WHOLE BLOOD SAMPLE PRESERVATION

7.1 PURPOSE

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

7.2 RESPONSIBILITY

Forensic Science Examiners (however titled) from the Division of Scientific Services who have been trained in the discipline of whole blood sample preservation according to FB SOP-26 (Training Manual and Checklist).

7.3 SAFETY

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

7.4 DEFINITIONS

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

B. Label the card with the Laboratory ID#, item #, donor name, date, initials of examiner and the type of tube (PTT, RTT).

C. Label the foil pouch with the Laboratory ID#, item #, donor name 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) and print out a barcode. Place the barcode on the pouch.

G. The pouch and bloodstain card will be accounted for and handled according to 1.5.4.R and 1.5.4.S in FB SOP-01 (Physical Evidence Examination).

H. The pouch and bloodstain card will be verified according to 1.5.4.U in FB SOP-01 (Physical Evidence Examination).

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

J. Seal the pouch and initial the seal.

K. Transfer and store the bloodstain in the "FTA Blood Storage" location.

L. When necessary, aliquot approximately 125ul 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").

M. For OCME bloods submitted with additional autopsy samples, refer to FB SOP-06 (Autopsy Sample Preservation).

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

7.5.3: Suggested Report Statement

A stain was made from a portion of item # [ ] (known blood sample).

7.6 REFERENCES

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