

Fingerstick Collection for Lead and Hemoglobin Filter Paper Tests

STEPS PERFORMED BEFORE, DURING, AND AFTER BLOOD COLLECTION ARE OF PARAMOUNT IMPORTANCE.

Pre-Collection Preparation

Complete all areas of the laboratory requisition

Provide all patient information and accurate billing information.

Hand washing

Collector must thoroughly wash hands with soap and water, dry hands, and put on gloves. Assist patient in thoroughly washing his or her hands with soap and water. He or she should air dry hands or dry them using a sterile individually-wrapped gauze pad. To prevent contamination, instruct the patient not to touch anything or hold his or her wrist.

Prepare collection supplies

Lancet, sterile gauze, band aid, appropriate collection card. Open the matchbook-style collection card and place it on a clean, flat surface. **Do not touch the filter paper or the inner shiny surface of the collection card.**

Note: The outside surface of the collection card is considered contaminated. Do not allow the outside surface to contact the filter paper (i.e., do not fold the front flap under or behind the filter paper).

Fingerstick Collection

Blood filter paper testing requires that a single large drop of blood freely falls and is absorbed uniformly by the filter paper. The front and the back of the filter paper must show uniform and identical saturation with blood. (Refer to examples on reverse).

Step 1. Prepare patient's finger

1. Thoroughly scrub the fingertip of the third (middle) or fourth (ring) finger with an alcohol prep pad.
2. Allow finger to air dry or wipe dry with sterile gauze. **Note:** If alcohol remains on the finger, it will prevent the blood from forming a well-rounded drop and will make the sample unacceptable.

Step 2. Fingerstick and sample collection

1. Using a lancet, puncture the fingertip in the fleshy part of the finger, slightly to the side of the center and across (or perpendicular to) the grooves of the fingerprint. This enables the blood to form as a drop on the fingertip. If the puncture is parallel to the lines of the fingerprint, the blood will not form as a drop but will instead run down the finger, making correct collection impossible. (See fingerstick examples below)

Correct Fingerstick:



Puncturing across grooves of fingerprint; a round drop of blood will form

Incorrect Fingerstick:



Puncturing parallel to grooves of fingerprint; blood runs down finger; will not form into a drop

2. Using dry, sterile gauze, wipe the first drop of blood from the finger as it is contaminated with excess tissue fluid.
3. Allow a large drop of blood to form on the fingertip. To enhance blood flow, apply gentle, intermittent pressure to finger beneath and surrounding the puncture site. **Note:** Do not use strong, repetitive pressure or "milk" the site; this causes tissue fluid contamination.
4. With the fingertip over the filter paper, turn the finger over so that the puncture site points downward.
5. Allow the single, large drop of blood to fall freely onto the filter paper.
 - Never put a second drop of blood on top of blood already on the paper.
 - Never touch the finger with the blood drop to the paper.

6. Collect at least three large, separate blood drops that:

- Evenly saturate the filter paper so that they appear the same on the front and back of the paper (see examples on reverse).
- Are at least the size of the black circles (10mm diameter).
Note: Blood spots do not have to be within the black circles but must be large enough for testing.
- Never put a second drop of blood on top of blood that is already on the paper (i.e., multiple drops). This makes the collection unacceptable for testing and requires cancellation for being smeared, non-homogeneous, or unsuitable (see examples on reverse).

Step 3. Evaluate sample collection

Examine the back side of the filter paper to ensure that the blood has soaked evenly through to the back of the paper. **If not acceptable, repeat fingerstick and recollect sample on a new collection card.**

Step 4. Label collection card

Label the front of the collection card by applying the bar-coded sticker from the requisition into the box on the card or writing the name and patient ID number on card. **Note:** Information must match the requisition. Cards without a label or identifying information will not be tested.

Step 5. Dry collection card

Allow the opened collection card to air dry for at least two to five minutes.

Step 6. Package and send collection card to MedTox Laboratories

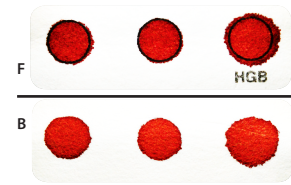
1. Place the dry card into the plastic bag in the kit. **Note:** Samples that are received wet cannot be tested. This occurs when cards are immediately placed into plastic bag or when filter paper is saturated with too much blood.
2. Seal the bag by pressing its seams together along the length of the bag's opening.
3. Place the white copy of the requisition and the sealed plastic bag with the labeled collection card into the postage-free envelope.
4. Seal the envelope by pulling its adhesive strip cover off and then pressing the exposed adhesive strip along its length against the envelope.
5. Send through US mail.

Specimen Collection Examples

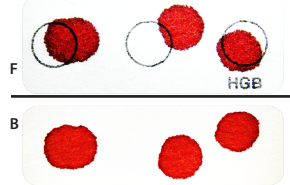
For the examples below, **F** represents the front of a card and **B** represents the back of a card.

Acceptable Specimens

Optimal



Acceptable



- Even distribution of blood that soaked uniformly through to back of paper
- Three large spots of optimal size (10mm diameter) from single drops of blood
- **The blood does not have to be within the black rings**

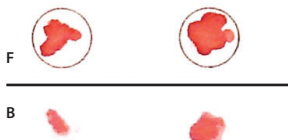
Use of Card for Testing



- Two punches (5 mm in diameter) are removed by a semi-automated sampler for initial analysis
- Up to six punches may be required for final results

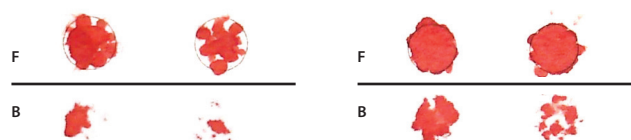
Unacceptable Specimens

Quantity Not Sufficient (QNS) and multiple spots

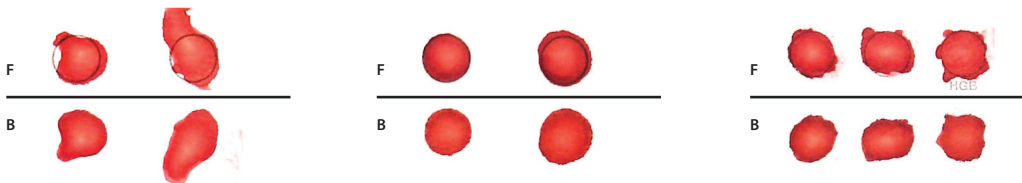


Smearred Samples

Blood did not soak through to back of paper and multiple blood spots applied



Non-homogeneous Samples



- Blood does not evenly saturate the paper; the central pallor (the edges of the blood spot are darker than the center) is evident on front and back of the paper
- Concentric rings are present that indicate multiple drops of blood applied; more evident on back of filter paper
- Sufficient blood that is unevenly distributed and unacceptable for testing
- Causes:
 - Blood drops are applied on top of one another (must use a single, large blood drop)
 - Touching the fingertip with blood to the filter paper (a single, large drop must fall freely unto paper-- it cannot be "touched off")
 - Excess tissue fluid contamination or alcohol residue because the first drop of blood is not wiped off

For questions concerning this service or the collection process, contact your sales representative or call MedTox Client Services at **1.877.474.5767**.

