

Capillary Blood Sample Collection

Performing a Fingerstick

For capillary collection, follow steps below and the procedure for optimal collection of capillary blood specimens given in the CLSI standard GP42-A6 “Procedures and devices for the collection of diagnostic capillary blood specimens”. (For latest edition of this standard go to www.clsi.org.)

Due to PLT adhesion to tissue and capillary walls and imprecision in preparation and blood draw procedures, discrepancies between capillary and venous blood values may occur on the following parameters:

PLT may be lower in capillary blood by 5–10%.

WBC may be slightly elevated if PLT clumping occurs, affecting the lymphocyte count.

Wash hands, put on gloves, and any other safety equipment specified by established local laboratory protocol, for coming in contact with potentially biohazardous materials.

Capillary Blood Sample Collection

1. Choose site for skin puncture

See CLSI standard GP42-A6 for details on recommended site for finger and heel punctures.

2. Warm the site

Warm the skin site for 3–5 minutes before puncture to increase blood flow to the site (arterialization). This can be done using a warm, moist towel or other warming device.

3. Disinfect site and dry

Cleanse site with 70% aqueous solution of isopropanol or appropriate disinfectant. Allow the skin to dry before puncture.

4. Remove MPA adapter

Remove MPA adapter from the analyzer by gently pulling the handle.

5. Perform the puncture (Figure 1)

Follow lancet packaging insert for instructions on proper preparation and use.

- Position lancet firmly against the puncture site and puncture skin.
- It is important to perform a deep and firm puncture to obtain free flowing drops of blood, which decreases incorrect or non-reproducible results.
- Properly discard lancet per laboratory protocol.

Figure 1. Puncture with lancet

6. Collect specimen (Figure 2)

- After puncture, wipe away the first drop of blood with a clean tissue or gauze pad. (First drop of blood often contains excess tissue fluid.)
- By holding puncture site downwards and applying gentle, intermittent pressure above the site, the blood flow will be enhanced. Do not use scooping motion or strong repetitive pressure, “milking”, to the site. (This can cause hemolysis or contaminate sample with excess tissue fluid.)
- When second drop forms either:
 - Use the micropipette holder to grasp a micropipette. (holding the micropipette towards one end or the other, instead of in the middle, is best for filling and insertion) Aspirate the sample, holding the micropipette at a slightly downward angle, for quickest fill, and being careful to only allow the tip of the pipette to touch the drop of blood (not the finger directly).
 - Or turn the patient’s palm downward and position micro collection tube directly under puncture site to collect blood drops.
- Dispose of all materials according to laboratory protocol.

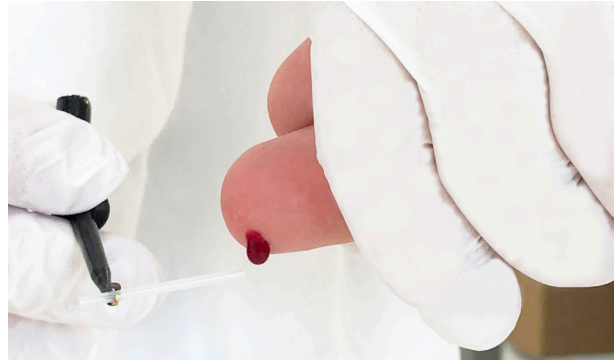


Figure 2. Collect specimen



Figure 3. Preparing micropipette

Attention:

Fill the micropipette completely with fresh whole blood and wipe off excessive blood on the outside surface (figure 3). Be careful not to wick blood from open ends of the micropipette. Ignoring these instructions might cause incorrect and non-reproducible results.

7. Complete procedure

- Transport sample to analyzer for processing by inserting filled micropipette into the MPA adapter using the micropipette holder. Insert the holder into the analyzer and an analysis cycle will automatically begin.
- Samples should be analyzed directly after collection and for optimal results not longer than 10 minutes from collection.