

Analysis of DNA from Fired Cartridge Casings

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Abstract : DNA analysis has been widely accepted as providing valuable evidence concerning the identity of the source of biological traces. Our work has showed that DNA samples can survive on cartridges even after firing. The study also raised the possibility of determining other information such as the age of the donor. Such information may be invaluable in certain cases where spent cartridges from automatic weapons are left behind at the scene of a crime. In spite of the nature of touch evidence and exposure to high chamber temperatures during shooting, we were still capable to retrieve enough DNA for profile typing. In order to estimate age of contributor, DNA methylation levels were analyzed using EpiTect system for retrieved DNA. However, results were not conclusive, due to low amount of input DNA.

Keywords : DNA profile, DNA Methylation, fired cartridge, touch sample

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