Incident/Corrective Action Report

Quality Division

---

Quality Division Use Only

<table>
<thead>
<tr>
<th>Quality Tracking #:</th>
<th>2019-029</th>
<th>Classification:</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Conformance Level:</td>
<td>Class II</td>
<td>Section:</td>
<td>Biology/DNA</td>
</tr>
<tr>
<td>Date of Discovery:</td>
<td>07/12/18</td>
<td>Date of Incident:</td>
<td>05/07/18</td>
</tr>
</tbody>
</table>

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

Description of Non-conformance:

On May 7, 2018, an acid phosphatase (AP) test for the possible presence of semen was conducted on the panties (item 1.5) in case 2018-06861. The screening analyst who performed the test documented the result as 4+ indicating that the positive reaction occurred within the first 15 seconds of the test in accordance with the Forensic Biology SOP. A cutting of the presumptively positive stain was then submitted for extraction and quantification. Because the detection of male DNA was insufficient for this cutting, the item did not proceed to STR analysis. On July 13, 2018, the report writing analyst in this case requested that a second cutting of the presumptively positive area be taken and submitted for STR analysis. The second cutting of the presumptively positive stain was then submitted for extraction and quantification. Because the detection of male DNA was insufficient for this cutting, the item did not proceed to STR analysis. The report writing analyst then requested that the presumptive test for the possible presence of semen be repeated. The presumptive test for the possible presence of semen was repeated in the presence of two separate senior analysts on August 10, 2018, and again on August 13, 2018, and both tests were negative.

Additional Information/Follow-Up:

N/A
Summary of Root Cause Analysis:
Note: Incidents are documented for tracking purposes and trend analysis. Root Cause Analysis is not required for incidents.

At the time of the original AP test in this nonconformance, the Forensic Biology SOP used time as the only criteria by which to interpret an AP test; it instructed staff to score a positive reaction as either 4+, 3+, 2+ or 1+ depending on whether the color change reaction took place within the first 15, 30, 45 or 60 seconds of the test. However, the SOP did not instruct staff to ensure that the color change deepened or intensified over time. The SOP has since been modified to include this language. Staff have also been instructed to test large stains in sections to ensure that the time of the reaction is accurate and to apply appropriate pressure when "pressing out" onto a piece of filter paper prior to performing the AP test. Another contributing factor to this nonconformance was that the screening analyst had just been released into independent casework at the time that she examined these cases. Before she was signed off for independent casework, her training program had been supplemented to include ten supervised cases; however, of those ten cases, only four contained panties that were found to be presumptively positive for semen. Therefore she didn't have much experience with the proper documentation of panties that were presumptively positive for the presence of semen. Additionally, the documentation concerns were not discovered during the screening technical reviews. As a result, when screening analysts are released into casework it is now Forensic Biology section practice to have their work technically reviewed by the Screening Supervisor or a senior analyst as designated by the Screening Supervisor.

Actions Taken:
Because the original AP positive results were not reproducible in case 2018-06861, the original screening report was amended with the following language: "A presumptive test for the presence of semen was inconclusive on this item. Results initially reported for this item could not be replicated with subsequent testing. As a result, the item will be reported as inconclusive for the presumptive presence of semen. See Quality Report 2019-029." When the documentation for the panties (item 1.5) for case 2018-06861 was reviewed, it was noticed that the documentation indicated that the entire pressed-out area was AP positive as opposed to a smaller area within the pressed-out area. Given this is atypical of press-outs involving panties, the Screening Supervisor consulted with the DNA Technical Leader and the Quality Division. A review of the press-out documentation from all eight other cases in which this screening analyst examined panties was performed. In order to verify the original stain boundaries, the AP testing had to be repeated. This was done with a senior screening analyst and the documentation of the stain boundaries was revised accordingly. When repeating the AP test for the sole purpose of revisiting the stain boundaries, one of the cases (2018-08855) that had been originally documented as having a positive 4+ reaction on the panties (item 1.12) was negative upon retest. However, it should be noted that the sperm fraction of the cutting from the panties yielded a mixture of at least four contributors, at least three of whom are male. Because the original AP positive results were not reproducible (regardless of the fact that male DNA was detected), the original report was amended with the following language: "A presumptive test for the presence of semen was inconclusive on this item. Results initially reported for this item could not be replicated with subsequent testing. As a result, the item will be reported as inconclusive for the presumptive presence of semen. See Quality Report 2019-029." When repeating the AP test for the sole purpose of revisiting the stain boundaries, two other cases (2018-06858 and 2018-07751) were also identified as being negative upon retest. However, because the report had not yet been issued in either case, amended reports were not necessary. Instead, the presumptive semen results were reported as inconclusive and the detection of male DNA was reported as insufficient in both cases. The original AP positive results were replicated in the other five cases and the AP stain boundaries were revised accordingly.
Incidents or Corrective Actions that involve the Biology/DNA section are reviewed by the Technical Leader and CODIS Administrator.

**Technical Leader:** Robin Guidry  
**Date:** 12/3/2019

**CODIS Administrator:** Jennifer Clay  
**Date:** 12/12/2019

**Quality Director:** Erika Ziemak  
**Date Closed:** 12/23/19