

Kidney Filtration Lab Notes

Objectives: At the end of this lab, you will be able to:

- Determine how kidneys function
- Identify components of the blood that should be removed by the kidneys
- Identify components of blood that should not be present in urine

Materials Needed

- 1 cup
- 1 piece of mesh
- Water
- 1 spoon
- “components of blood” bead bag

What do kidneys do?

Maintain _____

Remove _____ and other waste

Regulate the amount of _____ in the blood

Adjust the _____ of other substances in the blood

Send _____ blood back through the body

Blood Components

- The following items are found in the blood stream
 - o Water
 - o Red blood cells
 - o White blood cells
 - o Glucose
 - o Protein
 - o Amino acids
 - o Salt
 - o Urea
- As the blood goes through the kidneys, some components of blood are:
 - o Kept: because they are _____ for life functions
 - o Removed: and _____ in the urine because they are _____
 - o Balanced: so they are present in the correct _____ in the blood
 - _____ reabsorbed (_____ them all)
 - _____ reabsorbed (_____ a certain amount as needed)

- Blood components and action taken

Blood Component	Action Taken by the Kidneys
Water	
Red Blood Cells	
White Blood Cells	
Glucose	
Protein	
Amino Acids	
Salt	
Urea	

How the kidneys work

- Blood enters the kidneys through the _____
- Blood branches out to small capillaries (called _____)
- Big particles stay in the blood
 - o Red blood cells
 - o White blood cells
 - o Proteins
- Small particles go into a holding area (called _____)
 - o The material in the nephron is called _____
- The body _____ some (selectively) or all (completely) of the materials required for homeostasis
- The remaining filtrate is send to the bladder as _____