

ESMP Lab Rules

Version 31.01.2025

Always ask if in any doubt and do not assume.

Sharing is caring.

Don't hoard stuff.

Play fair.

Put things back where you found them.

Clean up your own mess.

Don't take things that aren't yours.

(inspired from the Chris Boyman group safety rules | University of Colorado)

Emergency Phone Number

- [5555](tel:5555) from university phone.
- [+3524666445555](tel:+3524666445555) from mobile/external phone
- works 24 / 7

Emergency e-mail : safety@uni.lu

Incident reporting on [Service Now](#)
(category *Health, Security and Safety*).

Safety rules

(for everyone working in our labs; must be shown to all newcomers regardless of which group they belong to)

General rules

- It is strictly forbidden to **eat, drink, smoke or vape** in the laboratories.
- Normally, you are not allowed to work alone in the lab area; there must be at least one other person on the same floor who is aware of your presence in the lab while you are there. Please let each other know when you leave. If you must work in a lab when nobody else is on the same floor, you must use the “lone working device” all the time. If you do not know where to find one, please ask the lab manager right away.
- **Look up!** Locate and be aware of laboratory **emergency exits**. If you notice unsafe conditions or behavior, please **share your concerns immediately**, on our Labs Slack channel and/or with Jan.
- **Mark up!** Always indicate which stuff (including vials, flasks, bottles, petri dishes, ...) is yours, what is in it and what date you prepared it, in a way that others understand. Indicate an area where you are working temporarily with your lab card. If you occupy an area or equipment over longer periods, indicate this with the “Equipment in use” card, adequately filled out.
- **Clean up!** Keep common areas and shared instruments (like balances) clean. This includes fume hoods and areas around instruments.
 - While you **must** clean up after yourself, you are encouraged to also react about other dirt. Kindly ask the responsible to clean up if you know who it is, otherwise contact our lab manager or write a kind and gentle note about it in our Labs Slack channel, before you clean up the mess (but don't do anything that could be potentially dangerous!).
 - All users of our labs are obliged to contribute to the monthly lab cleaning.
- **Respect specific lab rules**, such as yellow illumination only, exceptional degree of cleanliness, laser safety rules, ...
- Everyone has the right to trash improperly labeled samples lying around in the lab during lab cleaning. However, better is to first put it in the quarantine box and alert about it on the Labs Slack channel, and then trash one week later if nobody reacts.
- **Lab coat and safety goggles:** You must wear your protective coat and safety goggles before entering a lab that requires their use. Please check on the lab door for requirements. Do not bring your lab coat to your office. Give your coat to our lab manager for cleaning before people start to smell you (probably at least every 3 months).
- **Glove usage:** Always wear appropriate gloves when working with chemicals or in areas where dust minimisation is important. Remove gloves and dispose of them properly after usage.
 - Refer to the TU Delft glove selection primer if you are uncertain about which gloves to use; it is available from our website's safety section.
- You **must** read Monique Wiesinger's instructions for **proper fume hood usage** before working at a fume hood.
 - The document is available from our website's safety section..
- When doing work in a **fume hood**, the sash must never be open above the safety height of that particular hood, indicated with green-and-red striped tape, and the

first 15cm of the workbench inside the hood must be kept free of objects (otherwise airflow is obstructed).

