

ARMED FORCES REPOSITORY OF SPECIMEN SAMPLES FOR THE IDENTIFICATION OF REMAINS (AFRSSIR)

COLLECTION INSTRUCTIONS

1. Purpose

The following DNA collection instructions are designed to give specific direction to installations/sites on the collection and shipment of DNA reference specimens. *Questions concerning collection procedures and supply orders/reorders should be directed to the Armed Forces Repository of Specimen Samples for the Identification of Remains (AFRSSIR) at commercial telephone number (301) 319-0366 or DSN 285-0366, Commercial facsimile (301) 319-0369 or email AFRSSIR@afip.osd.mil. Duty hours are 0630 – 1730 hrs (EST), Monday through Friday.*

2. Collection Supplies

- a. A DNA specimen collection kit consists of a bloodstain card, single (see-through) shipping pouch with tape and a 1 gram desiccant packet. In addition, included with the collection kits are self-addressed mailing envelopes and drying racks. Available upon request are 6" x 8" transfer pouches, fingerstick devices, alcohol swabs, and pencils. Collection supplies are available in either individual packets or in bulk quantities for collection ease.
- b. All unique collection supplies used in collecting DNA specimens must either be provided by the AFRSSIR or approved by the AFRSSIR before use in the DNA collection procedure (specific requirements in fiber composition of the bloodstain card preclude the use of any substitutes).
- c. Supply orders are processed by the AFRSSIR Contract Ordering Officer. Supply requests are normally filled within 30 days after the order is received. If an order has not been received within 30 days, contact the ordering officer for assistance at the telephone numbers listed in paragraph 1.

3. Collection Procedures

- a. For personal safety, and to prevent contamination of the DNA specimen, collection personnel should wear clean non-powdered gloves when collecting and handling specimens.
- b. Bloodstain Card Data Information (see page 5, figure 1)
 - (1) The service member, deploying civilian or civilian contractor using a #2 pencil, or ball point pen (do not use felt tip or fountain pens) must complete all information in the requested format on the bloodstain card, and carefully blacken the appropriate blocks corresponding to the social security number (SSN) and branch of military service. The AFRSSIR requests that letters and numbers be made as close to the examples on the bloodstain card as possible. Bloodstain cards should not be discarded if the individual cannot make the alpha/numeric characters as depicted. As a general rule, if collection personnel can read the individual's name, SSN, date of birth, collection date, and branch of military service, then it can be assumed that AFRSSIR personnel can do the same. If collection personnel cannot decipher

the individual's writing, then the bloodstain card must be properly destroyed and the process repeated.

- (2) Have the **specimen donor** sign the card (not the individual collecting the specimen) using either a #2 pencil or ballpoint pen (do not use felt tip or fountain pens). Ensure that the signature corresponds to the name the individual places on the front of the bloodstain card.
- (3) Verify that all information is correct and complete on the bloodstain card using either a personnel roster or the individual's identification card.
- (4) Reserve and Guard Service Members must list their branch of service as USA, USMC, USN, or USAF. Do not select the *Other* block.

c. Blood Specimen Collection

NOTE: When collecting blood on the bloodstain card ensure that you do not cross contaminate the card with blood from another individual. This will interfere with the DNA identification process. Ensure that all work surface areas, gloves and other supplies are clean and free of blood and/or body fluids before proceeding with another collection.

- (1) Fingerstick Method: Place the bloodstain card so that the filter paper side containing the printed circles is facing up. Before any fingerstick is attempted, ensure that the area to be pricked on the individual's finger is cleansed thoroughly with an alcohol swab. Prick any finger except the right index finger, using the fingerstick device provided in the collection supplies. Each fingerstick device is designed to be used only once for safety purposes. Extra fingerstick devices will be furnished to ensure that collection personnel have enough devices on hand to complete the collection. Squeeze the pricked finger to produce droplets of blood. Touch the blood droplets to the appropriate circled areas of the bloodstain card so that the circled areas are at least half covered with blood. If more than one fingerstick is necessary, use a different finger for each stick until both circles are at least 50% covered with blood.
- (2) Venipuncture Method:
 - (a) Prior to venipuncture, ensure that the vacutainer tube bears the name and SSN identifiers specific to the service member, deploying civilian or contractor who is providing the blood specimen. Using standard sterile venipuncture techniques, draw the blood into a purple-top vacutainer tube which contains only EDTA. No other type of vacutainer shall be used. The AFRSSIR offers a 6" x 8" transfer pouch that can be used to keep an individual's bloodstain card and vacutainer of blood together. The use of this pouch will facilitate keeping a service member's collection material together until it can be spotted. **Do not send vials of whole blood with specimen cards to the AFRSSIR. The specimen card must be spotted with blood prior to submission to the AFRSSIR.** After spotting the specimen card, discard the tube/blood draw instruments in accordance with standard universal precautions concerning biohazard waste.
 - (b) To transfer blood from the vacutainer tube, place the bloodstain card with the filter paper side containing the printed circles face up. Ensure that name and SSN on vacutainer tube matches the donor card. Take precautions to prevent splatter or surface contamination,

