UNIVERSITY OF AMSTERDAM





FORENSIC LITERATURE THESIS

LITERATURE THESIS

Title	: ***The visualization and recording of traces of body fluids with forensic light sources***
Keywords	: *Body fluid, visualization, forensic light*
Forensic Expertise Area	: *Visualization of body fluids*
Department	: n/a
Institute/Company	: Eurofins TMFI (The Maastricht Forensic Institute)
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SHORT DESCRIPTION

Visualising biological material with a method that is non-invasive, rapid, applicable onsite and easy to use is highly desired during forensic investigations. Various light sources hold these attributes and are therefore often used in a forensic setting, for example to search for blood or semen, either in the lab or at the crime scene. When these traces are made visible, the next step is to record the results. For the recording, different settings can be applied. There are many articles on the use of forensic light sources and visualization of body fluids. This proposed literature study is expected to provide an overview of the possibilities of forensic light sources for the detection of body fluids, like blood, semen and saliva. The different categories of forensic light and their characteristics, such as the intensity of a light source, the applied wavelengths and the use of various filters, should be discussed. In addition, it is important to consider various variables, as for example the type of biological material, the substrate and the age of traces. At the moment there is no current review article that combines all these insights.

REFERENCES

1) Finnis, J., Davidson, G., Fraser, I., Murphy, C., Hargreaves, C., Stevenson, N., Doole, S., Rogers, C. (2023). Illuminating the benefits and limitations of forensic light sources. Science & Justice, 63(1), 127-134.

2) Nolana, A., Speersa, S.J., Murakami, J., Chapman, B. (2018). A pilot study: The effects of repeat washing and fabric type on the detection of seminal fluid and spermatozoa. Forensic Science International, 289, 51-56.

3) Achetib, N., Falkena, K., Swayambhu, M., Aalders, M.C.G., Van Dam, A. (2023). Specific fluorescent signatures for body fluid identification using fluorescence spectroscopy. Scientific Reports, 13(1), 3195.

REQUIRED/RECOMMENDED EXPERTISE

- Interest in the topic of searching for body fluids
- Independently thinking about the possibilities and impossibilities in the use of forensic light sources
- Critically reviewing scientific literature and report writing