



# SAN LUIS OBISPO COUNTY Public Health Laboratory

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[www.sloPublicHealth.org/lab](http://www.sloPublicHealth.org/lab)

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## SPECIMEN COLLECTION & TRANSPORT INSTRUCTIONS

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### Blood Lead Testing

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#### Specimen Collection Procedure for Blood Lead Testing with LeadCare II System

##### I. Specimen Collection:

Only use the heparinized Capillary Tubes provided with the LeadCare II Test Kit. The Capillary Tube must be filled to the fill line (50 $\mu$ l) for accurate results. Check to make sure that the tube is free of gaps and bubbles. After collection, wipe the Capillary Tube with gauze pad (wipe downward). The accuracy of the test depends on the precisely measured sample.

1. Place all collection materials on top of disposable pad. Label a Treatment Reagent tube with the patient ID using the label provided. Open the lancet, alcohol swabs, gauze, bandage, and other items. Have all items ready for blood collection.
2. Wash hands with soap. Do not use recycled disposable paper towels. Allow to air dry. Do not allow child's finger to touch any surface. Put on your powdered free gloves.
3. Remove a Capillary Tube and Plunger from container and place on top of lid of container to have ready for use.
4. Remove the Treatment Reagent cap from the labeled tube and place it top down on pad. Do not allow the inside of the cap to touch anything. This could contaminate the sample.
5. Massage the patient's hand and lower part of the finger to increase blood flow. Turn the hand down.
6. Scrub the patient's middle finger or ring finger with an alcohol swab.
7. Hold the finger in a downward position and lance the palm side surface of the finger.
8. Apply slight pressure to start blood flow. Blot the first drop of blood on a gauze pad and discard in appropriate container.
9. Keep the finger in a downward position to maintain blood flow. Hold the Capillary Tube at an angle of 10 degrees below the collection site and touch the tapered end of the tube into the droplet of blood. Do not touch the skin with the tube. Fill to the 50  $\mu$ L black line. Filling stops when the sample reaches the black line.
10. Remove excess blood from the outside of the tube with a clean wipe or gauze pad. Use a downward motion to wipe excess blood from the capillary tube. Use caution not to absorb the blood from the end of the Capillary Tube.
11. Inspect the Capillary Tube for proper filling. Make sure there are no gaps, air bubbles, or any excess blood on the outside of the Capillary Tube.
12. Place the full Capillary Tube in the Treatment Reagent. Insert Plunger into the top of the Capillary Tube and push down, ensuring to dispense the entire volume into the Treatment Reagent.
13. Replace the tube cap. Invert the tube 8 to 10 times to mix the sample completely.
14. The test sample is ready when the mixture turns brown.
15. Once the sample is collected, apply slight pressure to the finger to stop the bleeding. Apply a sterile adhesive bandage over the puncture site.

##### Other Acceptable Specimens:

Venous samples can also be tested.

1. Samples Collected in Micro-Vials or Vacuum Collection Tubes.
2. Use only heparin or EDTA as anticoagulants. If you use EDTA collection tubes, they must be a least one half full otherwise you obtain falsely lower blood lead results.
3. Use only fresh whole blood. Use the blood within 24 hours of collection. Store at 50°-

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90°F (10°-32°C).

### II. Rejection Criteria:

1. Blood in the Capillary Tube that was not transferred to Treatment Reagent within 10 minutes of collection.
2. Expired Heparinized Capillary Tubes and or Treatment Reagent.
3. Unlabeled or mislabeled specimens.
4. Specimen containers that are broken and/or leaking.
5. Specimen received at room temperature past the 48 h holding time.

### IV. Storage of Clinical Specimens:

The mixture of blood and Treatment Reagent is stable for up to 48 hours at room temperature and up to 7 days refrigerated.

### VI. Transport

1. Return all materials including samples to be tested provided by the laboratory in container provided within 24 h.

Deliver to: San Luis Obispo Public Health Laboratory, 2191 Johnson Ave, San Luis Obispo, CA 93401