

With interdisciplinary collaboration of the Institute of Legal Medicine, University Hospital of Düsseldorf, the Landeskriminalamt Nordrhein-Westfalen SG 31.5 – Operational Case Analysis and an experienced funeralmaster and embalmer a new technique in postmortem dactyloscopy – **Thanatoprint** – has been developed.

Thanatopractical processing allows morphological reconstruction of even advanced decayed corpses by extracting fluids from the body's tissue and restoring the antemortem volume and tenseness. By local application of this technique to a corpse's hands, fingerprints of high quality can be gathered even in cases of advanced decay.

Fingerprints of floaters can also be improved by using „Thanatoprint“, but mostly they do not reach the level of quality achievable in corpses decayed in a dry environment. „Thanatoprint“ is unsuitable for mummified hands and for fingers with ablated epidermis.

#### Advantages of Thanatoprint:

- > Immediate surface drying even in cases of advanced decay
- > High quality fingerprinting after 30 minutes
- > Persistent quality of fingerprints over at least 3 hours
- > Depending on the degree of decay also palm prints possible
- > No more need for amputation of hands or ablation of the epidermis
  - Burial of an intact corpse; no storage or disposal issues
- > No extensive processing of the epidermis, no in-process inspections
  - Less labour-intensive
- > Low material cost

Thanatoprint is a successful technique to improve the postmortem identification by fingerprints even in cases of advanced decay. Apart from the excellent quality of the fingerprints Thanatoprint stands out by being at the same time cost-efficient, quick and easy to apply. In cooperation with dactyloscopic experts, it can easily be implemented in the everyday work flow of Institutes of Legal Medicine. Furthermore there is no more need for amputation of hands or ablation of the epidermis so the corpse stays completely intact.

**Publisher:**  
Landeskriminalamt Nordrhein-Westfalen  
SG 31.5 – Operational Case Analysis  
Völkinger Str. 49  
40221 Düsseldorf

**In cooperation with:**  
University Hospital of Düsseldorf  
Institute of Legal Medicine  
Moorenstraße 5  
40225 Düsseldorf

**Contact:**  
Dr. med. Britta Gahr  
Forensic Physician – Medicolegal Expert  
University Hospital of Düsseldorf  
Institute of Legal Medicine  
britta.gahr@med.uni-duesseldorf.de

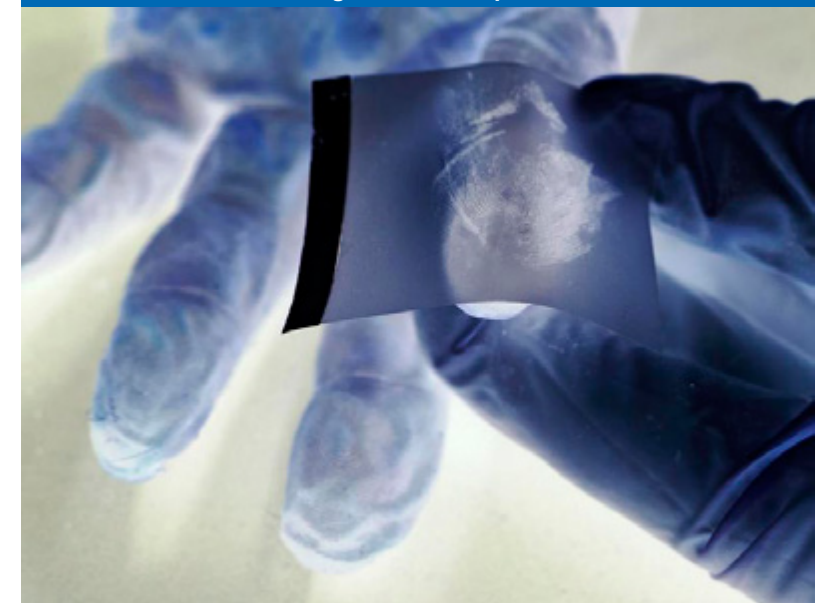
KHKin Maren Drewitz  
Detective Chief Inspector  
Landeskriminalamt Nordrhein-Westfalen  
SG 31.5 – Operational Case Analysis  
maren.drewitz@polizei.nrw.de

**For further information:**  
Gahr B, Drewitz M, Vöth R, Ritz-Timme S (2012)  
Thanatoprint – ein neues Verfahren für die  
Daktyloskopie von Fäulnis- und Wasserleichen.  
**Kriminalistik 03/2012; 3:165-168.**

Cordial thanks go to every person and institution supporting the development of Thanatoprint.



rechtsstaatlich • bürgerorientiert • professionell



## Thanatoprint A new technique in postmortem dactyloscopy

## Procedure recommendations for Institutes of Legal Medicine and Forensic Laboratories:

### 1. Dissection and insertion of the catheter

- > Dissection of the radial artery with minimal epidermal incision and maximal protection of the circumjacent tissue
- > Handward insertion of a permanent venous catheter close to the flexor retinaculum
- > Choose the size of the catheter according to the diameter of the radial artery between 20G x 1¼" (1,1 x 33mm) and 16G x 2" (1,7 x 50 mm)



### 2. Preinjection

- > Exact mixing of the preinjection composed of 10% Metaflow®, 10% Rectifiant® and 80% lukewarm tap water
- > Manual injection of 120 ml per hand

The purpose of the preinjection is to flush the blood vessels of the hand, to restore their flexibility and to facilitate the distribution of the following main injection reagents into the soft tissue. Within a reaction time of 15 minutes the preinjection unfolds its full potential.

### 3. Main injection

- > Exact mixing of the main injection composed of 15% Metaflow®, 15% Rectifiant®, 15% Metasyn® and 55% lukewarm tap water
- > Manual injection until the fingerpads feel firm, but not yet hard
- > After a reaction time of another 30 minutes the first fingerprints can be taken

The above-mentioned choice of the reagents of the main injection and their mixing ratio facilitates a fast volumen increase of the fingerpads and at the same time a sufficient surface drying.



### Utensilien:

- > scalpel
- > surgical forceps
- > permanent venous catheter
- > syringe pump, 50 ml (Luer Lock)
- > reagents for injection: Metaflow®, Rectifiant® and Metasyn®
- > cellulose (to absorb soakage)

The above-mentioned reagents are products of Dodge Company, containing formaldehyde, methanol and sodium hydroxide as main active agents as well as colourants, perfume, buffer solution, anticoagulants and distribution promoting substances.

There is no conflict of interest, the authors do not derive any financial or other advantage from using or mentioning the products of Dodge Company.