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A Study of Finger Temperatures and Fingerprint Quality

The purpose of this project was to test different finger temperatures on different materials which included; glass, wood, plastic, and metal to see whether the temperature of the finger or the material made a difference on fingerprint quality. The experiment involved taking eight fingerprints, two on glass, two on metal, two on plastic, and two on wood to test hot and cold fingers, from 30 test subjects. Each test subject's hands were warmed up using a blow dryer until the temperature reached 27° Celsius. Then, the warm fingers would touch the 4 materials, glass, metal, wood, and plastic. Next, the fingerprints were cooled by being placed in ice until the temperature reached 17° Celsius. The fingers then touch 4 materials again, glass, metal, plastic, and wood. The data supported the hypothesis, if the temperatures of the finger when fingerprinted are tested on different surfaces then it will be found that the warmer the finger the more it will show up on the different surfaces. The findings indicate that fingerprints are clearer when the fingers are warmer rather than cold. In conclusion, this study confirms the hypothesis: if the temperatures of the finger when fingerprinted are tested on different surfaces, then it will be found that the warmer the finger the more it will show up on the different surfaces.