Revised by Jane Jönsson, January 2020

**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 a few 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, and beakers with content.

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 an updated version of this document and do the quiz once more.

* **B 221, DNA extraction etc**

Note: Due to pandemic, there is a maximum of 5 people working at the same time in this room. Find the booking sheet on the white board by the mid entrance.

EtOH and dH2O squirt bottles, scissors, pipettes and boxes for ice etc. 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 fume hood to be used when you in general handle hazardous chemicals, for example when you extract DNA with the Phenol/Chloroform protocol. Using this protocol as an example here are some things to consider when working with this kind of chemicals:

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 toxic chemicals 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 fume hood in the lab in the back, to get rid of the fumes.

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 fume hood for RNA work and another with a centrifuge and vortex (for work with hazardous chemicals, mentioned above), as well as equipment for quantifying DNA/RNA and cloning. Information about chemicals (MSDS, CMR etc.) are to be found on shelves to the left of the fume hood for RNA work.

* **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 glas 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, a vacuum centrifuge and a two-plate centrifuge. You will also find the less 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, pipettes and boxes for ice etc. 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 buy 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 buy 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 -40 C freezer.

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 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, and send an email with company, product no, how many etc.

**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 B 221, on shelves to the left of the fume hood for RNA work, 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, as they will protect better if an accident occurs. Also, work in hood if needed.

When you spill something, no matter water or chemical, take care of it immediately. Always use vermiculite for chemicals and unknown liquids.

You will find different kinds of hazardous chemicals in the ventilated cupboard and in the small fridge and freezer in room B 221, oxidative and non-hazardous in the cupboard above the MilliQ in B 221, and chemicals considered less 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