



**Safety rules in laboratory**

**Good laboratory practice**

**Disinfection & sterilization**

**Microbiology 2017/2018**

# Safety rules in laboratory I

- Entry into the microbiological laboratory is only allowed to persons working there.
- Eating, drinking and smoking is not allowed.
- It is forbidden to pipette with your mouth.
- Adhere to principles of personal hygiene (no rubbing your eyes, nose, scratching in the hair, chewing on nails). Keep the lab clean and in order.

# Safety rules in laboratory II

- Always use lab coat, slippers and wear gloves.
- Work in an infectious environment is forbidden to pregnant women and during 9 months after birth.
- You should clean and disinfect your hands when splashed with MB material and before leaving the labs.

# Safety rules in laboratory III

- It is not allowed to open windows.
- Never put your personal belongings on worktables.
- Before and after practice disinfect your worktable.
- Any injury must be reported and disinfected.
- After experiments **MUST** all MB cultures be killed with physical decontamination for 30 min at 121 °C. **Never pour MB cultures in normal outlets.**

# Safety rules in laboratory IV

- Keep the burner lighted during work.
- Do not take any lab tools from the lab.
- In case of MB contamination clean the worktable with cotton with 70% ethanol.

# Health protection

- Work safety and hygiene must be respected to a greater extent as potentially pathogenic microorganisms are being used. Upon completion of work, hands should be thoroughly washed with soap and disinfected.
- If the infective material gets into your mouth, the mouth must be thoroughly rinsed and gargled with an antiseptic agent.
- If the infectious material gets into the eye, the eye should immediately be rinsed with water and then with an appropriate antiseptic.
- Contaminated skin or object (work desk, clothing) should be wiped immediately with disinfectant solution.

## Groups of microorganisms according to safety:

1. Microorganisms most unlikely to cause any harm to humans (commensals of humans and animals; or microorganisms not present in mammals).
2. Microorganisms that can cause human illness and can be dangerous for laboratory workers. However, it is unlikely that such infection would spread. Infection in the laboratory is exceptional and effective prophylaxis or treatment is available. E.g.: *Campylobacter spp.*, *Clostridium botulinum* / *tetaniil*, *Corynebacterium diphtheriae*, *Staphylococcus aureus*, *Herpes simplex*, *Influenza* etc.
3. Can cause severe human infections that are also at risk for laboratory workers. There is a risk of spreading, but there is effective prophylaxis or therapy against these infections. E.g.: *Bacillus anthracis*, *Brucella spp.*, *Salmonella typhi*, *Hepatitis B virus*.
4. Cause of severe human infections that can infect laboratory workers. There is a risk of proliferation and appropriate prophylaxis and therapy is not available. E.g.: *viral infections - Ebola, Variola, Marburg*.

# Requirements

- 100% attendance in labs and seminars
- protocols