



Quality Division Use Only

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| Quality Tracking #: | 2023-013 | Classification: | Incident |
| Non-Conformance Level: | N/A | Section: | Crime Scene |
| Date of Discovery: | 03/15/23 | Date of Incident: | 03/15/23 |

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|---|---------------------------------------|
| Forensic Case Number(s), if applicable: | Agency Case Number(s), if applicable: |
| 2022-02248 | 022754622 |

Description of Non-conformance:

An evidence item analyzed by the Forensic Biology section presented an unknown male DNA profile in the mixture that did not match any of the reference samples that were received for comparison. The unknown profile was then compared to the staff database and was consistent with a crime scene investigator who responded to the scene.

Additional Information/Follow-Up:

Any unknown profiles developed from an item of evidence are required to be searched in the HFSC elimination database. The elimination database is a read-only spreadsheet comprised of DNA profiles from HFSC staff and visitors that is used by the Forensic Biology section to detect potential contamination. A profile developed from item 13.1.2.1 (portion of swab from blade of knife) was determined to be consistent with a crime scene investigator.

On February 20, 2022, the crime scene investigator (CSI) responded to a scene as an assist CSI to work in conjunction with the lead CSI. As such, the assist CSI prepared the packaging for evidence collection (e.g., inventoried what type of packaging was needed, gathered packaging supplies, wrote on packaging) but did not collect (i.e., handle) the evidence.

Reports are not required to reference whether personal protective equipment (PPE) was used while at the scene and the assist CSI does not have specific recollection of the case but stated that personal practice includes using PPE when handling, packaging, and/or processing evidence per standard operating procedures at a crime scene. Furthermore, the lead CSI stated she was closely observing the activities of the assist CSI since he was only recently authorized for supervised casework at the time and did not recall anything out of the ordinary. The lead CSI noted that photos of the evidence items were taken on packaging that the assist CSI had handled.

While nonconformances have occurred involving DNA contamination of evidence by crime scene investigators (see quality reports 2017-092, 2018-013, 2018-110, 2021-029), the Crime Scene Unit has since published an SOP requiring the use of personal protective equipment when handling, packaging, and/or processing evidence at a crime scene. In addition, the crime scene investigators must wear gloves and a mask when stocking their vehicles with evidence collection supplies in order to prevent contamination prior to processing crime scenes. However, the use of appropriate PPE is not guaranteed to prevent contamination.



Summary of Root Cause Analysis:

Note: Incidents are documented for tracking purposes and trend analysis. Root Cause Analysis is not required for incidents.

N/A

Actions Taken:

The DNA Technical Leader opted to condition on the crime scene investigator using the STRmix software, as per the DNA Interpretation SOP that provides language for this scenario. Conditioning on the CSI's profile allows the STRmix software to focus only on the remaining foreign profile that is associated with this case and also allows comparisons to be made to the reference samples.

A report was issued on May 17, 2023, with reference to the quality report and a statement for item 13.1.2.1 that includes: "The DNA profile from this item was interpreted as a mixture of two individuals with at least one male contributor and a crime scene investigator (CSI) who responded to the scene as an assumed contributor."

Because there is one portion of the swab remaining, additional testing is possible; however, the Forensic Biology section does not recommend that any be performed at this time.

The CSU Technical Lead held meetings with each CSU squad in April 2023 to cover appropriate PPE on scene and other techniques to prevent contamination.

CSU ordered additional supplies to provide CSIs to prevent contamination including clip on glove holders (to prevent putting unused gloves in various gear pockets) and wrist sweat bands.

Section Manager: Carina Haynes

Date: 08/18/23

Division Director: Carina Haynes

Date: 08/18/23

Incidents or Corrective Actions that involve the Biology/DNA section are reviewed by the Technical Leader and CODIS Administrator.

Technical Leader: Cheron Maxwell (FBIO)
Nicole Teele (CSU)

Date: 08/15/2023
Date: 08/15/2023

CODIS Administrator: Jennifer Clay

Date: 08/16/2023

Quality Director: Jackeline Moral

Date Closed: 08/21/23