WHOLE BLOOD SAMPLE PRESERVATION

7.1 PURPOSE

To preserve whole blood samples for further analysis and/or long term storage.

7.2 RESPONSIBILITY

7.2.1: Personnel qualified to perform Forensic Biology Duties.

7.2.2: Ordering information is maintained electronically and/or in a logbook in the Forensic Biology Unit.

A. Products are purchased according to GL-6 (Purchasing).
B. For additional information, refer to the consumables inventory in Appendix 3.

7.3 SAFETY

Use appropriate measures for the proper handling of a biohazardous material according to GL-2 (Safety Manual).

7.4 DEFINITIONS/ABBREVIATIONS

A. FTA: Fast Technology for Analysis of Nucleic Acids
B. EDTA: Ethylenediaminetetraacetic Acid
C. PTT: Purple Top Tube
D. RTT: Red Top Tube

7.5 PROCEDURE

7.5.1: Materials

A. FTA Micro cards with provided foil pouches
B. Centrifuge tubes
C. Micropipette and tips
D. Wooden sticks
E. Desiccant packets
F. Appropriate disinfecting solution

7.5.2: Procedures

A. Record written information on the appropriate Quality Record Worksheet (Appendix 1).

B. Label the card with the case #, item #, donor name in quotes, date, examiner's initials and the type of tube (PTT, RTT).

C. Label the foil pouch with the case #, item #, donor name in quotes and type of tube.

D. Prior to sample removal:
   1. For samples collected in purple top tubes (EDTA) or other tubes containing anti-coagulant, thoroughly mix the blood.

2. For samples collected in red-top tubes (no anticoagulant), break up the blood clot with wooden sticks.

E. Remove a maximum of 125µl of the whole blood with a micropipette* and place on an FTA card, making the stain as concentrated as possible.
   1. Air dry the bloodstain card in the designated cabinet.
   2. Clean the micropipette after each use with the appropriate disinfecting solution described in FB SOP-21 (General Chemical and Reagent QC), followed by ethanol.

*A graduated disposable pipet may be used based on the condition of the blood or due to the presence of a low volume of blood.

F. Create (sub-itemize) the bloodstain in LIMS according to GL-4 (LIMS).
   1. Sexual Assault cases: Only the initials of the donor's name will be entered in LIMS. Quotes are not necessary.
   2. All other cases: The donor's name in quotes will be entered in LIMS.
   3. Print out a barcode and place on the pouch.

G. The pouch and bloodstain card will be handled according to sections 1.14.3 through 1.14.5 in FB SOP-01 (Evidence Examination and Sample Collection Guidelines).

H. Place the dried bloodstain card in the labeled foil pouch with a desiccant packet.

I. Seal the pouch and initial the seal.

J. Store the bloodstain in the appropriate designated secure storage location.

K. When necessary, aliquot approximately 125µl of whole blood into a sterile centrifuge tube (appropriately labeled), create (sub-itemize) in LIMS and handle as described above prior to transferring into the freezer for storage ("Freezer Storage - known bloodstains/aliquots").

L. For OCME bloods submitted with Autopsy Samples or additional Autopsy Samples, refer to FB SOP-06 (Autopsy Sample Preservation).

M. For additional information, please see FB SOP-02 (Sexual Assault Evidence Collection Kit Examination).

7.5.3: Suggested Report Statement

A. *A stain was made from a portion of item # [ ] (known blood sample).*
B. See FB SOP-05 (Case Records and Reports) for additional information

7.6 REFERENCES

A. Whatman FTA cards provided Technical and Protocol Information sheet
B. GL-2 (Safety Manual)
C. GL-3 (Purchasing)