

EVALUATION OF THE PERFORMANCE OF THE BLOOD EVIDENCE TESTS IN A FIRE SCENE

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Abstract

Biological evidence represent a central importance in the reconstruction of the dynamics of crimes; in fact, they often allow to trace the identity of the subjects present at the place of the facts. However, often, with the specific aim of "deleting the evidence", many criminals use fire as a tool to weaken the investigation process. The fire, due to the high temperatures, causes damage to the biological cells that make up the evidence useful for investigators.

The flames do not always destroy the evidence but only alternate it.

This study aims to assess the performance of various forensic presumptive tests capable of detecting the presence of human blood when this is in critical conditions such as the exposure at high temperatures.

The transformation of the traces also helps us understand the temperatures reached as a means of verification.

This study shown that it is possible to define the operating limits of presumptive and confirmatory tests currently used for the detection of human blood cells for forensics purposes through a standardization of the quantity of the blood evidence, the items, the temperatures and of next exposure time.

Through teamwork between biologist and fire investigator we get to the truth.