



Tennessee Newborn Screening Program



COMMON CAUSES OF UNSATISFACTORY SPECIMENS

Technologists closely examine each filter card for quality and quantity before performing tests. A satisfactory specimen is a drop of whole blood applied evenly and allowed to soak through the filter card and can be seen clearly with no white showing through on the other side. Preferably these spots should be large enough to punch out **six 1/8 inch discs** with no white areas. Both sides of filter card should look the same after collection.

Unsatisfactory Reason	POSSIBLE CAUSE
>6 months	Infant greater than 6 months of age at time of collection
<24 hours	Specimen collected before the infant was 24 hours of age
>10 days	Specimen received greater than 10 days after the date of collection. Delay in the U.S. Postal service or a delay in the hospital mail service. **Mail specimens within 24 hours of collection
Accident	Laboratory Accident
Altered Card	Use of capillary tube or syringe to apply blood can scratch the filter card Rubbing the spot when it is still wet Pressing the heel to the filter card during the collection process
Both Sides	Applying blood to both sides of the filter card (Recognized by holding specimen up to a light and seeing shadows)
Cells & Serum Separated	The usual cause is squeezing the heel during the specimen collection Waiting too long for the drop of blood to form or by clotted blood Applying blood with a capillary tube device, blood not well-mixed
Clotted Specimen	Improper puncture Application of blood with a capillary tube device Waiting too long for a drop of blood to form
Contaminated	Specimen contaminated with alcohol, water, formula, urine, or hand lotion, etc.
Detached	Blood spot filter paper detached from information portion of the card
Filter Paper Expired	Specimen collected on expired filter paper
Heated	Too long in transit especially during the summer Heating a specimen to dry it **Heat and humidity can affect test results **Will appear much darker than usual
Inaccurate Information	Information on form was inaccurate or incorrect (for example: wrong date of birth, date and/or time of collection)
Incomplete Information	All or part of the blanks on the form were not filled out completely (for example: missing date and/or time of collection)
No Blood	Form received with no blood on filter paper
Nonuniform	Applying many small drops of blood to each circle Applying blood with any type of capillary tube Touching the blood drops when they are wet Uneven soaking through the filter card caused by exposure to moisture Glove powder touching filter card area before collection The use of hand creams or lotions Contaminated surfaces with any of the above contaminants
Poly Bag	Specimen received in a sealed poly bag, plastic zip lock bag, plasticene envelope, or plastic shipping bag
Quantity Not Sufficient	The drops of blood are too small Improper use of lancet or dropping blood from a capillary tube device
QNSCOM	Quantity not sufficient to complete testing (Some tests could not be completed due to insufficient blood)
Supersaturated	The drops of blood are too large The drops of blood overlap or touch one another The filter card is pressed against the puncture site The blood is dropped in very large drops from a capillary tube