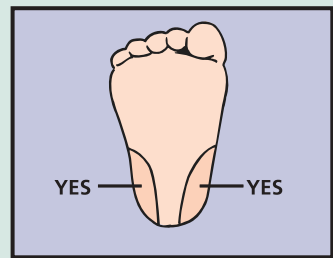


Newborn Capillary Blood Collection Methods Using the BD Quikheel™ Lancet

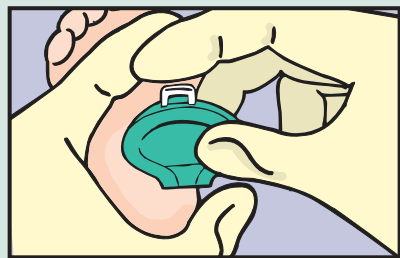
Performing a Heel Stick

NCCLS H4-A4 Recommended Guidelines:

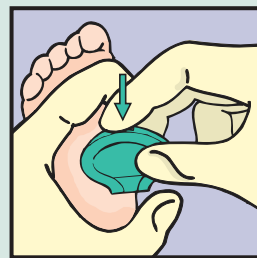
1. Warming the infant's heel is essential for pH and Blood Gases.
2. Warming the heel increases arterial blood flow to the site up to seven-fold without burning the skin.
3. Temperature of warming device should be no higher than 42°C.



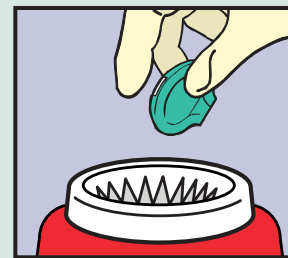
- Select a site identified in the colored area above.
- Cleanse site thoroughly with alcohol. (70/30 by volume, 70%).
- Allow skin to air dry.



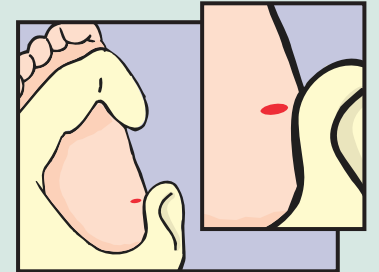
- With a gloved hand, place the **BD Quikheel™ Lancet** against the site with the Quikheel logo facing you.
- Place the blade slot area securely against the heel.
- The incision can be placed at a 90° angle to the length of the foot or parallel to the length of the foot.



- Firmly and completely depress the trigger with your index finger.



- After triggering the lancet, remove the lancet and discard it into a biohazard sharps container.

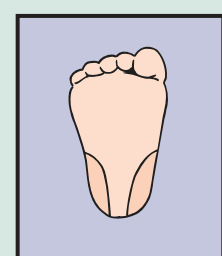


- Gently wipe away the first drop of blood with sterile gauze or cotton ball.
- Apply gentle pressure with the thumb and ease intermittently as drops of blood form.
- **Be sure to apply pressure such that the incision is opened.**

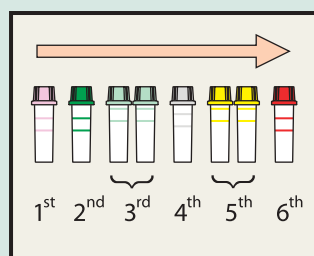
Filling BD Microtainer™ Tubes with BD Microgard™ Closure



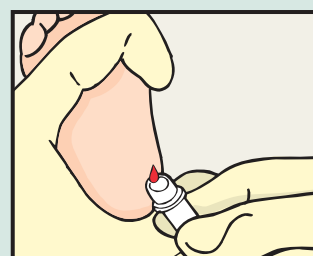
- Obtain necessary supplies:
 - Gloves (powder free)
 - Lancet
 - Gauze or cotton balls
 - BD Microtainer Tubes with BD Microgard Closure
 - Alcohol pad
 - Sharps Collector
 - Heel warmer (if used)
- Confirm the identity of the newborn.



