

Unsatisfactory Specimens:

Contaminated Blood Wet Sample Damaged Card

Background:

- Environmental factors can affect the quality of blood spots and result in unsatisfactory samples.
 - **Contaminated Blood** occurs when the filter paper and/or blood sample contacts other substances, such as alcohol, hand lotions, powders, formula, or antiseptic solutions.
 - **Wet samples** occur when the filter paper is not fully dried and is placed into a sealed plastic bag or a liquid is spilled on it. This can also occur during transport.
 - **Damaged cards** occur when the filter paper is damaged during the specimen collection process or during transportation to the lab. A common cause of damage is capillary tube scratching or compressing the filter paper during collection.
- Each of these factors may cause test results to be inaccurate. A repeat specimen will be required. This can lead to critical delays in identifying serious health issues for the infant.

Tips to Avoid these Unsatisfactory Samples:

- Do not allow filter paper to come into contact with an ungloved hand, alcohol, hand lotion, or other contaminants.
- Dry specimen card at least 3 hours in a horizontal position and ensure it is completely dry before packaging. Once dry, place the protective cardstock flap over the bloodspots to protect the specimen.
- Avoid using capillary tubes for specimen collection. Direct application of blood drop from heel to the filter paper is recommended.
 - If a capillary tube must be used (for medical reasons only), the capillary tube **cannot** contain heparin or EDTA as this can result in false positive or negative results. Do **not** allow the capillary tube to touch the filter paper.

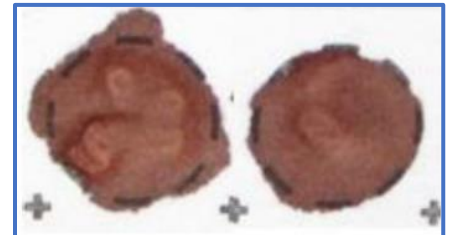
Contaminated blood spots:



Wet sample spots:



Damaged card spots:



Satisfactory Specimen Image:



Both the front and back of the specimen card should look like the image above. Note the circles are filled and the even saturation of a single blood drop applied to each circle.

For additional information about specimen collection, please visit [MDHHS - Newborn Screening - Resources for Hospitals and Health Professionals \(michigan.gov\)](https://www.michigan.gov/mdhhs) or contact the NBS Nurse Consultant at 517-335-1966.