

1. You have been testing various microorganisms for their antimicrobial drug susceptibility. Please draw a labeled diagram of a Petri plate with bacteria that are resistant to Amikacin. Label the plate to demonstrate the proper size of zone of inhibition. 5pts

Antimicrobial Agent	Disk Code	Interpretive Standards			
		Resistant (mm or less)	Intermediate	Moderately Susceptible (mm range)	Susceptible (mm or more)
Amikacin 30 mcg	AN 30	14	15-16		17
Cephalothin 30 mcg	CR 30	14		15-17	18

2. These are some results from growth tests, with “-” indicating no growth, and “+” indicating growth.

Organism	Control	Pasteurize			Boil		
		10	20	30	1	5	10
<i>E. coli</i>	+	+	-	-	-	-	-
<i>S. epidermidis</i>	-	+	+	-	+	-	-
<i>B. cereus</i>	+	+	+	+	-	+	+

- (a) Which organism is most sensitive to heat? 1pt
- (b) Why might *B. cereus* still be alive after 10 minutes of boiling? 1pt
- (c) What are the results that are least easily explained? 2pts

3. These are data from a use-dilution test of several disinfectants against *Staphylococcus epidermidis*, showing bacterial growth after a certain number of minutes.

	2 min.	5 min.	10 min.	15 min.
Product A	-	-	-	-
Product B	-	-	+	-
Product C	+	+	+	+
Product D	+	+	-	-

Which of these products was most effective? 1pt A, B, C, or D

4. BONUS: Please name the type of antimicrobial activity that results from small amounts of heavy metals. 1pt

1pt