

# UREAS TESTING TIPS

Remove the cap from the Nitrate Nitrogen (NN) bottle and replace it with the glass dropper/cap. ***Be careful with this reagent. It is almost pure sulphuric acid and will burn a hole or deface almost anything, including your skin.*** It is best if your lab kit is placed near a sink.

Remove the cap from the Ammonia Nitrogen (AN) bottle and replace it with the plastic dropper/cap. This reagent is largely potassium hydroxide so it is the opposite of the sulphuric acid. It is very alkaline. It is much less caustic but still something you do not want to touch or expose to other surfaces.

Fill the brown dropper bottle with the Universal Extracting Solution (UES). This solution is not caustic, but like the others, it should be stored in a safe place away from children or anyone untrained in the use of these reagents.

Place the entire lab kit on a thin absorbent material, especially the well plate, to guard against spills.

Use one of the included droppers (not one of the dropper/caps) to place one drop of urine into the provided ceramic crucible. Discard the first drop to make sure you have a full drop to place into the crucible.

Use the dropper/cap from the UES to add 6 drops of UES into the same crucible as the 1 drop of urine. Discard the first drop to make sure you have a full drop to place into the crucible.

Use the urine dropper to mix the solution of 1 drop urine/6 drops UES by squeezing/releasing the dropper bulb repeatedly over about 30 seconds or at least 50 times. It will make a squishy sound.

Place one drop of the urine/UES mix into the center of one well on the well plate and another drop into the center of another well. Best to use two wells in a vertical position to match how the NN/AN numbers are portrayed in the BIA<sup>®</sup> equation. Discard the first drop to make sure you have a full drop to place into the crucible.

Get your timer ready and set on 4 minutes.

Place 4 drops of NN reagent into the top well, onto the urine drop. Discard the first drop to make sure you have a full drop to place into the crucible. Drop from a height that will create a mixing action when it hits the urine drop, but not high enough to cause splatter. Replace the NN dropper/cap and move out of the way.

Notice what happens when the NN reagent hits the urine drop in the well plate. (1) Does it *immediately* begin forming a dark color? (2) Does it *slowly* start forming a medium blue color? (3) Does it look like it is forming nothing?

Place 4 drops of AN reagent into the bottom well, onto the urine drop. Discard the first drop to make sure you have a full drop to place into the crucible. Drop from a height that will create a mixing action when it hits the urine drop, but not high enough to cause splatter. Replace the AN dropper/cap and move out of the way.

Start the 4 minute timer. Grab the color chart.

Read the AN (bottom) well within 30 seconds. Choose the corresponding number from the color chart. The color will begin to fall out of solution after about 30 seconds. Record the AN reading on the Purification Test Strips Client Record.

At the 4 minute mark, read the NN well. Choose the corresponding number from the color chart. This reading is the most difficult part of the test. The more tests you see, the more comfortable you will become in knowing that you have chosen the correct number. Record the NN reading on the Purification Test Strips Client Record.

TIP: The reason for noticing how fast the color is forming when you place the NN reagent into the well is because it helps you know which row best suits your number selection. Choice #1 means your selection will be from the bottom dark row. Choice #2 means your selection will be from the middle lighter blue row. Choice #3 means your selection will be from the top very light row.

## **CLEANING PROCEDURES**

Clean the crucible by running clean water into it and drying it with a paper towel. Be careful that the running water does not have enough force to cause splatter coming from the crucible. Dry with a paper towel or tissue.

Clean the urine dropper by placing it into the clean water jar and squeezing in/out the clean water. Remove and place into a dry jar with tissue on the bottom which will suck remaining water residue from the dropper as they wait for the next use.

Clean the well plate by slowly running clean water over the wells containing the NN and AN solutions. Due to the caustic nature of the NN, it is important that the NN solution is well-diluted before or as it contacts any surface. Once the well plate is clean, wipe clean with a paper towel and replace in your lab kit area.