

## Collection of Fingertick Whole Blood on Filter paper for Blood Lead Determination

Collection technique is of primary importance when obtaining samples for blood lead determination. Lead is everywhere in the environment. **Great care must be taken to remove lead from the hands of the patient and collector and to prevent contamination from the environment.**

The following technique will produce a sample that is free from contamination and produce an optimum analysis.

Note: **Collection area should be clean and free of dust.**

1. Fill out all information on the laboratory requisition form or in your electronic order.
  - a. All patient information must be provided to follow state lead reporting guidelines.
  - b. Accurate billing information must also be provided.
  - c. Write patient's name and date of birth on the space provided on back of sample card, using care to avoid contaminating or touching the collection circles.
2. Collector should wash their own hands prior to collecting sample.
  - a. NOTE: Wear powder-free disposable gloves when handling collection card and when collecting sample.
3. Thoroughly wash the patient's hand or foot\* with soap and warm water.
  - a. Use of a brush may help improve circulation.
  - b. \*Use of heel is recommended for infants generally 6 months or under who have not begun to stand or walk.
4. Once site has been washed, instruct patient not to touch anything, although it is acceptable to dry the child's fingers with individually wrapped sterile gauze.
  - a. The hands of small children should be held at the wrist to prevent contamination.
5. Open the sample card to expose the filter paper and detach the outer instruction sheet by grasping thumb notches printed on the card between thumb and forefinger of each hand and snap card apart.
6. Place opened card on clean, flat surface.
7. Disinfect site on patient finger or heel by thoroughly scrubbing site with an alcohol prep pad.
  - a. Let air dry for 30 seconds or wipe with sterile gauze.
8. Use a lancet to pierce the skin of the prepped finger or heel.
9. Wipe off the first drop of blood with sterile gauze.
10. Allow large drops of blood to form and apply directly to filter paper, saturating one circle at a time.
  - a. Do not layer successive drops.
  - b. Apply to one side of the card.
  - c. Avoid allowing finger/heel to touch the filter paper.
  - d. Do not apply blood with a capillary tube.
  - e. NOTE: The circles are provided as a guide for the approximate size and location of the blood spots. The sample is acceptable if the blood spots fall outside of the circles as long as they are of adequate size and soak through to the back side of the filter paper and do not oversaturate the card.

11. Blood flow from the puncture site is enhanced by holding the puncture site downward. Do not squeeze excessively ("milk"), as this will introduce tissue fluid which dilutes the sample.
12. Allow the blood spots to dry at room temperature in a horizontal position for 2 or more hours.
13. Do not stack wet specimens. Do not expose specimens to heat or direct sunlight.
14. After specimen is completely dry, fold cover at score line, over the sample, and tuck into flap to create a "matchbook". Place the sample card into a sealable zip top bag.
15. Place the white copy of the requisition and the sealed bag with the sample card into the postage-paid envelope. Return to Corewell Health Laboratory via your Corewell Health Laboratory Courier or the U.S. Mail (USPS).

**IMPORTANT:**

Immediately discard any sample card that has been contaminated, handled on the filter paper section or that has fallen onto an unprotected surface.