

MEEL, Molecular Ecology and Evolution Laboratory

Lund University, Dep. of Biology

Routines

No eating or drinking in the lab facilities.

Always, always put away chemicals, pipettes etc. to their assigned places.

Make sure that your working space is clean and ready to use for the next person, that you have washed your dishes, replaced pipette tips etc before you leave.

If a solution is running short, take some minutes to make a new one. Please label the vial with contents, date and signature.

Nothing, except water, is allowed to be poured into the sink.

Label your racks with date and name.

If you are the last one to leave for the day, make sure that every window is closed, that the machines that are not in use are turned off, and everything look ok for the night. Turn off the light and lock the doors.

New persons in the lab should at least 2 w in the lab before working outside office hours.

When starting lab work after a break exceeding 6 month, please read this document and do the quiz once more.

- **B 221, DNA extraction etc**

EtOH and dH₂O squirt bottles, scissors and boxes for ice are labelled with pink tape. You will find dH₂O in the green taps. If you need ddH₂O, use the MilliQ on the bench by the sink/dishwasher/ice machine.

Next to the MilliQ, on the right hand side, you will find the extraction hood to be used when you for example do DNA extractions with phenol/chloroform, or any other protocol/action where you handle hazardous chemical. Use only disposable plastics when working with phenol and throw them in a waste bin, labelled with "Phenol". If your gloves are contaminated throw them there as well. Note that **phenol and chloroform are toxins** and you should know, before you start, how to handle them properly, i.e. **read the MSDS and the risk assessment**. With this protocol, as in any other protocol/action where you

handle toxic and hazardous chemicals, you need to use the vortex and centrifuge in the hood, in the lab in the back, to get rid of the fumes from these kinds of chemicals.

On the left hand side of the sink you will find the dishwasher. If you do work in the lab you are obliged to help out with putting in and picking out the dishes. When the dish washer is running the dirty dishes can be put in the black box under the sink until the machine is ready. Before you put it in the box, or in the dish washer, be sure that you have rinsed them well with tap water. In this way, the person who handle the dirty dishes does not have to worry about getting exposed to dangerous chemicals.

The hazardous chemicals (corrosive, flammable, CMR etc.) in the lab are stored in the chemical cupboard, freezer A and in fridge B in this room. Due to the group of toxic chemicals those storage spaces need to be locked, daytime as well as nighttime. There is also a fourth storage space above the MilliQ.

This is a ventilated cupboard, where we could store oxidative chemicals. Further inside this room you find a hood for RNA extractions/running RNA and another with a centrifuge and vortex (for work with hazardous chemicals), as well as equipment for quantifying DNA/RNA and cloning.

- **B 222, Set up PCR**

Used only for setting up PCR and storing PCR reagents. If you do a PCR with PCR products, do the set up the master mix here and add template in C 243, Post PCR.

- **B 213**

Here you will find the -80°C freezer with the primer stock and a cupboard with bigger glass ware.

- **B 214**

Also called the Lion/wolf room. A plate reader and a UV hood for more delicate work is situated here.

- **B 215, PCR room**

Here you find our PCR machines, Q-PCR, the vacuum and the two-plate centrifuge. You will also find the non-hazardous chemicals here.

- **B 216, Storage room**

Storage for gloves, tips, tubes, petri dishes etc. If the room storage runs out, refill from here!

- **C 243, Post PCR**

Used for preparation of nested PCR, sequencing PCR (PCR products as template), running agarose and acryl amide gels, scanning gels and storage of

PCR products. Nothing in this room is allowed into DNA, set up PCR or PCR rooms. This is essential to avoid contamination. Note the blue tape on EtOH and dH₂O squirt bottles, scissors and ice boxes. Here you also should cast the gels both for agarose and for acryl amide gels. Agarose gels are casted by the microwave and acryl amide in the hood by the ELISA equipment.