remove the top of the vacutainer. For personal protection, if available, laboratory blood spatter shields should be used. Using a standard plastic disposable transfer pipette, place four drops of blood in the center of each circled area on the bloodstain card. Allow the blood to migrate throughout the circle to completely fill the circled area (for difficult blood draws attempt to fill at least 50% of the circled area). If required, additional blood droplets may be applied to fill the circle. It is acceptable to have blood outside the designated circles. Once the blood transfer is completed, dispose of the remaining blood, vacutainer, and pipette in an approved biohazard container. Do not reuse the plastic transfer pipette.

- (3) Drying the Bloodstain Card: After affixing the blood to the bloodstain card, allow the blood to dry at room temperature, using the drying racks furnished by the AFRSSIR.

NOTE: Do not stack the bloodstain cards or touch the bloodstained areas of the card while transferring the cards to the drying racks. Ensure that gloves and all surface areas of the drying rack are clean and free of blood or other body fluids. While placing the cards onto the drying rack, ensure that the wet bloodstained ends do not come into contact with other cards. This can be accomplished by alternating the bloodstained end of the card on the left and right sides of the drying rack.

d. Specimen Kit Reassembly

- (1) Once the bloodstain card has dried, remove one bar code label from the individual's bloodstain card and place it in the appropriate block on the side of the card that contains the blood pad circles.

NOTE: To prevent bacterial growth, do not seal the bloodstain card in the see-through shipping pouch with tape until it has dried completely. A minimum of 20 minutes is required. Depending on humidity and other environmental factors, more time may be required.

- (2) The remaining bar code labels can be used to identify the vacutainer tube of blood or the 6" x 8" transfer pouch. It does not matter which alpha character (A – C) is placed on the bloodstain card.
- (3) Separate and discard the instructions and any remaining unused bar codes from the bloodstain card by tearing along the perforation.

NOTE: If the filter paper containing the bloodstain is separated from the donor's identification portion of the card, the card is invalid and another specimen card must be completed. It is unacceptable to reattach the bloodstained filter paper to the card with tape, staples, or by any other means.

- (4) Place the bloodstain card with a 1 gram desiccant packet into the shipping pouch. Place the blood spotted end of the card into the pouch first. To prevent bulging, excess air should be removed by gentle hand pressure over the pouch prior to sealing. If using a self-sealing pouch, seal the pouch by first folding the lip closure on the perforated line that is located

approximately ¼” from the opening of the pouch. Remove the tape from the lip of the pouch to expose the adhesive and fold the lip of the pouch along the perforated line so that the adhesive adheres to itself. Press along the adhesive to ensure proper closure.

4. Shipment of Specimens to the AFRSSIR

- a. Place the sealed shipping pouches containing the bloodstained cards in the mailing pouch (maximum of 75 specimens per pouch) furnished with the collection supplies. **If personal data on the bloodstain cards is visible through the single shipping pouch, then the shipped specimens should be “double wrapped.”** The use of other suitable mailing containers (i.e. cardboard boxes) is permitted and encouraged. If using cardboard boxes it is not necessary to package the specimens in the mailing pouches; however, the box should be lined with a plastic bag. When ready for shipment, seal the box and place the furnished address label on the box.

NOTE: Shipping box size should not exceed 16” x 16” x 18”.

- b. Before sealing, place a sheet of paper in the shipping container with the following information:
 - Point of Contact (person responsible for specimen collection)
 - Mailing Address
 - Telephone Number (Commercial and DSN)
 - Fax Number (Commercial and DSN)
- c. It is not necessary to provide a list of donors with each shipment. The specimens can be mailed through the US Postal Service or shipped by an express carrier. **The shipper is responsible for all shipping charges.** If shipment cannot occur immediately, the shipping container should be stored in a cool dry place, away from direct heat. Specimens should be mailed within 10 days of collection to:

**ARMED FORCES INSTITUTE OF PATHOLOGY
ATTN: AFRSSIR
16050 INDUSTRIAL DRIVE, SUITE 100
GAITHERSBURG, MD 20877**

Figure 1: Donor Specimen Card

