Lysozyme and Tears


Per Pair of Students

1. Sterile water blank
2. Two nutrient agar plates
3. Two sterile cotton-tipped swabs
4. One sterile spot plate
5. One sterile eye dropper
6. Seven Pasteur pipets and one rubber pipet bulb

Broth Cultures

*Micrococcus luteus*
*Serratia marcescens*

Procedure

1. Label one plate *Micrococcus* and the other *Serratia*. Divide each into six equal sections. Label the sections $10^{-1}$ through $10^{-6}$.

2. Make a lawn of bacteria on each plate:
   a. Dip one sterile cotton-tipped applicator into the *Micrococcus* broth.
   b. Transfer the bacteria to the agar: swab the entire surface.
   c. Repeat for the *Serratia* plate.

3. Using ONE sterile Pasteur pipet, aseptically transfer nine drops of sterile water into each of six depressions on the spot plate. (You do NOT need to change pipets for this part).

4. Using the sterile eye dropper, obtain a tear.

5. Aseptically transfer the tear into the first sterile water-filled depression on the spot plate. (You just made a $10^{-1}$ dilution of the tear!).

6. Using a fresh sterile Pasteur pipet, mix the $10^{-1}$ dilution gently, then transfer one drop to the second depression, one drop to the $10^{-1}$ section of the *Micrococcus* plate, and one drop to the $10^{-1}$ section of the *Serratia* plate. Discard pipet.

7. Repeat as in step six for the remaining dilutions, using a new sterile pipet each time.

8. Incubate at 37°C until next lab period.