If needed you also find another plate centrifuge that holds 4 plates at a time here. Other activities in this room are for instance ELISA, blood smear fixation/staining with Methanol and clone picking. Note that some of these chemicals are hazardous and toxic and you should know, before you start, how to handle it, i.e. **read the MSDS and the risk assessment.**

- **Booking of PCR machines/centrifuges/extraction hood**

Try to plan ahead and make bookings for the machines/extraction hood you will be using at least a day before you are going to work in the lab. Do not book more than you think you are going to need. With the PCR machines you are only allowed 2 active bookings ahead.

- **Chemicals accounted for?**

In room B 221, in the small freezer marked with an A, you will find the enzyme Prot K in a blue box in the top drawer. Whenever you take a new tube you should write your name, the number of the tube and the person paying on the list on the bench above.

In the freezer in the set up lab you will find the AmpliTaq, Taq Gold and Qiagen Multiplex stock. Whenever you take a new tube you should write your name, the number of the tube and the person paying, on the list on the wall next to the freezer.

You will find the Sybr Green and Platinum Taq in Jane's drawer, in Staffan's freezer. The lists are on the wall by the sink.

If you need another enzyme for you project, or if the enzyme is included in the kit that you are using, please contact Jane.

- **The black book and ordering**

The black book by the phone in B 221 is a list for ordering materials and chemicals that everybody uses in the lab. If anything runs out while you are working, write down what is needed, catalogue no, brand and how much (volume/weight). Each Wednesday Jane makes the order for the lab. You can check if it is ordered by the date – if the date is written in the book the order has been made. If you need to order something for your project only, please ask Jane for assistance

Safety issues

- **Chemicals**

A risk assessment should always be performed before an experiment. If there is a chemical you are not familiar with, read the MSDS to know how to handle it. In the DNA lab by the telephone in B 221 you will find folders of MSDS (safety data sheets), in both Swedish and English, for the chemicals registered in our lab. Use safety precautions like thick gloves, glasses, lab coat. If you wear contact lenses for everyday use, please consider to change to glasses when doing experiments. If an accident occurs and you get chemical spill in your face, you will be better protected if wearing glasses. Also, work in hood if needed.

When you spill something, no matter water or chemical, wipe it up immediately. With big pools of chemicals, and always for hazardous chemicals, use vermiculite.

You will find hazardous chemicals in the cupboard and in the small fridge and freezer in room B 221 (DNA lab), oxidative and non-hazardous in the cupboard above the MilliQ in B 221, and chemicals considered non-hazardous in the cupboard in room B 215 (PCR room).

- **Fume hoods**

Keep as clean and neat as possible. Do not leave anything behind, like beakers and measuring glasses. Change the surface cover and put in a new container for toxic waste if needed.

- **Chemical waste**

The chemical waste produced from our lab work needs to have their own individual waste buckets, separate for each chemical if possible. If one gets full, replace it and label it with name of the chemical, concentration, and appropriate CLP symbol (EU Regulation on Classification, Labelling and Packaging of substances and mixtures).

Needles and cutting waste are also in a separate bin, as is glass.

Be sure to keep the different hazardous waste separate.

- **Fire-extinguisher, bandage, emergency shower etc**

Make sure to know how to use fire-extinguisher, bandage, emergency exits and similar and take some minutes to check where you can find them in the lab. There is no lab that looks the same!

- **Children at office and in lab**

Vice-chancellor decision, in Swedish:

<http://www.medarbetarwebben.lu.se/organisation-och-styrning/regler-och-beslut/regelverket/regler-arbetsmiljo-miljo-och-sakerhet>

Vice-chancellor decision, in English:

<http://www.staff.lu.se/organisation-and-governance/rules-and-decisions/rules-and-regulations/work-environment-sustainability-and-safety>

Most important:

SOS, dial (0) 112

Last, but not least, do not hesitate to ask questions. You should be able to ask anyone that works in the lab about most things. And – better safe than sorry!

Good luck with your projects!!

Affirmation

I hereby declare that I have read and understood the above routines and instructions, and I will do my best to follow them during my time at Lund University, Department of Biology, MEMEG, MEE lab. I am aware of that it is my duty to keep informed of work regulations, how to handle chemicals according to safety regulations and perform risk assessments when working in the Dept. of Biology, Molecular Ecology and Evolution laboratory (MEE lab).

Lund, (date)

Signature

Name clarification