

Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services
Richmond, Virginia

Newborn Screening Specimen Collection

PREVENTING COMMON ERRORS

Refer to the unsatisfactory reason listed on your Final Report.

The following unsatisfactory specimen criteria have been established in accordance with the standards provided by the Clinical and Laboratory Standards Institute regarding dried blood spot specimen collection for Newborn Screening (Document NBS01-Ed7). Specimens are reported as unsatisfactory according to the following descriptions.

UNSAT 1	IMPROPERLY COLLECTED	Apply a heel warmer for 5 minutes prior to collection to increase blood flow. Angle the heel with puncture side down, apply gentle pressure, and allow a large drop of blood to form.
UNSAT 2	SCRATCHED / ABRADED	Do not apply samples from capillary tubes or other devices. Lift filter paper away from heel cleanly between circles to prevent smearing.
UNSAT 3	WET	Do not mail before completely dry, allowing a minimum of 3 hours. Do not dry or store near spillable liquids.
UNSAT 4	OVERSATURATED	Do not apply samples from capillary tubes or other devices. Do not apply multiple drops of blood to one spot. Lift filter paper away from heel cleanly between circles to prevent smearing.
UNSAT 5	CONTAMINATED	No "milking" – this causes hemolysis, excess serum, and other tissue fluids in the sample. Avoid lotions. Allow skin disinfectants to dry completely before puncture. Fill out collection form prior to sample collection.
UNSAT 6	NO BLOOD	Do not mail testing cards with empty collection circles.
UNSAT 7	INSUFFICIENT INFO	Double check! Do not mail testing cards with missing essential information.
UNSAT 8	OLD SAMPLE (>10 DAYS IN TRANSIT)	Perform regular checks to ensure that dry collection cards are mailed/sent by courier ASAP.
UNSAT 9	INFANT > 6 MONTHS	Do not collect NBS samples on infants > 6 months old.
UNSAT 10	OUTDATED FILTER PAPER CARD	Check expiration date on filter paper card before use. Discard all outdated filter paper cards.
UNSAT 11	INSUFFICIENT QUANTITY	Apply a heel warmer for 5 minutes prior to collection to increase blood flow. Angle the heel with puncture side down, apply gentle pressure, and allow a large drop of blood to form.
UNSAT 14	PARENT REFUSAL	NBS must be notified of a parent refusal. Complete this form: https://tinyurl.com/NBSparentrefusal
UNSAT 12, 15, 16	TESTING INCONCLUSIVE	Results are inconsistent during testing, causes may vary. Expect follow-up from NBS-DBS Short Term Follow-Up nurse team or contact us at (804) 864-7711.

1 PREPARE	2 COLLECT	3 DRY	4 SEND
Apply a heel warmer to newborn's heel 5 minutes prior to collection to increase blood flow for easier sample collection. Prevent unnecessary contamination of sample by completing ALL information on form prior to collection. Clean site with alcohol wipe (70% isopropanol) and let air dry completely.	Puncture the heel on the side and wipe away the first drop of blood. Angle the heel with puncture side down and allow a large drop of blood to form. Apply to one side of collection device only. Lightly touch filter paper to the large blood drop and allow to saturate completely through the filter paper before lifting filter paper cleanly to prevent smearing of blood sample or damage to filter paper. Apply gentle pressure to the heel around the puncture site to enhance blood flow. Use single blood drops to fill each circle, be certain to not overlay.	Dry filter paper on a clean, dry, non-absorbent surface for a minimum of THREE hours at 18-25°C (64-77°F). DO NOT use a drying device to dry samples. Drying samples in too warm of a location or in direct sunlight can lead to degradation and false results.	Ensure the demographic information is accurate and complete. Check both sides of the filter card for proper saturation. After drying, send sample in Tyvek or paper envelope at 15-30°C to DCLS as soon as possible for testing – Send daily. Do not batch. NEVER send or store NBS samples in ANY plastic bags, to include biohazard bags or FedEx Clinical Pak. <i>For a brief video tutorial, scan here:</i> 



For more information on proper collection techniques, contact the Virginia Newborn Screening Follow-Up Program:

Virginia Newborn Screening Program

Virginia Department of Health and Division of Consolidated Laboratory Services/Department of General Services

Phone: (804) 864-7711 Email: newborn_screening@vdh.virginia.gov

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