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Forensic evidence – *Cigarette Butt* helped to nail accused

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A forensic analyst routinely encounters a variety of challenging biological as well as forensic evidential samples for analysis. Many of these samples are exposed to environmental insults hence extracting DNA from these samples is a challenge in itself. In one murder case this laboratory received *cigarette butts* as the only evidential sample found at the crime scene. The isolation of DNA from control cigarette butts was carried out by using different extraction methods, with varying time of exposure of the samples. DNA was quantified by Real Time PCR (RT-PCR). After the standardization of extraction method from cigarette butts, the method was applied for the case work. DNA was quantified using Quantifiler™ Kit. Amplifiable DNA was used for further processing i.e. PCR amplification and genotyping. DNA from accused blood sample was extracted using Himedia Blood Genomic DNA Extraction Kit. DNA profile generated by the cigarette butt sample was then compared with the reference sample. In the present study it was observed that saliva degrades at the lapse of time and thus the quality and quantity of DNA obtained gets affected. Besides this, depending on the habit of holding cigarettes in the mouth, the quality and quantity of DNA gets affected.

Biography

V R Rathod has completed her PhD from Mumbai University in the year 2008. She joined Directorate of Forensic Science Laboratories, Government of Maharashtra, Mumbai in the year 1994. She has visited several scene of crime and assisted investigating officer in various medico-legal cases. She is one of the pioneers in establishing DNA profiling techniques in the laboratory. She has published about 10 papers in reputed national and international journals. She has also presented her work in several national and international conferences. She has organized workshops on forensic and forensic awareness week for students. She has successfully analysed several medico-legal cases by using DNA.

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