

General Examination of microorganisms

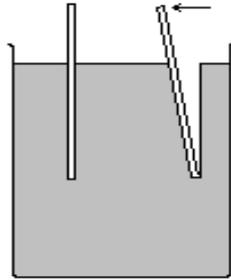
- Rossi and Cholodny Buried Slid Technique

The distribution of microorganisms in soil is heterogeneous. Microbes need nutrients and water to survive and these resources are not evenly distributed in soil. The structure of soil is composed of particles of inorganic and organic matter and the pores in between these particles. The pore spaces may be filled with water or air. Bacteria are mostly found attached to particles growing in small micro-colonies wherever nutrients can be found, Filamentous organisms such as actinomycetes and fungi found too.

One way to visualize how microbes are distributed in soil is to use the soil contact slide method developed by Rossi and Cholodny (1938). In this technique, glass slides are buried in soil and incubate for ~2 weeks. Bacteria and fungi attach to the glass as though it was a mineral particle and grow on the surface.

Procedure :

- 1-Weight 100 g of soil and placed in the clean container, if the soil is dry, moisten with water and adding (5 to 15 ml).
- 2- Make a slit in the soil and put the glass slide covered with media (semi solid) vertically in the Soil.
- 3 – Record the information on the glass slide.
- 4 – Covered the cans and incubated at room temperature for week-2weeks.
- 5- Remove the slide after Incubation by tilting it backwards so that the top of the slide is not scraped off.
- 6-Pulls slide and washed with water carefully to remove soil particles and clean the bottom of the slide with a moist paper towel.
- 7- Drying slide by flame for fixation and then staining by Gram stain or Carbol Fuchsin or methyl blue and washed with water and leave to dry.
- 8- Examine the slide under a microscope and identify the microorganisms in the soil



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