

WD-40® AS A FORENSIC TOOL?

WD-40*, a common household product, has emerged as an unexpected tool in forensic science, helping investigators solve a John Doe case in Akron, Ohio. This innovative approach combines new technology with a simple household item to revolutionize the fingerprint identification process.

In a case where human remains were discovered near a homeless shelter in Akron, investigators faced challenges in identifying the deceased due to advanced decomposition. Traditional methods of identification, such as dental records and DNA analysis, proved time-consuming or inconclusive.

Jason Gromm, a forensic investigator with the Summit County Medical Examiner's Office, applied a new technique he learned at an FBI conference. He used boiling water to temporarily enhance the ridge detail of the fingerprint, then employed a fingerprint scanner in conjunction with WD-40 to capture the print clearly.

"Anything with water on it won't read appropriately. You won't get a nice clear print. But WD-40, WD being water displacement, takes away all the water. That way you can scan nicely," Gromm explained.

The fingerprint scanners, connected to databases with Ohio BCI and the FBI, can identify individuals with criminal histories in minutes. This technology, combined with the WD-40 technique, led to the successful identification of the deceased as Emil Joseph Colosimo, a 54-year-old homeless man from the Cleveland area.

**WD-40 is a registered trademark of the WD-40 Company*





This innovative use of WD-40 in forensic science has shown promising results:

1. It enhances the efficacy of capturing fingerprints when using optical-capacitive scanners.
2. It can be used to preserve firearms evidence by immediately soaking recovered weapons.
3. It aids in victim identification, particularly in challenging cases involving decomposed remains.

The success of this method demonstrates how combining new technology with readily available products can significantly advance forensic investigations. **The fingerprint scanner used to identify the victim was Integrated Biometrics' Danno, a small sensor that is mobile and easy to bring out in the field.** The Summit County Medical Examiner's Office started with two fingerprint scanners and reported that within two months of using these scanners, they assisted in identifying 17 cases.

This breakthrough not only expedites the identification process but also provides closure for families of the deceased. As Gromm stated, "It's for the family, it's for closure, it's for the people who really need to know".

This innovative application has significantly improved the capture of usable fingerprints in challenging scenarios, including daily forensic work and disaster victim identification (DVI) incidents.

APPLICATIONS IN FORENSICS

The use of WD-40® in conjunction with optical-capacitive scanners has demonstrated a marked increase in the efficacy of capturing clear, usable fingerprints. This technique is especially valuable in complex settings where traditional methods may fall short.

Daily Cases

In routine forensic work, this method allows for more reliable fingerprint collection, even in less-than-ideal conditions. The lubricating properties of WD-40® may help in smoothing out rough or dry skin surfaces, enabling better contact with the scanner.

Disaster Victim Identification (DVI)

During mass fatality incidents, rapid and accurate identification is crucial. The WD-40® technique has proven particularly useful in DVI scenarios, where postmortem changes can complicate fingerprint collection.

Postmortem Fingerprinting

This method has shown promise in overcoming challenges associated with postmortem fingerprinting. In cases involving decomposed bodies, the application of WD-40® after using boiling water has been reported to facilitate fingerprint capture.

Technological Integration

The combination of this technique with mobile devices and peripheral fingerprint scanners allows for quick database searches, significantly speeding up the identification process. Fingerprints can now be captured and compared against major databases within minutes, even in field conditions.

While further research is needed to fully understand the mechanisms and limitations of this technique, its initial success in improving fingerprint capture efficiency marks a significant advancement in forensic science and disaster response capabilities.



Watch the InvestigateTV* report.



Investigators in Akron, Ohio, used a combination of cutting-edge fingerprint scanning technology and an old-school forensic trick to identify human remains found near a bridge. Forensic investigator Jason Gromm enhanced the ridge details using boiling water and WD-40, allowing a mobile fingerprint scanner to quickly match the prints to a database. This breakthrough technique helped identify the man providing closure to his family and marking another success for the Summit County medical examiner's office in solving unidentified cases.



ABOUT INTEGRATED BIOMETRICS

Integrated Biometrics, LLC designs and manufactures FBI-certified fingerprint sensors for law enforcement, military operations, homeland security, national identity, election validation, social services, and a wide range of commercial applications. The company's patented light emitting sensor technology enables lightweight scanners that outperform traditional prism-based devices in size, power consumption, portability, and reliability. Identity management solutions providers, government agencies, and corporations around the world rely on Integrated Biometrics' products to enroll and verify individual identity quickly and accurately, even in remote locations.

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