnetic grips.



ToolScan system - workstation

XII. “TRASOSCAN” SYSTEM FOR EXAMINATION OF DOCUMENTS, FINGERPRINTS AND SHOEPRINTS

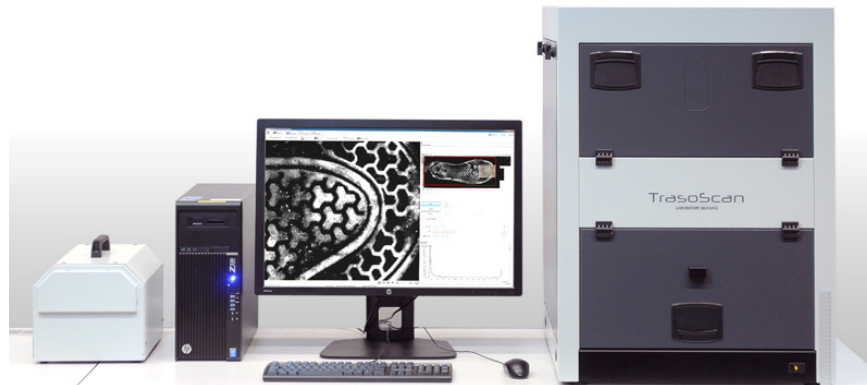
The TrasoScan System is a versatile system for examination of shoeprints, fingerprints, documents and other flat surfaces. Shoe soles and objects up to 24 cm high can be scanned using the close up lens. Objects as large as 66 x 49 mm can be displayed live on the screen. Larger objects up to 37 x 20 cm are scanned in high 1.000 PPI resolution. The integrated vacuum table is suited for fixing gelatine lifters, dust lifters and paper to it. This guarantees the perfect fit of the scanned material to the base, which minimizes surface distortions and reflections.

The integrated **LUCIA Forensic software** enables the scanning settings to be quickly and easily set up and for them to be saved, making it completely reproducible. The system is delivered with a set of customizable presets to make typical tasks straightforward. Annotation, measurement, comparison, and reporting functions are also available. Images can be saved into the database and shared via a network.

High illumination variability is provided by the **TrasoScan System** via 3 pairs of multispectral LED panels, illuminating the scene at angles of 12°, 45°, and 60°. In case of thick (high) objects, LED panel motorization guarantees well defined and homogenous illumination. High power 455, 505, 525, 590, 625 nm + white LEDs included in the multispectral panel enable to visualize latent traces by luminescence. It also is possible to plug in a lightguide and use an external light source (Projectina, Polilight) for even wider range of excitation wavelengths.

TrasoScan System specifications:

- resolution: 1000 PPI;
- illumination: 6 multispectral LED panels - (365), (400), 455, 505, 525, 590, 625, (740), (850) nm + white; wavelengths in brackets represent optional illumination, high power LEDs, 120W total power;
- illumination angle: 12°, 45° and 60°;
- live image field of view: 49 x 66 mm;
- scanning area: 20 x 37 cm;
- accessories: shoe holder, set of rulers, set of emission filters (yellow, orange, and red) with holders, set of close up lenses (0.25D, 0,5D, 1D, 1.5D);
- PC workstation: 64-bit high performance PC with Windows 7, 30” LCD monitor.



TrasoScan system - workstation

XIII. “BALSCAN” SYSTEM FOR BALLISTIC IDENTIFICATION

The BalScan System was developed to examine and compare markings on fired ammunition. Cartridge cases and bullets are examined, compared, scanned in 2D or 3D, and saved to a database. A special software application searches the database and displays a hit list of possible matches. The forensic expert operator has a full set of comparison functions at hand to confirm the match.

The BalScan System enables a wide range of calibres to be digitized, ranging from small-bore rifle ammunition to 12 gauge shotgun shells. Bullets, cartridge case bottoms, or cartridge case surfaces are scanned in high 3µm resolution including 3D information.

