

Usefulness of Indandion and DFO Reagents in Eliciting Papillary Line Traces

Matej Trapečar, Ph.D., Associate Professor of Logistics, Head of the Department for Dactyloscopy, National Forensic Laboratory, General Police Directorate, Slovenia. ORCID: 0000-0002-6788-677X. E-mail: matej.trapecar@policija.si

Patricija Jankovič, Ph.D., Associate Professor of Logistics and Law, AREMA Academy for Logistics and Management, Slovenia. ORCID: 0000-0003-4595-0379. E-mail: patricija.jankovic@quest.arnes.si

Sašo Murtič, Ph.D., Associate Professor of Management and Law, Faculty of Industrial Engineering, Slovenia. ORCID: 0000-0002-2959-6309. E-mail: saso.murtic@fini-unm.si

Papillary line traces are important evidence of the presence of the offender at a crime scene or on objects related to the crime scene and the victim, and provide a basis for finding relevant information to confirm the presumption made. In this study, we determined the suitability of the methods of using the reagents Indandione and DFO for recovering papillary line traces. The reagents are used to examine porous and semi-porous contact surfaces. For the experimental part of recovering papillary line traces, we used white paper, white printed paper, paper towels, brown cardboard, colour magazines, newspapers, tea packaging, cigarette packaging boxes and waxed cardboard. Before the experimental process, papillary line traces were caused on the objects. The samples were stored in a dark laboratory room at room temperature between 22OC and 24OC and prepared for recovery at different time intervals. Indandione in controlled and uncontrolled conditions, and DFO in controlled conditions were used for the recovery of papillary line traces. After completing the recovery procedures and evaluating the papillary line traces, we found that about 50% more lines were recovered with Indandione than DFO on the samples.

The quality and usefulness of the papillary line traces were also better with Indandione, which provides a sounder basis for further examination of individual cases. In our study, we found that Indandione is useful for recovering papillary line traces on (semi)porous surfaces. The final results showed that the effectiveness of Indandione in recovering papillary line traces on the study examination areas is superior to DFO. The Indandione method will be implemented in the future in forensic fingerprint examination of the laboratory.

Keywords: forensics, fingerprints, porous surfaces, marks recovery, Indandione

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