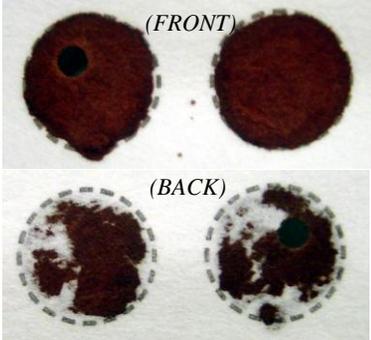


## POOR QUALITY SPECIMENS DELAY DETECTION OF DISORDERS IN NEWBORNS

All specimens received at the newborn screening laboratory are examined for specimen acceptability. Poor quality specimens may not have enough blood to perform all the testing, may have been collected improperly, and or may have been delayed in the mail. When the Newborn Screening Laboratory determines a specimen to be poor quality, a same-day Fax report is sent to the collecting facility and physician of record. After being notified by fax that the sample is poor quality, it is imperative that arrangements are made to recollect the newborn screen as soon as possible so that there is no delay in follow-up for babies that may have an abnormal result.

Remember, if there is a question about suitability when collecting a specimen, it is best to start over and recollect another newborn screening specimen. Instead of discarding the “ruined” or poor quality specimen, write VOID across the front of the screening form and return it to the Newborn Screening Laboratory along with the “good” newborn screening sample. You will be credited for the VOIDED specimen form. By recollecting the baby’s blood immediately, you will provide a timely newborn screening result and avoid recalling the baby back after it has been discharged.

Examples of satisfactory and unsatisfactory blood spot specimens follow:

<p><b>SATISFACTORY SPECIMEN:</b>                  Allow a sufficient quantity of blood to soak through to completely fill the preprinted circle on the filter paper. Fill all the 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.</p>	
<p><b>QUANTITY NOT SUFFICIENT:</b>                  Quantity of blood on filter not sufficient. Possible causes: Removing filter paper before blood has completely filled circle; not allowing an ample sized blood drop to form before applying to filter; inadequate heel stick procedure.</p>	
<p><b>INCOMPLETE SATURATION:</b>                  Uneven saturation; blood did not soak through the filter paper. Possible causes: Removing filter paper before blood has completely filled circle or before blood has soaked through to opposite side; improper capillary tube application; 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.</p>	
<p><b>SPECIMEN ABRADED:</b>                  Filter scratched, torn or abraded. Possible causes: Improper use of capillary tubes. To avoid damaging the filter paper fibers, do not allow the capillary tube to touch the filter paper. Actions such as “coloring in” the circle, repeated dabbing around the circle, or any technique that may scratch, compress, or indent the paper should not be used.</p>	

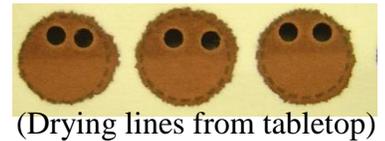
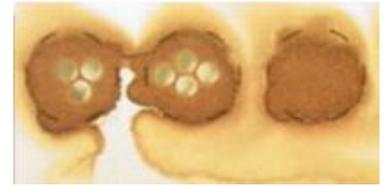
**LAYERED, CLOTTED OR SUPERSATURATED:**

Possible causes: Touching the same circle on filter paper to blood drop several times; filling circle on both sides of filter paper; application of excess blood; clotted swirl marks from improper capillary application. Use of unheparinized capillary tube.



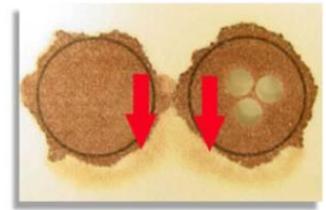
**DILUTED, DISCOLORED OR CONTAMINATED:**

Possible causes: 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, powder, etc., either before or after blood specimen collection; exposing blood spots to direct heat; allowing blood spots to come in contact with tabletop, etc. while drying the sample.



**SERUM RINGS:**

Serum separated into clear rings around blood spot. Possible causes: Card dried vertically (on side) instead of flat; squeezing excessively around puncture site; allowing filter paper to come in contact with alcohol, hand lotion, etc.



**BLOOD ON OVERLAY COVER:**

Overlay cover came in contact with wet blood specimen. Sample is poor quality status because blood soaked from back of filter onto the gold colored backing of the form. The filter circles are designed to hold a specific quantity of blood. If the wet filter is allowed to come in contact with the paper backing of form, blood can be drawn out of filter making the quantitative tests performed by the Newborn Screening Laboratory invalid. Allow blood spots to thoroughly air dry for at least 3 hours in a horizontal position, away from direct heat and sunlight. Do not allow the blood to touch any surface during drying, including other parts of the form.



**FILTER AND FORM BARCODES DO NOT MATCH:**

Bar code on filter does not match bar code on Newborn Screening Form. Collection forms contain barcodes on demographic, hearing and filter portions. The barcodes may not be altered in any way. If incorrect baby is sampled do not remove filter and attach to a different demographic portion. If a sampling error occurs the entire form needs to be voided and sample needs to be recollected on a new form. All barcodes must match on laboratory copy, submitter copy, newborn hearing screen, and filter.



**LABORATORY ACCIDENT:**

Unable to test, sample damaged at laboratory.

**OLD SPECIMEN:**

Specimen greater than 15 days old when received at State Public Health Laboratory. The collection card should be transported or mailed to the Newborn Screening Laboratory within 24 hours after specimen collection. Avoid the practice of holding onto specimens to wait for more to accumulate before mailing, also referred to as “batching” the specimens. Although batching may seem more efficient, it’s not worth it in the long run because a delay in screening and treatment can cause irreparable damage to a child with metabolic disease.

**NO BLOOD:**

Filter submitted without blood.

**OLD FORM:**

Sample received on expired newborn screening form.

**DAMAGED SPECIMEN:**

Specimen damaged in transit.

**MISSING OR INCOMPLETE PATIENT INFORMATION:**

Missing or incomplete name on sample.

**WET SPECIMEN:**

Specimen submitted before drying thoroughly. Allow blood spots to thoroughly air dry for at least 3 hours in a horizontal position, away from direct heat and sunlight. Do not allow the blood to touch any surface during drying, including other parts of the form.