

Procedure for Evidence Handling

1.0 Purpose - This procedure specifies the method for handling evidence within the Forensic Biology Section.

2.0 Scope – This procedure applies to those Forensic Scientists who handle forensic evidence.

3.0 Definitions

- **Evidence** - An object submitted to the State Crime Laboratory for analysis. An item of evidence is equivalent to a test item as described in ISO 17025.
- **Work product** - The material that is generated as a function of the analysis and includes DNA extracts, amplified product, amplification tubes, 96 well plates used in analysis. Once DNA extracts are dried, including positive and negative controls, they shall be considered evidence.
- **Distinguishable portion of the case file number** - At a minimum, the case number shall reflect the year and the five numbers unless one of the five numbers is a place holding zero.

4.0 Equipment, Materials and Reagents - N/A

5.0 Procedure

5.1 Each sample shall be labeled in accordance with the Procedure for Evidence Management and Forensic Biology Section Procedures.

5.1.1 Labeling

- 5.1.1.1** All tubes containing extracted DNA (including controls) shall contain the distinguishing portion of the case file number, the item number, the date of extraction and the Forensic Scientist's initials.
- 5.1.1.2** Amplified product shall be stored in trays labeled with the distinguishing portion of the case file number, the date of amplification, and the Forensic Scientist's initials.
- 5.1.1.3** The sides of 96 well trays used for capillary electrophoresis shall be labeled with the Forensic Scientist's initials. The columns used for a particular run shall be labeled by writing the date on the side of the tray and aligned with the specific columns (e.g., for December 14, 2006, the number 121406 or equivalent shall be used). If subsequent runs are loaded in the tray and run on the same date, then the date followed with ascending letters shall be used to designate the other runs (e.g., 121406, 121406a, 121406b.)
- 5.1.1.4** The DNA extract envelope shall be assigned an item number in FA.
- 5.1.1.5** If the DNA extracts are resubmitted to the Laboratory for re-analysis or there is an internal transfer of the extracts, the following procedures shall take place:
 - 5.1.1.5.1** If the original/raw evidence is resubmitted with the corresponding extracts or an internal transfer occurs while the corresponding evidence is still in the Laboratory, the extracts shall retain their original identification.
 - 5.1.1.5.2** If the extracts have been resubmitted without the original/raw evidence, the contents of the container shall be sub-itemed based on the last assignment by

FA. During this sub-item process, another Forensic Scientist shall verify that the sub-item numbering and description(s) of tubes(s) correctly identify the original number(s) and description(s). This shall be confirmed with a verification review in FA.

5.2 Storage - All evidence submitted for testing that is not actively being examined shall be stored as follows:

- All work product shall be refrigerated. Once DNA extracts are dried, they are considered evidence and are stored at room temperature.
- All evidence with the exception of liquid blood samples shall be stored at room temperature.
- All bone and tissue shall be stored in the freezer.

5.3 Evidence Security – All evidence shall remain in the possession of the employee who has signed for the evidence. Evidence shall be maintained in a secure area at all times. When being analyzed, evidence shall remain in the care and custody of the Forensic Scientist working the case.

5.3.1 Forensic Scientists shall lock doors to lab rooms where evidence is examined when they are not present in the room. When leaving the room, the doors shall be locked if the evidence is not placed in a locked cabinet or drawer.

5.3.2 The Section Evidence Vault shall be secured at all times other than when an employee is in the vault.

5.4 General Procedure

5.4.1 Victim and suspect hair evidence found in the Victim and Suspect kits, any hair found in the panties in the Sexual Assault Evidence Collection Kits and the hair standards may be transferred to the Trace Evidence Section; or, if all hair standards are not present returned to the submitting agency; or returned to the submitting agency based upon the results of the examination in the Forensic Biology Section. For other items of evidence, refer to the State Crime Laboratory Evidence Guide for the requirements for processing of hair evidence.

5.4.2 All liquid blood samples shall be removed from evidence packages and refrigerated until a blood stain can be prepared on S&S 903 paper (or equivalent). If the Forensic Scientist determines the sample is too old or degraded to be useful as a standard, the sample need not be refrigerated and a blood stain need not be prepared. All liquid blood samples shall be processed in a Biological Safety Cabinet. After preparation of the blood stain, the blood tubes shall be re-capped and the tube shall be placed in a heat sealed container and placed back with the evidence. The blood stain shall be sub itemed and packaged in a properly labeled and sealed coin envelope after it is dried.

5.4.3 To maximize the potential of obtaining results from minimal sample amounts, it is permissible to consume the entire piece of evidence during analysis. The complete consumption of the evidence shall be documented in the case notes and noted on the evidence packaging.

5.4.4 DNA Forensic Scientists shall return all evidence to the investigating agency. The work product shall be disposed of in the biohazard trash (excluding dried DNA extracts.)

5.4.5 Upon completion of the DNA analysis, DNA extracts shall be dried down and returned to the investigating agency as one Item number. The report shall state the following: Item_____ (this

would be the item number for the dried DNA extracts): Dried DNA extracts generated from Items ____ (list the item numbers) and the corresponding controls. The DNA extracts and their corresponding controls will be dried as follows:

- 5.4.5.1 Prior to use, wipe the interior of the incubator with a 10 % bleach solution followed by an ethanol wipe.
- 5.4.5.2 Briefly centrifuge the samples to remove any condensate that might be in the cap. Uncap the samples and place the samples in an incubator set to between 50 °C and 70 °C.
- 5.4.5.3 Let the samples dry (it may take 8 hours to overnight to dry). Once dry, remove and recap the samples, wrap each tube with Parafilm® (or equivalent) and place them in an envelope. Properly label and seal the envelope. (See 5.3.5 in the State Crime Laboratory Procedure for Evidence Management.)

5.5 Disposition of Human Remains

- 5.5.1 When the Forensic Biology Section returns human remains to investigating agencies, the Disposition section of the Lab Report shall contain the following statement (or equivalent):

NOTE: Evidence being returned in this case includes human remains which need to be kept frozen to avoid degradation and offensive odors.

5.6 External Transfer of Evidence

- 5.6.1 All evidence transfers to outside agencies and from another Laboratory shall be made through the Evidence Control Unit.
- 5.6.2 The only exception to 5.6.1 shall be the direct transfer of evidence between Forensic Scientist and officer (e.g., Evidence Control requests Forensic Scientist to review and evaluate a case). Paperwork shall be cleared through the Evidence Control Unit.

6.0 Limitations – N/A

7.0 Safety - N/A

8.0 References

State Crime Laboratory Evidence Guide

9.0 Records – N/A

10.0 Attachments – N/A

Revision History		
Effective Date	Version Number	Reason
09/17/2012	1	Original Document
12/07/2012	2	5.4.4 – added wording to exclude DNA extracts from being disposed
02/01/2013	3	5.4.1 – added wording to refer hair evidence to Evidence Guide, 5.4.6 – changed procedure to dry down using an incubator, removed speedvac option, added Evidence Guide as reference.
05/30/2013	4	5.1 - adjusted wording to make consistent with other Section documents
09/13/2013	5	5.1.1.2 – 2 nd paragraph renamed as 5.1.1.3; 5.1.1.4 – clarified wording; 5.1.1.5 - added procedure for resubmission of extracts for analysis; 5.4.1 – changed hair transfer requirement to align with trace requests based on the results of analysis; 5.4.5 - removed section (slides remain with associated swabs)