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FIBRE TRANSFER AND PERSISTENCE STUDIES: ARE WE

CONTAMINATING OUR SCENES OF CRIME SUITS?

Claire Gwinnett, John Cassella, Daniel Rogers, Keanu Daal, Hathi Nguyen,

Eva de Botselier, Connie Rowland

Criminal Justice and Forensic Science, Staffordshire University, Stoke-on-Trent/

UNITED KINGDOM

Scene of Crime Officer (SOCO) suits are now standard protection for major

scenes to prevent contamination from both DNA and trace particulates

but what if we are contaminating our suits prior to entering the crime

scene? This paper will outline a series of studies that have identified that

transfer of fibres from SOCO’s clothing to the outside of the suits occurs

during donning and that these subsequently persist long enough to enter

the scene of crime. Low, medium and high shed garments were analysed

in terms of their ability to transfer fibres to the outer surface of the crime

scene suit and therefore potentially contaminate any environment they

subsequently come in contact with. The subsequent persistence of

different fibre types on SOCO suit surfaces were identified to ascertain

the potential for these fibres to be carried into crime scenes and then

redistributed within the scene. Contamination ‘hot-spots’ on the crime

scene suits were also identified. Results indicate that considerable fibre

contamination can occur whilst crime scene suits are being donned

and this is dependent on the sheddability of the garments being worn

underneath (mean number of fibres transferred were 225 (low shed), 340

(medium shed) and 437 (high shed)). Persistence of different fibres on

SOCO suits indicated that fibres were retained for long enough to be taken

into a crime scene and shed when undertaking common movements/

activities of Scenes of Crime Officers thus highlighting the potential for

scene contamination. This paper will also outline a series of solutions

to this potential contamination that could be utilized in serious crime

investigations where fibres evidence are readily utilized, including the

development of a SOCO undersuit that reduces fibre contamination and

appears to have additional benefits including an increase in wearer comfort

and a perceived improvement in wearer temperature regulation.

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