

Biochemical Collection Guidance¹

Accurate testing requires standardized technique, accurate & calibrated equipment, and trained staff.
Use the following guidance when collecting biochemical data.

A **hemoglobin or hematocrit** test for anemia must be completed at the WIC certification and/or obtained from referral sources for applicants following time frames per category in IL WIC PM CS 6.3. Hemoglobin or hematocrit testing may be deferred up to 90 days following IL WIC PM CS 6.4. This also applies when exceptions are made to physical presence (IL WIC PM CS 2).

As part of the WIC assessment, all applicants must be asked if they have had a **blood lead test**. If a participant has been tested (verbal statement is allowable), staff should include the results in WIC MIS and offer education and counseling as appropriate. If a child has not had a test, a referral must be made and documented in WIC MIS (IL WIC PM CS 13.4).

Measuring Hemoglobin with blood sample

1. Turn on testing device.
2. Wash hands and put on new disposable gloves for each participant.
3. Collect required materials: remove cuvette from vial, lancet, gauze, alcohol wipe, bandage.
4. Participant should be comfortably seated. If child, may be held by head of household.
5. Ensure finger is warm to touch or have client wash with warm water prior to testing.
6. Use the middle or ring finger for sampling.
7. Clean finger with alcohol wipe and dry completely using a gauze pad.
8. Keep finger in a downward position and gently massage for blood flow, avoid going past the first knuckle. Do not "milk" the finger.
9. Using a lancet, prick the upward side of the fingertip, slightly off center near the side of the fingertip.
10. Wipe away the first 2-3 drops using the gauze pad.
11. Using a large droplet, fill the cuvette by touching its pointed tip to the middle of the blood drop, filling the cuvette completely. Wipe excess blood from outside of cuvette. Never refill or top off the cuvette. If air bubbles are in cuvette, repeat collection with a new cuvette.
12. Cover skin with gauze and apply gentle pressure.
13. Insert cuvette into analyzer. Once results are obtained, apply bandage. Due to choking risk, it is not recommended to apply a bandage to a child less than 2 years old.
 - a. If results are too low or too high, repeat test with new cuvette². This can often be done using the same puncture site, provided that excessive pressure was not applied.
14. Dispose of used cuvette and lancet into sharps container and other nonhazardous waste into trash.
15. Remove and discard gloves. Wash hands or use approved hand sanitizer.
16. Record measurement.

Measuring Hemoglobin with non-invasive machine

1. Turn on testing device (should not be placed in direct sunlight during testing).
2. Ensure participant is comfortably seated. If child, may be held by head of household.
3. The participant should be sitting during the reading, holding their finger or thumb as still as possible.
4. Select a pediatric or adult sensor and connect to the device. Children must weigh at least 22 lbs. to use the pediatric sensor.
5. Place sensor on the participant's finger. The finger must cover all lights within the sensor to accurately work. For children, place sensor on their thumb.
6. Inaccurate readings may be due to nail polish or excessive ambient light such as sunlight.
7. Begin the test and wait for the timer to countdown.
8. If results displayed too low or too high, repeat test or test with a blood sample machine².
9. Record measurement.
10. Wipe sensor with alcohol pad.

1. This guidance follows general manufacturer guidelines for accurate testing. Consult with your WIC Coordinator for your agency's protocol and read the operating manual for the system your agency uses.

2. For details on hemoglobin levels refer to the Addendum USDA WIC Nutrition Risk Manual (IL WIC PM CS 6.1).