# BENEDICT'S TEST & ACETIC ACID TEST

### Urine Tests During Pregnancy

• Urine tests provide the doctor or midwife with important information about diseases or conditions that could potentially affect a pregnant woman or the growing baby. That's why at each prenatal visit, pregnant client be asked to give a urine sample as part of a regular exam. • This sample is used to help determine if the client have diabetes, kidney disease, or a bladder infection by measuring the levels of sugar, protein, bacteria, or other substances in the urine. The test is routine and painless and could prevent a lot of trouble down the road.

 Urinary tract infection (UTI) is one of the most common bacterial infections contracted by women. Pregnancy is a predisposing factor for UTI. In the Philippines, routine urinalysis is reflective of the clinical practice used as a diagnostic tool for UTI, while urine culture is only requested in advanced cases of UTI, hence the need for a more rapid and standardized method of diagnosis.

#### What does a urine test involve?

Urine can be collected any time of day. You will most likely be given a sterile cup to collect a sample before your exam. Before urinating, use a sterile towelette to wipe your genitals from front to back, and then release a small amount of urine into the toilet -- this prevents the sample from being contaminated with bacteria or other secretions that may invalidate the results. Put the container in your urine stream, and collect at least one to two ounces.



• Typically, there is very little or no sugar (glucose) in urine during pregnancy. But when blood sugar levels in the body are too high, excess sugar can end up in the urine. This can be seen with gestational diabetes, a form of diabetes that only develops during pregnancy. It occurs when pregnancy hormones disrupt the body's ability to use insulin, a chemical that turns blood sugar into energy.



• Protein in urine (proteinuria) can indicate a urinary tract infection (UTI), a kidney infection or chronic kidney disease. When proteinuria develops later in pregnancy, it can be an early sign of preeclampsia, a pregnancy-related condition that can cause high blood pressure after the 20th week of pregnancy, and increase the risk of serious complications for mom and baby. Preeclampsia complicates about 7 percent of all pregnancies, and women with preeclampsia usually need immediate treatment to prevent problems with their health and delivery.

#### Bacteria

• The presence of bacteria in urine is a clear sign of a UTI. Up to 8 percent of pregnant women get UTIs, but many don't have any symptoms. However, a symptomless infection can still spread to the kidneys and cause significant problems for you or your baby. Treated quickly and properly, UTIs rarely lead to further complications. But left untreated, they can damage your kidneys and elevate your risk of having a low birthweight or premature baby.



• When fat is broken down for energy instead of carbohydrates, the results are acidic byproducts known as ketones. If you have diabetes, large quantities of ketones in urine may indicate a harmful condition called ketoacidosis, which can lead to diabetic coma.

### **BENEDICT'S TEST**

to check for the presence of sugar in the urine

Procedure of Benedict's Test

Put 5 ml of Benedict's solution in the test tube.

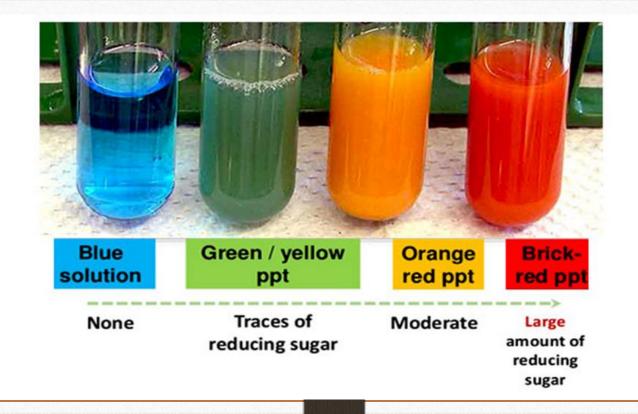
Heat over the flame. Move the test tube back and forth over the flame (away from the client). Wait until it bubbles.

Drop 3 to 5 drops of urine and boil the mixture.

Leave the mixture to cool to room temperature.

Read and interpret the result.

## Result Interpretation of Benedict's Test



### BENEDICT'S TEST

• INTERPRETATION OF RESULTS

BLUE (-) GREEN (+1) YELLOW (+2) ORANGE (+3) RED (+4)

#### ACETIC ACID TEST

- to check for the presence of <u>ALBUMIN</u> in the urine

Fill the test tube with 5 ml urine or about 2/3 level.

Heat the upper portion of test tube with urine without shaking until boiling (away from the client).

If cloudiness appears (or even without cloudiness) in the heated portion, add 5 drops one at a time of 10% acetic acid and reheat it until it boils.

Read and interpret the results.

#### ACETIC ACID TEST

#### • INTERPRETATION OF RESULTS

#### CLEAR (-) NEGATIVE

#### CLOUDY (+) ALBUMINURIA

