

# LEAD POISONING



## LEAD TESTING QUICK GUIDE

With LeadCare II® Analyzers

### Using LeadCare II® Analyzers

#### Supplies Needed for Testing

- LeadCare II® Test Kit
- Sterile Lancet
- Alcohol Wipe
- Gauze pads
- Bio-hazard container
- Disposable gloves
- Lab coat & safety glasses
- Band-aids®
- Absorbent cover for supplies to be placed on
- Soap & water to clean collection site
- Neutralizing Solution (7.5% Sodium Bicarbonate  $\text{NaHCO}_3$ )

#### Calibrating

Calibrate your analyzer to the lot number in use per manufacturer instructions

#### Calibrate with key and button:

- The first time you use the analyzer
- Each time you use a new test kit
- When the analyzer displays a recalibration message

### Collecting Capillary Specimens for Lead

#### Personal, Patient and Area Prep

1. Designate a clean work area dedicated to blood lead testing.
2. Warm hands under warm water to ensure good blood flow.
3. Scrub area on child to be punctured with soap & water. If water is not available, thoroughly rinse designated finger with soap and water solution dispensed from a goose-neck squirt bottle.
4. Allow puncture site to air dry. Don't let area come in contact with other surfaces.

#### Testing

1. Scrub area to be punctured with soap & water. If water is not available, thoroughly rinse designated finger with soap and water solution dispensed from a goose-neck squirt bottle.
2. Clean area to be punctured with the alcohol pad & dry with gauze pad.
3. Using a lancet, puncture the finger pad to the side of the center.
4. Wipe away the first drop of blood.
5. Hold the heparinized capillary tube almost horizontally, with the green band on top, fill to the 50  $\mu\text{L}$  black line. Filling stops when the blood reaches the black line.
6. Remove the excess blood from the outside of the tube with a clean gauze pad. Use a downward motion to wipe excess blood from the capillary tube.
7. Dispense blood sample into treatment reagent vial. Invert the treatment reagent/blood mixture 8-10 times to mix the blood.
8. Insert sensor into LeadCare II® Analyzer until it beeps and use transfer dropper to deposit sample onto the "X". The test will automatically begin. Record the result on the display window after 3 minutes.
9. Report all results. "Low" in the display window indicates a result less than 3.3 mcg/dL and must be reported as "less than (<) 3.3 mcg/dL".

#### Disposal

1. Use an estimated four drops (40 $\mu\text{L}$  ea.) of 7.5% sodium bicarbonate ( $\text{NaHCO}_3$ ) neutralizing solution, to neutralize remaining contents in reagent vial to a pH between 2.0 - 12.5.
2. Dispose this along with other materials in bio-hazard container.

QUESTIONS ON REPORTING

1-603-271-3968

L.E.A.D. is an initiative out of the City of Nashua Division of Public Health and Community Services, Greater Nashua Public Health Network Services

Call 1-603-589-4500 or Visit [NashuaNH.gov/LEADGreaterNashua](http://NashuaNH.gov/LEADGreaterNashua)

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### Troubleshooting for LeadCare II® Analyzers

*Common issues, retesting, and information on venous confirmations*

#### Child less than 1 year old

- Do a heel puncture. If difficulty arises with obtaining a specimen from the heel, use the large toe.

#### Unexpected Results

- Please refer to the Troubleshooting section of your LeadCare II® User's Guide.
- Elevated results may be due to skin contamination from not washing skin surface properly or contamination during the collection procedure. Confirm with a second specimen.
- Specimen may have had clotted blood.
- The analyzer was moved and has not warmed up to room temperature.
- Not enough blood was collected in the capillary tube.
- Mix blood with treatment reagent immediately and run test within 48 hours or refrigerate for up to 7 days.

#### Any result equal to or exceeding 5 mcg/dL or uncertainty in validity of the test

- Refer patient for [confirmatory venous testing](#)

#### If receiving a continuous error message

- Contact LeadCare II® Analyzer Product Support at **1-800-275-0102**

#### Things to Remember

- Run Controls according to manufacturer instructions.
- The accuracy of the test depends on hand washing prior to sample collection and filling the capillary tube properly.
- Make sure blood reaches the 50µL black line without gaps or bubbles.

#### Confirmatory Venous Testing based on Capillary Blood Lead Level

**<5 mcg/dL**

- Test at ages 1 and 2.
- Test annually until age 6 based upon risk factors (pre-1978 housing, pica, siblings with EBLs.)

**5 - 9 mcg/dL**

- Retest in 3 months

**10 - 19 mcg/dL**

- Venous confirmation in 1 month regardless of age

**20 - 44 mcg/dL**

- Venous confirmation in 1 week regardless of age

**45 - 69 mcg/dL**

- Confirm within 48 hrs. regardless of age
- Any result >65 mcg/dL will be displayed as HIGH. All "HIGH" results should be followed up immediately as an emergency laboratory test.

**Distribute *Lead and Children* factsheet to parents of any child with a blood lead test result detecting any presence of lead.**

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