

# VERMONT DEPARTMENT OF HEALTH LABORATORY DIVISION

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PLEASE READ INSTRUCTIONS CAREFULLY BEFORE COLLECTING SPECIMEN/SAMPLE

In order to comply with postal regulations and ensure the safety of laboratory personnel and others involved in the transport and receipt of blood specimens, and to maintain integrity of the specimen, the Vermont Department of Health Laboratory (VDHL) will accept for testing only those specimens that are packaged according to the instructions below.

## Instructions for Capillary Blood Lead Specimen Collection

**It is imperative that all steps be carried out with meticulous attention to detail, in order to minimize the risk of contaminating the blood specimen with lead. A large majority of false positive capillary specimen tests are due to errors in collection technique.**

### **A.1 Collection Kits provided by the VDHL\***

1. Microvette tubes with EDTA
2. Biohazard labeled lock-seal bags with patient ID sticker
3. Prepaid mailing tubes
4. VDHL Clinical Test Request form MICRO 220

### **A.2 Materials required but not supplied:**

1. Sterile isopropyl (70%) alcohol pads
2. Gauze pads (may be non-sterile)
3. Lancet for creating finger-stick or heel-stick
4. Sterile adhesive strip

\*Please request and use Order Form Tox 501 to obtain these supplies.

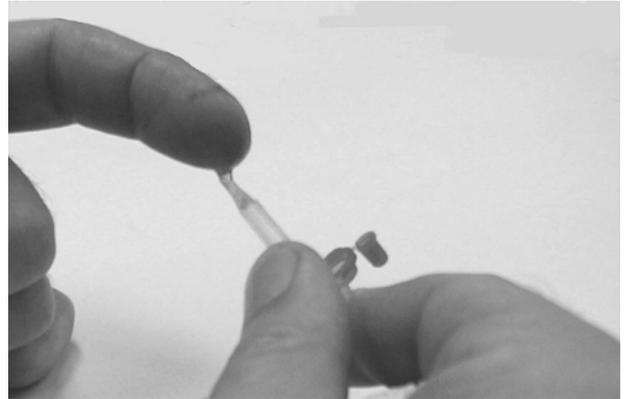
### **B. Preparing the site**

1. Universal precautions against blood borne pathogens must be observed throughout the procedure. This includes pre-test and post-test decontamination of testing surfaces as normally performed in your practice.
2. Pre-testing preparation:
  - a. Set out specimen collection materials on a clean dust-free work surface.
  - b. Loosen Microvette tube from its outer sleeve and remove small end cap, which fits over the narrow end collection tip. Place on a clean work surface, gauze pad or paper towel.
  - c. Fill out the name/dates on the patient label on the lock-seal bag.
3. Sample site selection recommendations:
  - a. Infants up to 1 year: use of the plantar surface of the heel is recommended.
  - b. Children aged 1 year and over: use the palmar surface of the finger, above the most distal flexion joint. Puncture perpendicular to the finger line. Do not puncture the tip of the finger in an in-line direction.

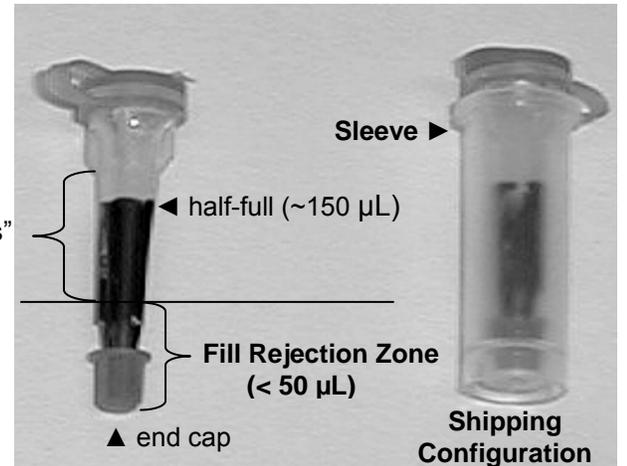
### **C. Collecting the Specimen**

1. Put on disposable gloves.
2. For heel-stick: Massage the site to be punctured for about 30 seconds with an alcohol wipe. Thoroughly dry the site with a gauze pad while continuing to massage the area for about 15 more seconds.
3. For finger-stick: Massage the distal 2/3 of the finger for about 30 seconds with an alcohol wipe. Thoroughly dry the site with a gauze pad while massaging the finger for approximately 30 more seconds. If child's hand (or heel) is visibly dirty, wash with soap and warm water before proceeding

4. Perform the stick using an appropriate lancet for the site selected.
5. Wipe away first drop of blood with a clean gauze pad.
6. Hold the Microvette tube (open at both ends) with the narrow end pointed upwards, then contact the drop of blood to initiate filling. You may need to try different angles so gravity will enhance capillary filling action. Be careful that blood does not drip out of the large open end of the tube.



7. Tube should be at least half-full (~150  $\mu$ L). Please refer to the picture below to assess the adequacy of your specimen blood volume. **Rejection Criteria:** Specimens filled less than the **Fill Rejection Zone** will not be accepted.
8. After collecting a suitable size specimen, close the tip of tube first with the small end cap. Then seal the wide end of tube with attached flip cover.
9. Insert collecting tube into outer sleeve and snug down. Tap both ends of the packaged sample vigorously against a tabletop several times. This essential step will provide better mixing of the blood with the EDTA anticoagulant to prevent the formation micro-clots that could potentially interfere with reliable sample analysis.



#### D. Submitting the Specimen

1. Place capillary tube in pre-labeled lock-seal bag marked "Biohazard." Write patient's name, date of birth and date of collection on the patient identification label.
2. Complete all applicable sections of the VDHL Clinical Test Request Form (*Micro 220*). **Be sure that the spelling of the patient's name, DOB and collection date is both legible and consistent between specimen label and requisition form.**
3. Place specimen and request form into a postage pre-paid mailer and cap the mailing tube tightly.
4. Mail or deliver the specimen to the Vermont Department of Health Laboratory promptly. If unable to send the specimen the same day, it is recommended that you refrigerate until able to do so.

#### The specimen may be rejected if:

- Date of specimen collection is missing on the specimen and form
- Patient name is missing on the specimen and form
- Medical provider name / address is missing on the form
- Quantity Not Sufficient (QNS) – see step # 7
- The specimen is leaking

THE LABORATORY WILL DECONTAMINATE AND DISCARD ANY BLOOD SPECIMEN WHICH IS IMPROPERLY PACKAGED AND MAY PRESENT A RISK TO PERSONNEL.

If you have any comments or suggestions regarding these instructions, please call the laboratory.