

SAFETY FIRST IN THE LAB

Preparing for the Lab

- Wash your hands with hot, soapy water. If soap and water are not available, you can use disposable wipes or a gel hand sanitizer.
- Wear disposable safety (protective) gloves.
- Tie back long hair.
- Wear safety goggles or regular glasses for microbiology work.
- If possible, wear a lab coat or apron.
- NEVER EAT, DRINK, OR CHEW GUM IN THE LAB. Keep your hands, pencils, etc. out of your mouth.
- Disinfect all surfaces with a disinfecting bleach solution before beginning a lab (see box above).
- INAPPROPRIATE BEHAVIOR WILL NOT BE TOLERATED AT ANY TIME IN THE LAB!

TIP **Disinfecting Bleach Solution:**
20 ml of liquid household bleach (chlorine bleach) in 1 L of tap water.

Safety Gloves

- Wear safety gloves when inoculating Petri dishes and when working with raw meat.
Safety gloves are made using many types of materials, including vinyl and polyethylene. They can be purchased at a local pharmacy, supermarket, or through science supply catalogues.
- When removing safety gloves, be careful not to contaminate your hands, items, or surfaces with any residue that may be on the gloves.
- Throw away used gloves immediately after removing them. Wrap one glove inside the other, then throw both gloves away.
- Wash your hands with hot, soapy water after removing the gloves.

Hot Surfaces

- Use thermal gloves or hot-pad holders when working with hot plates, burners, autoclaves, or any other heat source.

Petri Dishes

- Use Parafilm to seal Petri dishes after inoculating them.
- Never open a Petri dish with organisms growing in it. It could contain/release dangerous pathogens!

Pipettes

- **Never pipette by mouth.** Always use a pipette bulb or pipette aid.
- Be careful when attaching a pipette bulb. Hold your hand close to the end of the pipette where the bulb will be attached. Push the bulb onto the pipette carefully and gently. If you push too hard, the pipette could break and you could cut yourself.

Food in the Lab

- NEVER EAT OR DRINK ANY FOOD OR LIQUID USED IN A LAB.
- Thoroughly wash hands before and after handling and cooking raw meat.
- Wear safety gloves and lab aprons when handling raw meat, as well as safety goggles when cooking raw meat.

Proper Clean-Up

- Wear safety gloves and take appropriate defensive measures when cleaning up cultures and used equipment.
- Wash all glassware and other instruments in hot, soapy water, then sterilize them (see page 8).
- Properly dispose of used Petri dishes and other used equipment.
- Thoroughly disinfect all surfaces, especially those that were in contact with raw meat.
- Before leaving the lab, wash your hands with hot, soapy water or use a gel hand sanitizer.

Disposal of Used Materials and Equipment

- Check your school, local, or state safety regulations for specific information on how to properly dispose of potentially hazardous materials. If there are no guidelines, follow these precautions:

For Raw Meat

- Unless contaminated with a virulent pathogen in the lab, raw meat and other foods can usually be disposed of as regular solid waste. Place the meat in a sturdy plastic bag, seal, and dispose.

For Used Swabs, Petri Dishes, Pipettes, and Other Disposable Equipment

- Use a sturdy plastic bag that won't leak.
- Place the bag in a metal container, such as an empty coffee can. Use one bag/container for each team of students conducting the labs.
- Place used swabs, disposable Petri dishes, pipettes, etc. in the bag.
- At the end of the lab, add enough disinfecting bleach solution (see above) to cover the contents and tightly close the bag.
- Dispose of the closed bag in the trash.

Note: Equipment that will be reused should be cleaned using hot water and soap and then placed in boiling water for 10 minutes or sterilized in an autoclave.