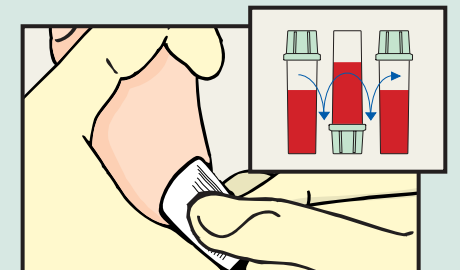
- Conduct Heel Stick as outlined in the **"Performing a Heel Stick"** Section above.



- The order of draw for micro collection differs from that of venipuncture.
- If multiple specimens are to be collected, including EDTA specimens, the EDTA specimen is drawn first to ensure adequate volume and accurate hematology test results.
- Additive specimens are collected next.
- Specimens requiring serum are collected last.



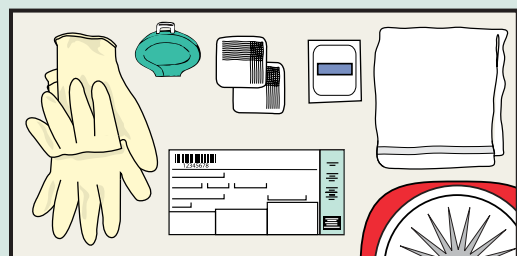
- Collect the specimen with the Microtainer Tube by allowing the blood to run into the collection scoop, while holding at a 30-45° angle.
- Ensure that the tube is not scraped over the puncture site.



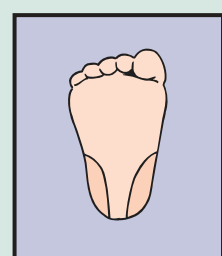
- After blood has been collected from the heel of the newborn, the foot should be elevated above the body.
- A sterile gauze pad or cotton swab should be pressed against the puncture site until the bleeding stops.
- It is not advisable to apply adhesive bandages over skin puncture sites on newborns.
- Mix all Microtainer Tubes with Microgard Closures with the following inversions.

EDTA - 10 X Lithium Heparin - 10 X
PST - 10 X Glucose - 10 X
SST - 5 X Serum - 0 X

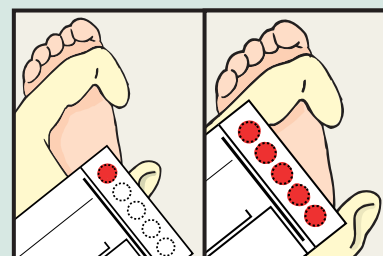
Completing a Filter Paper Card



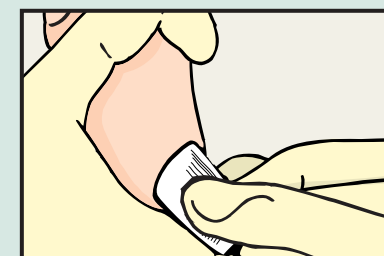
- Fill out all relevant information on the filter paper card prior to collection.
- Take precautions not to touch the filter paper while filling out the relevant information.
- Obtain necessary supplies:
 - Gloves (powder free)
 - Lancet
 - Gauze or cotton balls
 - Filter paper
 - Alcohol pad
 - Sharps Collector
 - Heel warmer (if used)
- Confirm the identity of the infant and ensure linkage with the demographic data on the card.



- Conduct Heel Stick as outlined in the **"Performing a Heel Stick"** Section above.



- The filter paper should be touched gently against the large blood drop and, in one step, a sufficient quantity of blood allowed to soak through to completely fill a preprinted circle on the filter paper. The paper should not be pressed against the puncture site of the heel.
- Blood should only be applied to one side of the filter paper.
- Both sides of the filter paper should be examined to assure that the blood uniformly penetrated the saturated paper.

