

FROM THE LAB...**Serum Separation on
Newborn Screening Specimens**

One of the more common causes for an unsatisfactory newborn screening specimen is serum separation. When serum separates from the red blood cells, the blood circles have a "halo" of light colored fluid that appears to have seeped outwards from the blood circles before the specimen finished drying. This distinct appearance is how serum separation is recognized on a newborn screening specimen. Serum separation is generally caused by improper drying technique or from drying the specimen in a non-horizontal position. The usual causes for serum separation include:

1. Putting a specimen in a plastic bag or plastic sleeve after collection. This is by far the most common cause of serum separation, particularly in hospitals that put their newborn screening specimens in plastic sleeves when transporting specimens from the nursery to the lab.
2. Putting a specimen in a drawer, box, or other container while still wet.
3. Mailing a specimen before it has dried completely.

(Factors 1-3 cause serum separation by not providing sufficient air exposure for the blood to dry properly. As a result, the blood stays damp too long and the serum begins separating from the red blood cells).

4. Hanging the specimen to dry or standing it on end. This can cause serum separation from gravity causing the serum to drip away from the blood cells in the circles.

5. Blood sample is from a baby with a low hematocrit – these are usually low birth weight babies in NICU whose blood is thin and separates quickly. Minimize the chance of serum separation by blotting the blood directly onto the paper instead of using capillary tubes.
6. Storing blood in a capillary tube so long that the blood had time to separate before being applied to the paper.

***Recommended procedure for
drying newborn screening
specimens:***

The correct way to dry a specimen is to lay the specimen flat on a non-porous surface and allow it to air dry. Wire test tube racks are a great surface for drying newborn screening specimens because they provide good air exposure while the specimen is drying. You can also lay the specimen flat on a counter top with the circles extending over the edge for air circulation. Specimens need to dry for a minimum of 3 hours. In a humid environment, you may want to extend this to half a day or overnight if the specimen was collected in the afternoon. A good rule of thumb is wait until the blood looks completely dry before mailing.

FOR MORE INFORMATION

about blood specimen collection
and handling procedure:

- Posters (Spanish and English)
- Pamphlets
- Newsletter

Call us at 1-800-422-2956 Extension 3204



IT'S NOT JUST PKU

There has been much confusion among doctors, hospitals and parents when newborn screening tests are called "PKU tests" or "PKU's".

Parents are upset unnecessarily for fear their child has PKU, when in fact, a routine repeat filter for another disorder has been requested.

Please make every effort to call the test a "newborn screening test" rather than a "PKU".

THANK YOU

What Newborn Screening Means To Me



Dear Health Professional,

I am a parent of a three-year-old girl with congenital adrenal hyperplasia (CAH). She has the salt-wasting form of this genetic disease. When she was born she had some virilizing which doctors believed the result of CAH. She was taken to Texas Children's Hospital in Houston, TX and a battery of tests were run including the newborn screening test. We had conclusive results within the week that she did indeed have CAH. We are so proud of our state and the Texas Newborn Screening Program for the effort they have made in testing for a number of illnesses through the newborn screening test. I have spoken to many parents whose children's lives were saved as a result of this test. One of my friends had a baby girl just last year and went home thinking she had a healthy baby. Because Texas requires the newborn screening test for every child born in the state, my friend found out within the week that her daughter had congenital hypothyroidism before it was too late. We are so fortunate to live in a state that requires such a test; so many states still do not.

Sincerely,

Tangie Doss
Parent of a Child with CAH

Everything you always wanted to know about

RETEST RECOMMENDATIONS

This free chart explains what to do when the first screen is abnormal: how soon to retest, type of specimen and amount of blood needed, what tests are done (at TDH), and how often the test is run.

To order, call us at 1-800-422-2956

The Newborn Screening Laboratory has revised the Confirmatory Testing Form, (aka G-127).

Call Laboratory Supplies at
1-800-422-2956

Extension 7661

to order the new (free) forms.

Please discard Rev. 04/93.

Texas Department of Health
Newborn Screening Program

Margaret Drummond-Borg, M.D., Director
Genetic Screening and Case Management

Susan U. Neill, PhD., M.B.A., Director
Biochemistry and Genetics Division
Bureau of Laboratories

Barbara Aldis, M.T. (ASCP), Branch Supervisor
Newborn Screening Laboratory

Daisy Johnson, R.N., B.S.N.
Congenital Hypothyroidism

Carolyn Scruggs, R.N.
PKU, CAH, Galactosemia

Michele M. Goddard, MPA
Acting
Hemoglobinopathies

Michele M. Goddard, MPA
Editor

