Name: _____

Macromolecule Tests:

Carbohydrates (Simple Sugar) Test: Benedict's Solution

Positive Test- If simple sugars are present, the clear blue solution turns green, yellow, or brick red.

1. Add 20 drops of sample to a test tube.
2. Add 40 drops of Benedict's solution to the test tube.
3. Place the test tube into a heated water bath for three minutes.
4. Record color change.

Carbohydrates (Complex Sugar- Starch) Test: Lugol's Iodine Solution

Positive Test- If starches are present the solution will turn bluish purple-ish black.

1. Add about 40 drops of sample to the test tube.
2. Add 3-4 drops of iodine to the test tube.
3. Record color change.

Lipid Test: Sudan III Stain

Positive test- If lipids are present, the fats will turn red and form a layer at the top of the test tube.

1. Fill a fourth of the test tube with the sample. Fill the next fourth of the test tube with distilled water.
2. Add 6 drops of Sudan III stain to the test tube. Cover the top with a thumb and gently shake for 30 seconds. Then place the test tube in the rack and let it sit for 5 minutes.
3. Record results.

Protein Test: Biuret Solution

Positive Test- If proteins are present, the blue solution will turn pink.

1. Add 40 drops of sample to the test tube.
2. Add 20 drops of Biuret solution to the test tube. Cover the top with a thumb and gently mix for 30 seconds.
3. Record color change.

Data Table for Macromolecule Positive Test Results

Macromolecule	Chemical Test	Observation