

UNEVENLY SATURATED

The abbreviation “US” is used by the Bureau of Clinical Laboratories Newborn Screening Laboratory for submitted specimens that are **unevenly saturated**.

What causes uneven saturation?

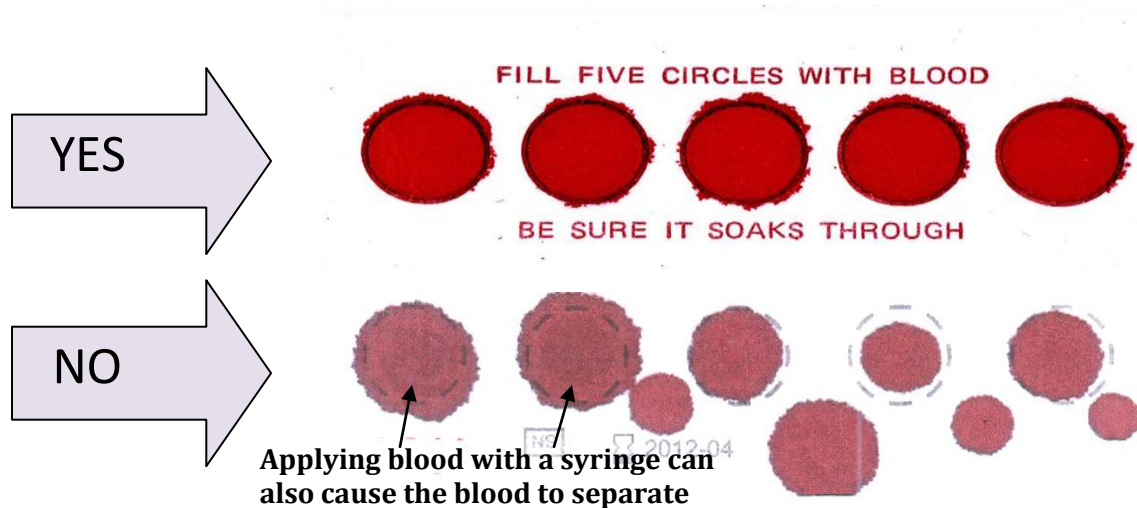
Uneven saturation is usually caused by touching the same circle on the filter paper to the blood drop several times or filling the circle on both sides of the filter paper. If the drop of blood is of adequate size (0.1cc), the circle can be filled to the edges using one drop. To minimize “uneven saturation”, apply a single drop of blood to only one side of the filter paper.

Why only one drop of blood per circle?

A minimum of eight punches are required from each filter paper specimen in order to screen for all of the disorders. The punches can only be obtained from blood spots that are *evenly* and *completely* saturated in order to have reliable test results.

What else could cause “uneven saturation” when only one drop is applied per circle?

Filling the circles from both sides of the paper will cause “uneven saturation.” In addition, if the filter paper is dried in a vertical position rather than a horizontal position, the serum can separate from the blood and cause “uneven saturation.”



Steps to collecting a satisfactory newborn screen:

1. Puncture the heel with a disposable lancet deep enough to reach the skin’s primary blood supply, yet shallow enough to prevent heel or bone injury.
2. Apply 5 large (approximately 0.1 cc) drops of blood evenly to the filter paper printed circles.
3. **Do not** remove the filter paper until the blood has completely soaked through to the other side.
4. Specimens should be dried in a **horizontal** position for at least 4 hours.