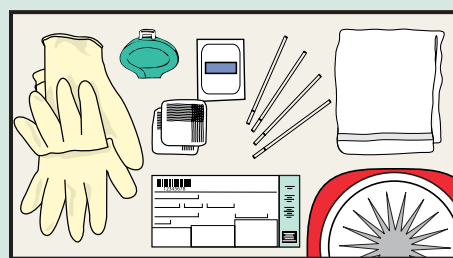


- After blood has been collected from the heel of the newborn, the foot should be elevated above the body.
- A sterile gauze pad or cotton swab should be pressed against the puncture site until the bleeding stops.
- It is not advisable to apply adhesive bandages over skin puncture sites on newborns.
- Allow filter paper to dry thoroughly on a horizontal, level, non-absorbent open surface for three hours at ambient temperature and away from direct sunlight.
- Touching or smearing of blood on the filter paper must be avoided.

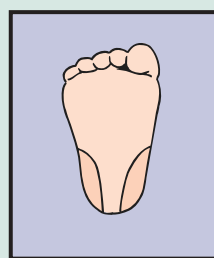
Alternate Filter Paper Method

NCCLS LA4-A3 Recommended Guidelines:

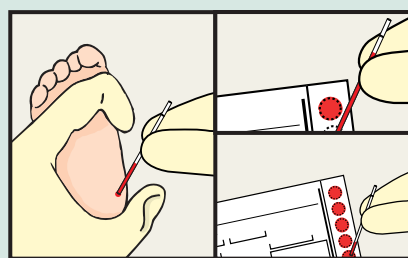
1. Although this is not the preferred method, applying blood collected in sterile heparinized capillary tubes onto preprinted circles of filter paper is an acceptable alternative to applying the blood directly from the heel puncture site.
2. One capillary tube for each circle.
3. Each capillary tube should collect approximately 75-100µL.



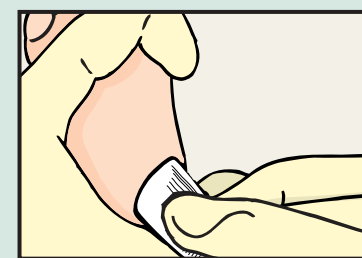
- Fill out all relevant information on the filter paper card prior to collection.
- Take precautions not to touch the filter paper while filling out the relevant information.
- Obtain necessary supplies:
 - Gloves (powder free)
 - Lancet
 - Gauze or cotton balls
 - Filter paper
 - Heparinized capillary tubes
 - Alcohol pad
 - Sharps Collector
 - Heel warmer (if used)
- Confirm the identity of the infant and ensure linkage with the demographic data on the card.



- Conduct Heel Stick as outlined in the **"Performing a Heel Stick"** Section above.



- The tip of the heparinized capillary tube should be touched to the drop of blood formed at the heel puncture site.
- After filling each capillary tube to the calibration mark, the contents of the tube should be immediately applied to the center of a single preprinted circle completely.
- Blood should only be applied to one side of the filter paper.
- Both sides of the filter paper should be examined to assure that the blood uniformly penetrated the saturated paper.



- After blood has been collected from the heel of the newborn, the foot should be elevated above the body.
- A sterile gauze pad or cotton swab should be pressed against the puncture site until the bleeding stops.
- It is not advisable to apply adhesive bandages over skin puncture sites on newborns.
- Allow filter paper to dry thoroughly on a horizontal, level, non-absorbent open surface for three hours at ambient temperature and away from direct sunlight.
- Touching or smearing of blood on the filter paper must be avoided.

BD Vacutainer™ Technical Services: 1.800.631.0174
BD Customer Service: 1.888.237.2762



Handle all biologic samples and medical "sharps" (lancets, needles and transfer straws) according to the policies and procedures of your facility. Obtain appropriate medical attention in the event of any exposure to biologic samples (for example, through a puncture injury) since they may transmit viral hepatitis, HIV (AIDS), or other infectious diseases. BD does not recommend resheathing used needles, but the policies and procedures of your facility may differ and must always be followed. Discard any medical "sharps" in biohazard containers approved for their disposal.

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