

# CULTIVATION OF MICROORGANISMS

## AIM: inoculate open water samples on nutrient agar

**All cultures of microorganisms are potentially dangerous. When handling microorganisms, certain safety rules and aseptic measures must be used.**

- All wounds should be covered with a waterproof patch;
- During practice you cannot eat or drink;
- Long hair should be tied. It is necessary to dress in gowns;
- Windows and doors must be closed to prevent contamination through the air;
- Wash hands with antibacterial soap before and after handling microorganisms;
- Clean the desk before and after use with disinfectant;
- After inoculation of the microorganisms, carefully seal the Petri dishes with adhesive tape;
- Never remove the lid of a sealed Petri dish;
- Autoclave sterilize used materials and containers.

### STEP 1

Before you start working with microorganisms: wash your hands, disinfect the table.



### STEP 2

You will be given sterile Petri dishes and sterilized agar. The flask containing the medium is kept adjacent to the lit spirit lamp. With the other hand a removable foil stopper is placed on a cleaned table, the flask opening is briefly burned in flame loosely cover the Petri dish and fill the agar to cover the entire bottom. The tray closes immediately. If the medium is not evenly distributed, the dish is gently moved. Nutrient agar is dispensed into all Petri dishes. Wait a few minutes for the agar to solidify.



### STEP 3

Add 0.5 ml of sample water to a Petri dish with a sterile pipette. The sterile pellet sample is distributed over the agar surfaces. Leave the Petri dishes on the agar for 5 minutes to allow water to pool. The dishes are then sealed with adhesive tape. On the bottom of the plate, mark where the sample was taken.



### STEP 4

Place the Petri dishes with the bottom up on the thermostat for 1–2 days. The temperature should be 25 °C. Never open closed Petri dishes. Wash hands after finishing work.