SWAP THE SWAB: IMPROVED DNA STABILITY AND RECOVERY OF EVIDENTIARY SAMPLES

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In recent years, a combination of new technologies being introduced into the market and the increasing impact of the use of DNA to solve crimes has led to both increased reliance on DNA and more collections. One often overlooked area is the collection, transport, recovery and storage of biological evidence from crime scenes. This presentation will introduce new technologies available that can improve sample recovery for DNA analysis from crime scenes.

Cotton swabs are the primary collection devices used to collect biological material. After collection, swabs are often dried and placed in coin envelopes or swab boxes where the swab is unprotected from contact with the envelope or box, but also unprotected from external environmental conditions. Biological materials, even when stored properly, can break down or degrade, resulting in less than desirable results. This can be exacerbated if the sample is limited in quantity or compromised from the start. This presentation will introduce the use of a preservative solution that is pre-applied to a cotton swab that prevents DNA degradation from a variety of factors including enzymes, bacteria, and fungi. The result is the ability to resist any degradation that may occur in the weeks, months, or years that may pass before the sample is analyzed. The utilization of the Bode BioSafe Swab ensures that the quality of sample that is collected at the crime scene is maintained until sampling and extraction occurs. Studies have concluded that utilization of the BioSafe Swab resulted in significantly higher DNA yields with a significantly lower degradation index score compared to standard swabs. The combination of a higher DNA yield and less degradation will increase the chances of obtaining a complete profile upon STR amplification. Through the use of the BioSafe Swab, evidence collectors will now be more confident that their collected sample will be preserved until the crime laboratory processes the case.

Collecting a sample from an individual or from a crime scene is only part of the equation. The true success is when that profile can be used to identify a missing person, solve a crime, or exonerate a wrongfully convicted individual etc. Through the use of the new Bode BioSafe Swab, investigators and analysts can be confident that the DNA sample they collected has not deteriorated prior to analysis.