

PROPER SPECIMEN COLLECTION PROCEDURE

The filter paper forms should be stored in a cool, dry place. Be sure to take note of the form expiration date printed on the filter paper margin below the circles. The filter paper forms are to be used on or before the expiration date. Destroy all outdated forms immediately and request a new supply from the Kentucky Public Health Laboratory. Order no more forms than can be used in 6 months.

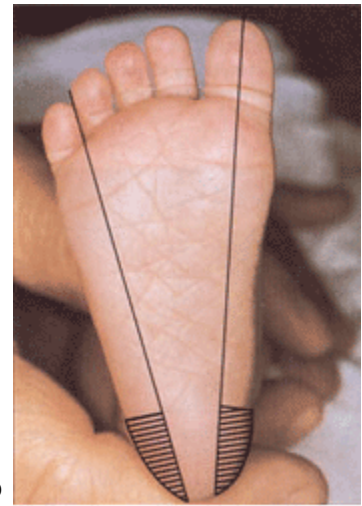
Gloves should be worn for personal safety. Care should be taken to avoid contamination of blood collection circles with antiseptic solutions, powders, lotions or other materials, which may adversely affect the testing process.

1. When collecting blood, fold back the cover sheet to expose the filter paper. Do not touch or handle the filter paper before or after applying blood.
2. Position the infant with feet lowered below the heart to help to increase the blood flow.
3. Warm the heel to increase the blood flow to the area by covering the puncture site for three to five minutes with a warm, moist towel which has been run under tap water at a temperature of not more than 42 degrees centigrade or 107.6 degrees F.

4. Clean the puncture site with a sterile alcohol pad. Allow to air dry. Excess alcohol may cause hemolysis and denature some of the enzymes tested.
5. Use a sterile disposable lancet with a 2.0 mm tip or an automatic lancet to perform a swift clean puncture in the areas indicated on the diagram. Wipe away the first drop of blood with dry sterile gauze.

Recommendation for Heel Puncture Site in Newborns:

Perform punctures on the most lateral portions of the plantar surface (in the hatched portion of the foot in the photo to the right).



Hatched area (//) indicates safe areas for puncture site.

6. Allow a large drop of blood to form. To enhance blood flow during collection, very gentle intermittent pressure may be applied to the area surrounding the puncture site. Excessive "milking" causes an admixture of tissue fluids with the blood specimen, resulting in an unsatisfactory specimen.
7. Do not use a capillary tube. Lightly touch the filter paper against a large drop of blood and allow a sufficient quantity of blood to soak through to completely fill the circle. Apply blood to one side of the filter paper only, allowing full saturation of each circle area. Either side may be chosen for this procedure. Fill all circle areas. Do not layer successive small drops of blood to the same circle. Avoid touching or smearing the blood spots.
8. If blood flow is diminished, repeat steps three through six with sterile equipment.
9. Special Considerations: Do not draw from intravenous lines where TPN or blood is being infused. For other types of IV fluids, make sure the line has been thoroughly flushed before attempting specimen collection. Avoid syringes with additives. Draw 2 to 2.5 cc from the line before sample is obtained. Spot the card immediately after specimen collection.
10. Allow the blood specimens to air-dry for at least 3 hours on a flat, nonabsorbent surface protected from heat or direct sunlight. Do not refrigerate the samples.
11. Ship collection forms to the Kentucky Public Health Laboratory after at least 3 hours drying time. Remember to **"Draw, Dry, and Drop (in the mail)."** Do not accumulate or "batch" specimens before shipping since this may result in specimens too old to test. When placing more than one specimen in an envelope, alternate orientation of collection forms so that blood spots on adjacent forms are not in contact. Delayed submission to the laboratory may result in significant delay in identification of an infant with a disorder.
12. After completing the form and collecting the specimen, ship to: Department for Public Health, Division of Laboratory Services, P. O. Box 2010, Frankfort, KY 40602.

The Kentucky Public Health Laboratory assumes responsibility for testing only; whoever submits specimens must assume liability for proper identification, collection and prompt delivery of specimens to the State Lab.

