O2. Fingerprint sampling devices; Methods for controlling fingermark deposition

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The appearance of friction ridge skin marks can be affected by factors related to the physical action of deposition; including the force applied during deposition, the duration and the angle of friction ridge and surface contact. Recent research has described a 'fingerprint sampler', which is a device capable of controlling the quantity of force applied to fingers during fingermark deposition. In this study fingermarks of a higher quality were deposited, that were consistent and reproducible in nature [1].

The aim of this research project was to advance the development of the 'fingerprint sampler' by producing a device that could facilitate the deposition of fingermarks under several controlled quantities of force, whilst maintaining the qualities of the original device where the duration of friction ridge to surface contact and the area of friction ridge to surface contact were controlled. This research has resulted in the production of a sampler capable of depositing marks at multiple force quantities, which will soon be available for purchase through Scientific and Chemical Supplies Ltd.

Latent fingermarks and inked fingerprints were deposited using the multi-force sampler to investigate the effects of multiple force applications on the appearance of the resultant marks. This presentation will examine the findings of the investigation and will be of a general interest to anybody who is interested in developing a scientific approach to research methods and in particular those individuals involved with fingerprint related research.

[1] Fieldhouse, S. 2010. Consistency and reproducibility in fingermark deposition. Forensic Science International. In press; http://dx.doi.org/10.1016/j.forsciint.2010.09.005