

Collection of Dried Blood Spot (DBS) from Infant

How do I take a good quality sample?

- Successive punctures should be, if possible, performed on alternate heels to minimize risks and complications of repeated trauma.
- Allow prepared site to dry before puncturing skin as residual alcohol may cause erroneous results and retard skin disinfection.
- Avoid excessive squeezing or 'milking' as this causes hemolysis.
- Do not puncture deeper than 2.0 mm.

Collection Instructions



1

Wear gloves throughout the procedure



2

Clean baby's heel with alcohol swab and wipe dry with sterile gauze



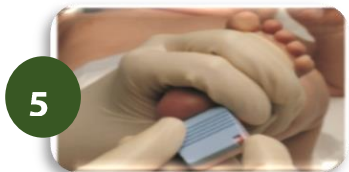
3

Warm the infant's heel for increased arterial blood flow to the site



4

Use sterile lancet to prick the heel



5

While firmly pressing the lancet to skin. Press button to initiate the puncture



6

While maintaining gentle pressure, allow a large drop of blood to form



7
Remove the Lancet
and wipe the first drop
of blood away with
sterile gauze



8
Gently touch the first
circle of the collection
card against the drop of
blood. And allow the
card to absorb and fill
the circle



9
Repeat steps for the
remaining four circles
and ensure the circles
are filled with blood

Remember

- Complete patient information in the card including gestational age, gender, and birth weight and indicate if it's repeat specimen.
- Place barcode label on back of the card and check information correlates with identification band on new born.
- Place the Dry blood spot cards on dark flat surface at a room temperature of 18-25°C before sending to the laboratory within 24hr.

Newborn screening blood spot specimen quality check from infant for biochemical genetic testing

Valid spots (front and back)



Not necessary to fill up the circle completely, the circle minimum Di is 1 Cm

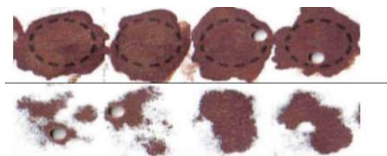
Invalid spots

- 1. Problem:** Insufficient quantity: Circles not filled with blood.



Causes	Prevention
Collector unable to obtain large drops of blood from heel	Hydrate the baby; warm and lower the heel; puncture again

- 2. Problem:** Insufficient quantity: Filter paper not saturated (front and back of same card).



Causes	Prevention
Blood applied to each circle did not soak through evenly	Apply one large drop per circle; check reverse for soak through; don't touch sample area

- 3. Problem:** Filter paper damage: Creases and tears



Causes	Prevention
Wet filter paper is easily damaged	Do not overload card or touch the wet sample; do not crease

4. **Problem:** Filter paper damage: Capillary abrasion



Causes	Prevention
Capillary scraped on wet filter paper	Avoid capillary tubes if possible; never touch capillary to card

5. **Problem:** Poor quality: Layered specimen



Causes	Prevention
Collector unable to apply large drops of blood	Apply one large drop per circle; never add to a partially dry spot

6. **Problem:** Poor quality: Contamination



Causes	Prevention
Blood contaminated by liquid absorbed on card after blood applied	Dry the cards flat away from spilled liquids

7. **Problem:** Poor quality: Serum rings



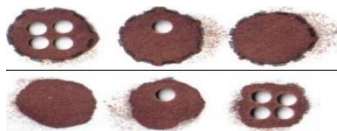
Causes	Prevention
Serum or tissue fluid separates from blood cells on card	Dry flat; apply gentle heel pressure rather than "milking"

8. Problem: Poor quality: Clotted specimen



Causes	Prevention
Delayed application of blood to card using capillary or syringe	Avoid devices; if used, need one per spot ; no anticoagulant

9. Problem: Poor quality: Blood applied to both sides (smearing front and back of same card)



Causes	Prevention
Delayed application of blood to card using capillary or syringe	Avoid devices; if used, need one per spot ; no anticoagulant

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إدارة التشخيص الصحي

Clinical pathology department



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