Neonatal Screening Blood Specimen Collection and Handling Procedure



1
Equipment: Sterile lancet with tip approximately 2.0 mm, sterile alcohol prep, sterile gauze pads, soft cloth, blood form, gloves.



2
Complete ALL information. Do not contaminate filter paper circles by allowing the circles to come in contact with spillage or by touching before or after blood collection. Keep "SUBMITTER COPY" if applicable.



3
Hatched area () indicates safe areas for puncture site.



4
Warm site with soft cloth, moistened with warm water up to 41°C, for three to five minutes.



5
Cleanse site with alcohol prep. Wipe DRY with sterile gauze pad.



6
Puncture heel. Wipe away first blood drop with sterile gauze pad. Allow another LARGE blood drop to form.



7
Lightly touch filter paper to LARGE blood drop. Allow blood to soak through and completely fill circle with SINGLE application to LARGE blood drop. (To enhance blood flow, VERY GENTLE intermittent pressure may be applied to area surrounding puncture site.) Apply blood to one side of filter paper only.



8
Fill remaining circles in same manner as step 7, with successive blood drops. If blood flow is diminished, repeat steps 5 through 7. Care of skin puncture site should be consistent with your institution's procedures.



9
Dry blood spots on a dry, clean, flat, non-absorbent surface for a minimum of four hours.



10
Mail completed form to testing laboratory within 24 hours of collection.

Schleicher & Schuell
P.O. Box 202, Kewanee, WI 53042 • 1-800-845-4814 • FAX: 800-327-7700

Information provided by New York State Department of Health

Simple Spot Check

Valid Specimen



Allow a sufficient quantity of blood to soak through to completely fill the preprinted circle on the filter paper. Fill all required circles with blood. Do not layer successive drops of blood or apply blood more than once in the same collection circle. Avoid touching or smearing spots.

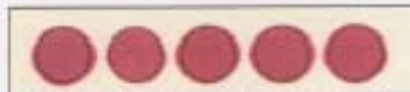
Invalid Specimens



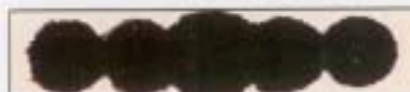
1. Specimen quantity insufficient for testing.



2. Specimen appears scratched or abraded.



3. Specimen not dry before mailing.



4. Specimen appears supersaturated.



5. Specimen appears diluted, discolored or contaminated.



6. Specimen exhibits serum rings.



7. Specimen appears clotted or layered.



8. No blood.

Possible Causes

- Removing filter paper before blood has completely filled circle or before blood has soaked through to second side.
- Applying blood to filter paper with a capillary tube.
- Touching filter paper before or after blood specimen collection with gloved or ungloved hands, hand lotion, etc.
- Allowing filter paper to come in contact with gloved or ungloved hands or substances such as hand lotion or powder, either before or after blood specimen collection.

- Applying blood with a capillary tube or other device.

- Mailing specimen before drying for a minimum of four hours.

- Applying excess blood to filter paper, usually with a desk.
- Applying blood to both sides of filter paper.

- Squeezing or "milking" of area surrounding the puncture site.
- Allowing filter paper to come in contact with gloved or ungloved hands, or substances such as alcohol, formula, antiseptic solutions, water, hand lotion or powder, etc., either before or after blood specimen collection.
- Exposing blood spots to direct heat.

- Not wiping alcohol from puncture site before making skin puncture.
- Allowing filter paper to come in contact with alcohol, hand lotion, etc.
- Squeezing area surrounding puncture site excessively.
- Drying specimen improperly.
- Applying blood to filter paper with a capillary tube.

- Touching the same circle on filter paper to blood drop several times.
- Filling circle on both sides of filter paper.

- Failure to obtain blood specimen.

Schleicher & Schuell

Schleicher & Schuell, Inc. • 13 Optical Avenue • Kenosha, WI 53141
 Manufacturer of 903 Specimen Collection Paper

Information provided by New York State Department of Health