



OBSERVING THE GROWTH OF BACTERIA NEAR ANTIBIOTIC DISCS ON AGAR PLATES

Name: _____

Date: _____

Experiment #: _____

**SAFETY FIRST!**

Do not open the plates. Do not touch the inside of the plate or the antibiotic discs. Wash hands before and after.

**GOAL**

To observe how different antibiotics affect the growth of bacteria on an agar plate.

**MATERIALS**

- Agar plate with bacteria and antibiotic discs
- Ruler (mm)
- Marker
- Observation sheet (this page)
- Magnifying glass (optional)
- Camera or phone (optional)

(Use a prepared plate provided by a teacher, co-op, or science supply company.)

**BACKGROUND**

Antibiotics can stop or slow the growth of certain bacteria. On an agar plate, the bacteria grow and form a lawn. Antibiotic discs release medicine that may prevent bacteria from growing near the disc. This creates a clear zone, called a **zone of inhibition**.

**PROCEDURE**

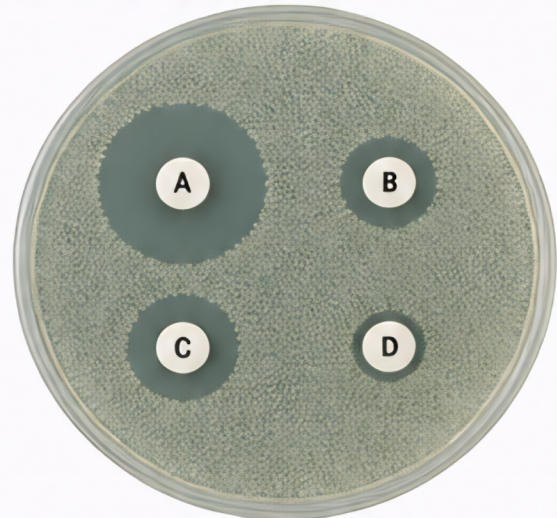
1. Observe the agar plate without opening it.
2. Identify the antibiotic discs by their labels (e.g., A, B, C, D).
3. Use a ruler to measure the diameter of each zone of inhibition (the clear area around each disc), including the disc. Measure in millimeters (mm).
4. Record your observations and measurements in the tables.
5. Take a photo or draw your plate in the space provided.
6. Compare which antibiotic had the largest and smallest zone of inhibition.

**ANALYSIS QUESTIONS**

1. Which antibiotic had the largest zone of inhibition? _____
2. Which antibiotic had the smallest zone of inhibition? _____
3. What might this tell you about how well each antibiotic works against this bacteria? _____

4. Why do you think some discs have larger zones than others? _____

5. What are some limitations of this experiment? _____

EXAMPLE PLATE (for reference)

Note: Your plate may look different.

OBSERVATIONS & MEASUREMENTS

Antibiotic Disc (Label)	Zone of Inhibition Diameter (mm) (including disc)	Notes (e.g., size, clarity)
A		
B		
C		
D		

DRAW OR SKETCH YOUR PLATE