

# Finger Stick (Capillary Whole Blood) Sample Collection: Tips and Tricks from the Field\*

Capillary whole blood (CWB) sample collection is not complicated but there is a learning curve for most users/sites. This list includes tips from early adopters in the field. Not all sites find the same tips helpful, so you will need to determine which tips work for your site and patient population.

## 1 Choose the lancet

- Use a high-flow lancet with a penetration depth of at least 2mm and a wide width (for example, the Accu-Chek Safe-T Pro Plus or the BD Microtainer® Contact-Activated Lancet).

## 2 Choose the hand

- Consider the non-dominant hand
- For clients who smoke with a glass pipe, consider choosing the hand that doesn't hold the pipe

## 3 Choose the finger

- The least calloused finger is best

## 4 Warm the hand



- Hold a hot beverage
- Hold a hand warmer
- Hold a glove filled with hot water
- Immerse the hand in hot water

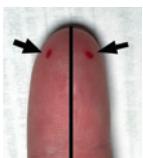


## 5 Increase blood flow to the hand and finger



- Clench and unclench the fist multiple times
- Massage the hand and finger
- Hold pressure on the fingertip

## 6 Select the spot to puncture



- Slightly to the side of the fingertip

## 7 Puncture technique





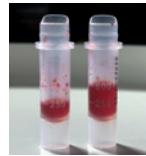

- Puncture with the hand and finger positioned below the arm
- Puncture perpendicular to the lines ("whorls") of the fingerprint. This cross-sectional puncture lets the blood form beads and prevents it from flowing down the lines of the fingerprint
- Press firmly into the finger when activating the lancet
- Puncture while the finger is against a hard surface
- Puncture while holding pressure against the finger

## 8 Collecting the blood with the BD Microtainer®



- Have the client hold their hand with the palm facing down so gravity assists with blood flow
- Touch collector end of the BD Microtainer® to the drop of blood
- Massage finger with gentle pressure to promote blood flow while collecting the sample
- Gently tap tube on a chair or table in between drops to bring the blood to the bottom of the tube to avoid early clotting

## 9 Sufficient sample volume is critical!



- 250–500 microliters of blood are required; insufficient sample quantity can lead to problems aspirating the sample into the pipette, transferring the sample to the cartridge, and may trigger an insufficient volume error when the test is run.
- Immediately after you have finished collecting the sample, invert the tube at least 10 times to mix it.

## 10 Aspirating the sample into the pipette



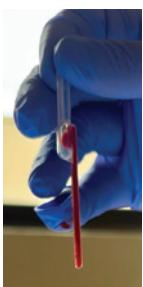
- Before aspirating the sample, mix the sample again by gently inverting the tube 10 times. If the sample has been sitting in the microtainer for more than 15 minutes, invert the tube 20 times



- Before inserting the pipette into the Microtainer®, squeeze top bulb of pipette completely until the two sides touch
- While holding the sides together like this, place the pipette tip in the microtainer below the liquid and close to the bottom of the microtainer



- With the pipette tip at the bottom of the microtainer, release the top bulb of the pipette slowly and completely until it is filled with the sample
- Do not remove pipette from the microtainer until the bulb on the top of the pipette has fully expanded



- It is ok if sample goes into the overflow reservoir of the pipette
- The shaft of the pipette should be full of blood with no bubbles or “spaces”

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## REFERENCES

1 Instructions for Use (IFU) Xpert HCV 303-3318 latest revision.

US-IVD. *In Vitro Diagnostic Medical Device.*

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## 11 Pipetting the sample into the cartridge

- When pipetting the sample into the cartridge, make sure the tip of the pipette is at the bottom of the sample chamber. The blood must be placed at the bottom of the chamber; if not, an insufficient volume error may be triggered.
- Squeeze the top bulb of the pipette completely until the two sides touch to deliver the sample to the bottom of the chamber.



## 12 Practice Transfer Technique

- Practice with water and red food coloring to get the steps down with the pipette so you don't introduce air.
- Practice with just a Microtainer® and pipette. You don't necessarily need to use a cartridge to practice.

## 13 Expert Consult

Consult with local phlebotomist or nurse if needed.

