AL-mustaqbal university

College Of Health and Medical Techniques

Department of kidney dialysis techniques

Lab 4

Frog Dissection and Physical and Chemical Analysis of Urine

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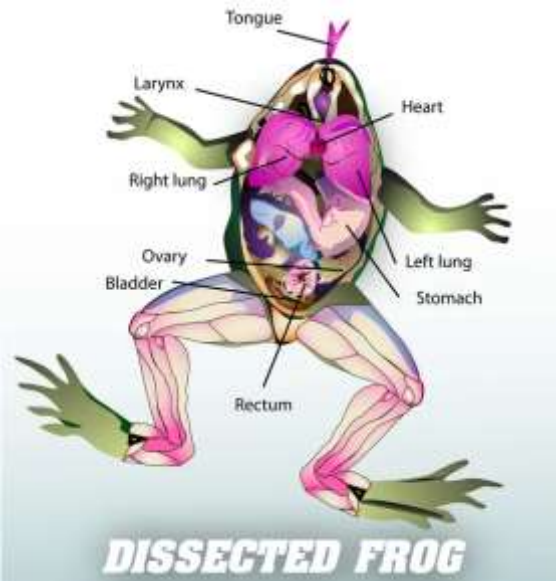
Part 1: Frog Dissection Procedure



Required Tools:

1. A live or anesthetized frog.
2. Dissection board.
3. Dissection tools: scissors, scalpel, forceps.
4. Pins for fixation.
5. Gloves.
6. Anesthetic solution (e.g., diluted ethanol).

Steps:

1. **Anesthetize the Frog:**
   - Place the frog in an anesthetic solution to ensure it does not feel pain during the procedure.
2. **Fix the Frog:**
   - Place the frog on the dissection board and secure it using pins.
3. **Make Initial Incisions:**
   - Use scissors or a scalpel to make a vertical incision along the abdomen.
   - Carefully remove the skin to expose the muscles.
4. **Expose Internal Organs:**
   - Open the muscular layer carefully to access internal organs like the heart, liver, stomach, and intestines.
5. **Examine Organs:**
   - Observe each organ, noting its shape, size, and color.
6. **Documentation:**
   - Create a labeled diagram of the organs and their positions.

Part 2: Physical and Chemical Urine Analysis

Required Tools:

1. Urine sample.
2. Test tubes.
3. pH meter or pH paper.
4. Chemical reagents (e.g., ferric chloride, nitric acid).
5. Sensitive balance.

Physical Examination:

1. **Color:**
   - Observe the color of the urine (clear, yellow, dark).
2. **Odor:**
   - Gently smell the urine to identify its odor (normal, foul).
3. **Specific Gravity:**
   - Measure the specific gravity using a hydrometer or refractometer.
4. **Sedimentation:**
   - Allow the urine sample to settle and observe any solid particles.

Chemical Examination:

1. **Protein Test:**
   - Add nitric acid to the urine. A white precipitate indicates the presence of protein.
2. **Glucose Test:**
   - Heat the urine with Benedict's solution. A color change to orange indicates glucose.
3. **Ketone Test:**
   - Add ferric chloride. A purple color indicates the presence of ketones.
4. **pH Measurement:**
   - Use pH paper or a pH meter to determine the acidity or alkalinity of the urine.