

Collecting Fingerprints in Forensic Science

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Opinion

The most valuable trace in forensic science is suspect's fingerprint collected from the crime scene. These, fingerprints may be hidden or visible at the crime scene. Visible prints are left in the form of blood stains, coal dirt, mud dirt, in short term any visible trace. So called invisible traces are fingerprints left by hand on any surface. These prints are visualized by special fluorescent dyes, chemical development, powders, and in some cases, they are visualized by modern equipment-so called lasers. Real people without fingerprints have genetic disease named dermatoglyphic, and this is a case of so-called absence of fingerprints and there are medical records and identity cards that mark this condition. Forensic science known as fingerprinting was established by Sir Francis Galton. In the beginning of this important science, primitive means were used for collecting fingerprints from the crime scene. There is an old method such as tape and carbon color, or modern ways of detecting fingerprints using chemical development. Glove fingerprints are special traces or marks from the crime scene, when suspects are trying to hide their fingerprints using gloves. Three main types of fingerprints were found, arches, loops, and whorls.

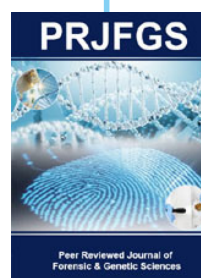
And when it comes to analyzing fingerprints today, we use modern algorithms such as CEDAR, CiteSeerX, and other or fingerprints can be analyzed in the old ways. Correlation coefficient/statistical tool is used when it comes to identify matching of suspects fingerprints with fingerprints in database. In that case we can define three main types of fingerprints rolled, plain, and latent fingerprints. In each type ridges or lines are counted, and it is normal for a woman to have about 70-80 ridge lines, man 90-100 ridge lines, greater number of ridge lines is a mark of migration of ethnic groups. In forensic science known as fingerprinting shape of fingerprints is analyzed, and every person in the world known as adult has its unique fingerprint. There are no identical fingerprints in the world. In modern fingerprint science new fingerprint patterns were defined such as plain arch that looks like Amor's arch and tented arch that has form of a bell shaped group of ridges, ulnar loop, radial loop, and double loop, plain whorl-were lines are in the concentric shape, central pocket loop whorl, and accidental whorl. Loops 70 percent and whorls 20-30 percent are most common fingerprints in the population. One of the oldest fingerprints are found in Kuwait, on some Stone Age pottery and it is about 7300 years Old.



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