Name(s)	Project Number
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Project Title

Who Are You? Analyzing the Performance of Fingerprinting Powders

Abstract

Objectives/Goals

This project attempts to answer the question of which fingerprint powder lifts the clearest prints and is the best to be used in a criminal investigation.

Methods/Materials

The project utilized no powder (the control) and the four available fingerprint powders: black powder, silver black powder, magnetic black powder, silver black powder. The independent variable in this experiment is the fingerprinting powders. The dependent variable is the points of minutiae, which are identifying points on a fingerprint.

First, five people's fingerprints were recorded with notary ink. After washing their hands they picked up and held five tiles, one at a time, placing their four fingers on the top of each tile. Fingerprints were then dusted and lifted using the four types of powders and the control of no powder. Finally, the number of points of minutiae on each print were counted and visually compared to the recording cards of the participants.

Results

Black powder worked the best disproving the hypothesis that silver black magnetic powder would work the best.

Conclusions/Discussion

After conducting this experiment, I have concluded that black powder is the most effective fingerprinting powder, giving the clearest prints. This conclusion proves my hypothesis to be null. Contrary to what I predicted, black powder had the most average points of minutiae, .4 more than silver black magnetic powder.

Summary Statement

My project is attempting to determine which type of fingerprinting powder is the most effective, meaning it produces the clearest fingerprints with the most visible identifying points.

Help Received

Help was received from a forensic agent who supplied the materials necessary, the school science teacher who gave advice concerning the report, and parents who also advised and proofread the report.