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Development of Hit Marks on Clothes Using Amino Acid Reagents

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Abstract : If we analogize any physical external force given to victims in many crimes including violence, it would be possible not only to presume mutual action between victims and suspects, but to make a deduction of more various facts in cases. Therefore, the aim of this study is to identify criminal tools through secretion on clothes by using amino acid reagents such as Ninhydrin, DFO(1,8-dizafluoren-9-one), 1,2 – IND (1,2-indanedione) which are reacting to skin secretion. For more effective collecting condition, porcine skin which is physiologically similar to human was used. Although there were little differences of shape identification according to sensitivity, amino acid reagents were able to identify the fist, foot, and baseball bat. Furthermore, we conducted the experiments for developmental variations through change over time setting up 5-weeks period including first damage as variation factor, and developing materials in each action through certain reagents. Specimen level of development depending on change over time was identified. As a result, each of initial level of development was seen no changes.

Keywords : hit marks, amino acid reagents, porcine skin, criminal tool
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