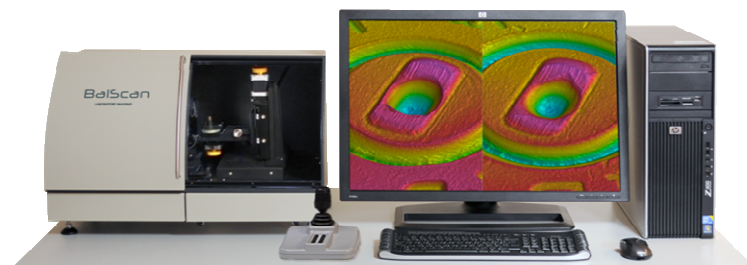
The BalScan System is very suitable for scanning and comparison of deformed bullets, bullet fragments and even direct scanning of the breech face and the firing pin of a firearm.

The reliable Oracle database is an important part of the BalScan system. The database is organized in two distinct forms. The database of criminal cases contains evidences related to the crime scene along with test bullets and cartridge cases. The firearms database includes fired bullets and cartridge cases linked to a particular registered firearm. The database can be installed on a standalone server connected to other BalScan workstations within a private network. A filtering can also be applied to the database. The user can easily display selected data, for instance, records of a certain calibre, of a certain type (2D/3D/bullet/c. case), or created within a certain period of time, etc. The filtering criteria can be combined so that only relevant records are displayed.

The automatic database search is based on comparing significant areas of the digitized evidence. Land impression marks on bullets and breech face marks, firing pin marks, and ejector marks on cartridge cases are compared. Advanced algorithms and the 3D data analysis are used to achieve maximum reliability.

BalScan System features:

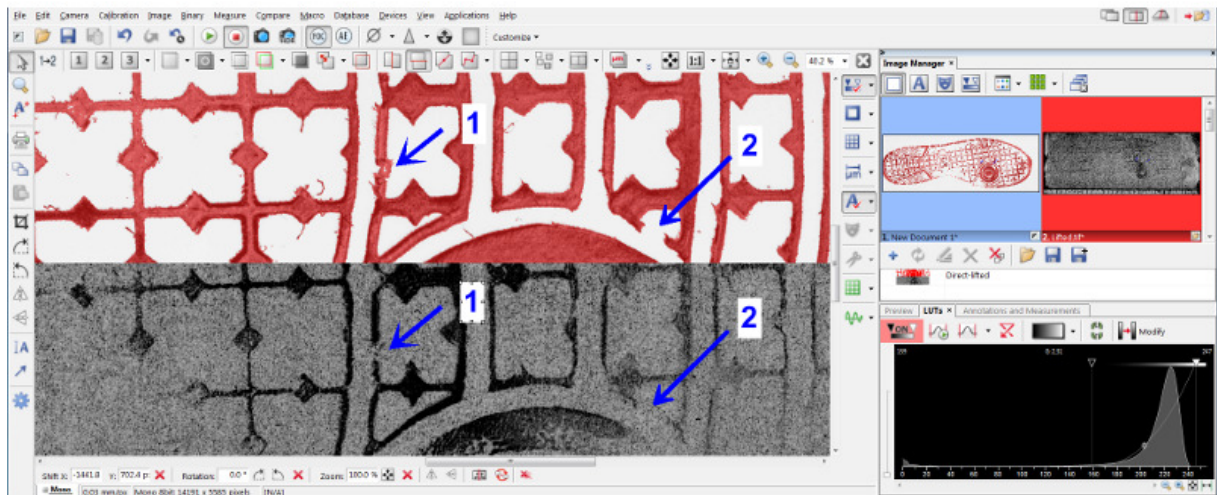
- the highest quality monochrome digital camera (optionally colour);
- the highest quality telecentric lens developed specially for the BalScan device;
- precision laser focus;
- LED illuminator;
- high 3µm/px resolution;
- the device is fully controllable via the BalScan software and a programmable joystick;
- precision stepper motors are used to move the object in four axes: X, Y, Z, and rotation.



BalScan system - workstation

XIV. “LUCIA FORENSIC” SOFTWARE

LUCIA Forensic software package provides control of the scanning process performed by the **ToolScan** and **TrasoScan** systems and the saving of settings. The system is delivered with a set of customizable presets to make typical tasks straightforward. Annotation, measurement, comparison, and reporting functions are also available. Images can be saved into the database and shared via a network.



LUCIA Forensic software

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