Common sense for laboratory work at the Biology Education Centre

Contents

1 Welcome to our course laboratories

This booklet contains directions for laboratory work at our course laboratories. The aim is to improve safety and comfort for all of us. Read this before you start your experiment and do not hesitate to ask the lab assistants if you are unsure about anything!

2 Localities

2.1 Lab coats

Lab coats can be bought from the laboratory staff. You can also borrow one against deposit at EBC.

2.2 Lockers

Lockers are available at both BMC and EBC.

At BMC there are changing rooms with lockers in corridor A, floor 0. You need your access card to enter these rooms. At EBC the lockers are in the basement under the laboratory corridor.

Label your locker with name and course, and bring your own pad lock. Note that the lockers are to be emptied at the end of the spring semester.

2.3 Course library

The lab personnel keep a small library at BMC. Ask for instructions!

3 Regulations

- Do not keep outdoor clothes in the laboratory.
- Use lab coats all the time.
- Students should only work under supervision of lab teachers.
- No eating or drinking in the laboratory.
- Be careful with hand hygiene and do not wear gloves outside of the laboratory.
- At the end of the day, check that the windows are closed. Turn of the light.

4 General routines

4.1 Autoclaves and sterilisation ovens

The lab personnel manage autoclaves and sterilisation ovens. At BMC material to be sterilised should be put in specific boxes in the laboratory. Please ask the lab personnel.

4.2 Dish washing

All dirty glassware must be rinsed and all labelling removed before placed on the dish wagon. Contaminated glassware should be disinfected with jodopax (use gloves because jodopax is allergenic), and contaminated pipettes placed in buckets with 0.5 % virkon solution.

4.3 Bacterial spill

Treat bacterial spill with 70 % ethanol or jodopax and wipe it up.

Use 70 % ethanol for bench sterilisation.

4.4 Solutions and media

Lab teachers order solutions and media **in good time** before start of the course.

There can be some solutions and sterile water in stock. Ask the laboratory personnel if there is anything that you need!

4.5 Broken or faulty lab equipment

When you notice that any lab equipment is broken, place it in the designated area in the lab so the lab staff can take care of it.

5 Waste

5.1 General

Estimation of what kinds of waste will be produced should be included while planning the experiment. Ask lab teachers or lab assistants if you are uncertain of what is contaminated and what is not. Contaminated waste includes materials infected with micro-organisms, virus, material containing blood and radioactive waste.

5.2 Handling of non-contaminated waste

- Paper towels, gloves, empty wrappings, eppendorf tubes etc., which are not sharp or cutting, should be thrown in a **wastebasket**.
- Pasteur pipettes, cannulae, scalpel blades and object glasses should be thrown in plastic tins “stickande och skärande”. Full tins and pipette tips should be thrown in **blue waste cartons** at BMC and in **yellow waste cartons** at EBC.
- Contact the laboratory staff for large glassware breakage.

5.3 Handling of contaminated waste

- Contaminated gloves, eppendorf tubes, tips, plates, pasteur pipettes etc. are to be thrown in yellow cartons for hazardous waste.
- Radioactive waste should be put in separate yellow cartons with a “radioactive waste” label and marked with type of isotope. P-32 should be kept behind plexiglass.
- Biological waste (i.e. small animals, organs, tissues and blood) should be put in yellow “hazardous waste” cartons and kept in freezing room.
- Bacterial cultures should be treated with 10 % jodopax and thrown away in the sink.

5.4 Handling of chemical waste

- Chemical waste such as phenol should be poured into plastic bottles/cans and kept in fume hood. Label bottles with contents and date.
- Do not mix chemicals without first consulting lab teachers or assistants.
- Acrylamide gels should be put in separate yellow cartons, which are marked accordingly.
- Do not pour any inflammable, caustic or toxic chemicals into the drain.

6 Safety

6.1 General

Check where emergency showers, eye wash flasks, fire equipment, and evacuation routes are located. ***Teaching assistants give safety briefing to the students at the start of the term.***

6.2 In case of fire

- First save those who are in obvious danger.
- Call the fire department by dialling 112 on a cell phone, by pressing the alarm button or by calling 00 112 from a phone at Uppsala university.
- Warn others that are threatened by the fire.
- If possible, extinguish the fire.
- Escape through the nearest route and go to the meeting place.
- Do not use elevators.
- Shut doors to prevent smoke scattering.
- If possible meet the fire brigade.

6.3 Eye safety routines

- If an accident occurs use the eyewash.
- Arrange for transport to the hospital and flush sterile physiological salt solution in the eye during the transport.

Preferentially, contact lenses should not be worn in the laboratory. If so, special care should be taken to protect the eyes.

6.4 Working with chemicals

- Always read the warning label before using a chemical!
- Rinse any spill of hazardous chemicals immediately. Cover with absorbent and gather in waste cartons for chemicals. Contact the lab assistants.
- Work in fume hood and wear protective glasses and gloves.
- In case of phenol splashes at the skin: Spray with PEG 400 and rinse with plenty of water.

6.5 Working with liquid nitrogen

- Use protective glasses.
- Use a special thermos for nitrogen storage. An ordinary thermos might explode.

6.6 Working with injection needles

- Do not put the protective cap on again after using the needle.
- Throw the injection needle in the waste container for needles **directly after use**.

7 Laboratory instruments

7.1 General

Check manual or instructions before using an instrument. If equipment is broken, mark it with fault description and inform the lab personnel or the technician.

7.2 Micropipettes

- Handle the pipette with care. It is a precision instrument.
- Keep the pipette in its rack.
- **Avoid removing the ejector.** It supports the tip holder.
- Use the same pipettes during one experiment.
- If the pipette feels stiff or in any way different, leave it to our technician for service.

8 Laboratory personnel

We work in the laboratory:

EBC:
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Manager (located at EBC):
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Please put all broken/faulty lab equipment in the designated area in the lab