



Grunelius-Möllgaard-Labor
Abteilung Botanik und Molekulare Evolutionsforschung
Forschungsinstitut Senckenberg
Senckenberganlage 25, D-60325 Frankfurt am Main, Germany
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Safety and Working Rules in the Lab

[additional to the General Laboratory Regulations of the Senckenberg Gesellschaft für Naturforschung]

The Grunelius-Möllgaard-Laboratory is accessible for all Senckenberg scientists as well as their guest researchers, students and technicians. To ensure a smooth workflow and the safety of all lab users keep the following rules. Please print these pages and read them carefully. Each new lab user must register before the start of the project, receive a lab briefing and confirm it with a signature. The registration form can be downloaded on the lab homepage, for a lab briefing please make an appointment with the lab manager Juraj Paule.

The purchase of consumables, the maintenance and servicing of the equipment and the general functioning of the laboratory is organized centrally by the laboratory staff and ensured as best as possible. The laboratory staff is not responsible for cleaning up the laboratory or removing mess and/or contamination caused by the users. Their instructions concerning the laboratory process must be followed. In case of continued violations of the laboratory regulations and the safety and work rules, a laboratory ban may be imposed. It is recommended to use the laboratory between 8:00 and 17:00, so that someone can help in case of questions.

Certain materials required by all users are ordered centrally and made available in the required quantities against payment. Please note all used consumables on the corresponding list and inform Heike Kappes when something is running low. For users of Entomology III a separate contingent of consumables is available (labeled "AG Pauls"). Before starting lab work, please make sure that sufficient materials are available at the workplace for the day's needs, so that supplies can be taken from the warehouse in appropriate time if required (access to the warehouse is restricted for users!). This applies in particular to planned absences of laboratory personnel.

Safety rules

1. **Flammable, combustible and fire-promoting chemicals** are stored in the safety cabinets next to the fume hoods or in the corresponding sub-cabinets of the fume hoods (rooms 1.02 & 2.02). Separate compartments are provided for **acids and alkalis (bases)** in the fume hood base cabinets. Other chemicals are stored on the shelves in the pre- and post-PCR areas. Toxic chemicals are locked in the poison cabinet.

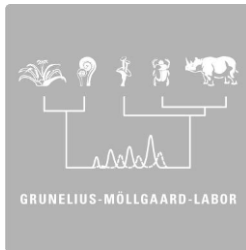


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2. Always wear blue nitrile gloves when working with **HDgreen** (Intas) for gel staining, even when photographing the gel! Gel waste stained with HDGreen can be disposed directly with household waste. Contamination of work surfaces, equipment and the floor with HDgreen must be avoided under all circumstances or removed immediately. Change HDgreen-contaminated gloves before the next work step! It is to be avoided to operate the keyboard of the Geldokuments-PC with contaminated and wet gloves.
3. Take a clean spoon/spatula and use gloves when **weighing chemicals** for each substance. Do not handle chemicals with bare hands. Wash off chemical splashes on skin with plenty of water (eye wash if necessary!).
4. When handling **liquid nitrogen** wear a lab coat, face shield and solid shoes (no sandals). Do not use the elevator for transport. It is essential to discuss the need for nitrogen with Heike Kappes in advance!
5. If you work with **UV light** (e.g. gel purification) wear special goggles, blue gloves and lab coat.
6. The lab is air conditioned, so keep **windows** and **door** closed.
7. **Eating and drinking** as well as storing food in the laboratory is prohibited. A break room is available to all users of the laboratory in room 1.01.

Work rules

1. In order to access the lab you need to apply for an **extension of your transponder access rights**. The form has to be signed by H. Kappes and delivered to Department Recruiting.
2. The areas for **pre-PCR and post-PCR** must be strictly separated. Devices (including pipettes and racks!) must not be removed from their area. This also applies to gloves, pipette tips and tubes. In case of DNA contamination, the entire laboratory must be cleaned by the users. For this purpose, the contaminated surfaces must be treated with sodium hypochlorite solution or similar substances. Separate conditions apply to the "Cleanroom".
3. For individual workstations in the pre-PCR and post-PCR area as well as for the PCR cyclers, the users must register in corresponding **schedules** in order to ensure plannability and conformity with current hygiene regulations.
4. Keep **equipment and workplace** clean! Work surfaces and equipment must be cleaned latest after completion of the daily work, if possible also during interruptions. Devices that are no longer in use must be switched off. Malfunctions of devices and fume hoods must be immediately reported to the lab personnel. Full bench waste containers must be emptied into the trash cans under the sinks. Always close doors of freezers and refrigerators tightly. Certain



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- devices of "AG Pauls" could be used only after consultation and/or instructions given by Julio Schneider.
5. The **safety cabinets and UV cabinets** can be used only after instructions given by lab personnel. They are reserved for work requiring particular product protection (e.g. sensitive DNA extractions, NGS library prep).
 6. Wipe **pipettes** clean with ethanol after use. Set multichannel pipettes to "locked" after use. When pipetting, never hold the pipettes with the tip up and make sure to aspirate carefully (risk of contamination of the pipette shaft!). Personalized pipettes (see label with name) are not to be used by the users.
 7. Always balance **centrifuges** before switching on, i.e. load them with equal weights opposite each other. Close both lids before starting the centrifuge. Immediately remove any contamination in the centrifuge with rinsing agent.
 8. Handle the electrode of the **pH meter** carefully, rinse it with Millipore water and put it into the protective cap with KCl after use.
 9. The **autoclave** may only be operated by Heike Kappes or Julio Schneider.
 10. Clean the **electrophoresis** tanks and lids after use, as well as the gel documentation unit.
 11. Do not store **consumables** on work surfaces, but label them in the assigned cabinets or drawers.
 12. Place empty **tip jars and glasses** (from GML stock) on the lab cart for autoclaving and do not collect these on lab benches.
 13. Collect **chemical waste** under the fume hood in the marked containers. If these are full, please inform Heike Kappes who will take care of disposal.
 14. All **tubes/racks** stored in the refrigerator/freezer must be properly labeled with name and date.
 15. **Refrigerator/freezer and material cabinets** are labeled according to their respective user groups. This classification shall be followed. Containers etc. that are not or insufficiently labeled or cannot be assigned will be disposed.
 16. **Sequenced PCR products** may only be stored temporarily in the designated refrigerator. Plates or strips are to be labeled with name and date. If the refrigerator is overfilled, unlabeled products or the oldest labeled samples will be disposed of by Heike Kappes.
 17. **Safety data sheets and manuals** are located in the folders provided for this purpose in laboratory rooms 1.03 and 2.03.



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18. Open **doors of the laboratory rooms** carefully and pay particular attention to opposing doors.
19. When **leaving the laboratory**, undress your lab coat and hang it on the lab coat rack. Users are not allowed to leave the laboratory areas wearing gloves (exception: for product protection when transporting between separate laboratory areas).
20. **After completion of your project**, the workplace must be completely cleaned up. This includes: emptying your drawer, make leftover consumables (tips, tubes, etc.) available to others, empty boxes, and remove labels. After consultation with the supervisor, an information if DNA samples are to be disposed of or deposited in the DNA bank should be provided to Heike Kappes.
21. Please notify us about **publications** based on data generated in the Grunelius-Möllgaard-Laboratory and **acknowledge** the laboratory in publications e.g. "We are grateful to the staff of the Grunelius-Möllgaard Laboratory (Senckenberg Research Institute Frankfurt) for lab support."

Heike Kappes (tel.no. 1156), Julio Schneider tel.no. 1173 and Juraj Paule (tel.no. 1158),
11.06.2021