

MONTANA NEWBORN SCREENING:

UNSATISFACTORY BLOODSPOT SPECIMENS

These are images of actual specimens received by the Montana Newborn Screening Program and are presented as an aid to improvement. All five circles on the specimen card should be evenly filled with blood without any foreign substances or filter paper damage. If you see an unsatisfactory specimen, please collect another right away while the baby is still in the nursery. **Remember: The delay caused by an unsatisfactory sample could be life-threatening to an affected child!**

Problem	Examples	Causes	Prevention
Insufficient quantity: Circles not filled with blood		Collector unable to obtain large drops of blood from heel.	Hydrate the baby; warm and lower the heel; puncture again.
Insufficient quantity: Filter paper not saturated (front and back of same card)		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.
Filter paper damage: Creases and tears		Wet filter paper is easily damaged.	Do not overload card or touch the wet sample; do not crease.
Filter paper damage: Capillary abrasion		Capillary scraped on wet filter paper.	Avoid capillary tubes if possible; never touch capillary to card.
Poor quality: Layered specimen		Collector unable to apply large drops of blood.	Apply one large drop per circle; never add to a partially dry spot.
Poor quality: Contamination		Blood contaminated by liquid absorbed on card after blood applied.	Dry the cards flat away from spilled liquids.
Poor quality: Serum rings		Serum or tissue fluid separates from blood cells on card.	Dry flat; apply gentle heel pressure rather than "milking".
Poor quality: Clotted specimen		Delayed application of blood to card using capillary or syringe.	Avoid devices; if used, need one per spot; no anticoagulant.
Poor quality: Blood applied to both sides (smearing front and back of same card)		Smear blood on both sides suggests blood applied to both.	Apply blood to one side only. Dry flat for at least 4 hours before closing flap.