- *Large objects inside the fumehood should be placed on low stands, allowing air flow underneath.*
- *To maximize fume hood performance, to conserve energy and for safety reasons, keep the hood sashes down as much as possible.*
- *Pull them down completely when you leave the lab in the evening*
- Proper **training** is needed for using any equipment or set-up in the lab. Contact the lab manager or Jan if you need to use equipment you have not been trained for.
- Prior to starting a new experiment, you must do a **risk assessment**. Use the template provided by Matej Janeček (it is available from our website's lab safety area) and ask him for instruction if you are uncertain. Please deposit your risk assessment in the designated folder on our shared repository (OneDrive at the date of writing this document)
- Read the **SDS** for any chemical you will be working with, **before** you start working with it.
 - *Normally they are available through Quarks. Otherwise check the website of the manufacturer or use this SDS Database: <https://ehs.ucop.edu/sds/#/msdscse>*
 - *In case you are ordering a new chemical, you must check the SDS even before ordering, following the procedure on Quarks.*
- **Chemicals and solvents** should be **stored** in the designated safety cabinets or in the ventilated areas underneath the hoods.
 - *Chemicals that are not in active use can be stored in the bunker.*
- Read the label on all **chemicals bottles** you deal with and make sure you know what each pictorial symbol means.
 - *If in doubt, check the summary at the end of this document.*
 - *If you still have questions, ask your colleagues for advice.*
- **Chemical waste** must be stored in a hood until it is properly disposed of.
 - *Maximum amount of flammable liquid (pure and waste) is 100 L per lab.*
 - *Refer to our waste management flow chart on our website's lab safety pages and also in the labs.)*
- **Transport of chemicals** between labs must be done in a safe manner. Place the bottles in one of the buckets designated for carrying chemicals. Place this on a rolling table for transporting to a target lab on the same floor. If the target lab is on a different floor, use the stairs, not the elevator.
 - *If a chemicals bottle falls and breaks while you are in the elevator, there is no immediate escape!*
- Familiarize yourself with the **first aid kits** and the **spill kits** in our labs before you start working, in order that you can quickly manage a small injury or spill should they occur.
- **Sharps** (syringe needles and scalpel blades) and broken or irreparable glassware should be stored in designated containers and disposed as chemical waste.
 - *The plastic syringe (without the needle) should be disposed in the box for contaminated waste.*
 - *Refer to our waste management flow chart on our website's lab safety pages and also in the labs.)*

Before you start working

Each person must be able to answer the following questions:

- Where is the closest emergency exit from the laboratory you are working in and what is the best evacuation route like?
- How can I reach help and whom should I call?
- Where is the list with emergency phone numbers?

- How do I activate the fire alarm?
- Where are the emergency stop buttons for electricity?
- Where is the extinguishing equipment (extinguishers and fire blankets)?
- What do I do in case of liquid spill?
- Where are the eye-showers and emergency showers and how do I activate them?
- Where is the nearest first aid kit?
- Which are the laboratories with special detectors and how do their alarms sound?
- How do I find safety information on chemicals?
- Which precautions must I take care of if I want to run an experiment overnight or during the weekend?

Before you start working: *think about your safety!!*

Informing yourself

- The UL organization responsible for our safety is the HSSO (Health, Security and Safety Office), and the DPhyMS safety officer is Matej Janeček.
 - Our lab manager at the time of writing is Zornitza Toscheva.
 - Our lab safety coordinator at the time of writing is Yansong Zhang.
- At your welcome day you should have been provided with a lab safety pamphlet. If not, please contact Matej.
- *Compressed gas tanks*: All orders are made through Olga Astasheva and the lab manager has to be informed when you order a gas tank.
- Remember that usage of regular nitrogen (or argon) comes with *suffocation risk*. Do take precautions. Such gases may only be used in the Spider and Groot labs, which are our only labs with oxygen sensors.
- If you need to work with *liquified gases like nitrogen*, propane etc., you must first inform yourself about the safety risks and learn proper handling. In particular, never accompany a dewar with liquified gas in an elevator, and always wear protection gloves and goggles when handling liquified gases.
- There are many excellent lab safety training videos online. Please look for some videos to your liking and watch them

Pregnancy











- You must inform Jan ASAP; do not wait. There are plenty of things you can do that continue to support your career even if you may not be able to work in the lab for some time.
 - "...Women often wait too long before informing the Occupational Health specialists of their pregnancy. Expecting a baby is considered an essentially private matter, but this means that female employees are depriving themselves of the preventive care to which they are entitled..." (from <http://securite.epfl.ch/pregnancy>)
- Refer to guidelines from university that can be found [at this link](#) and from the ITM (Luxembourg Inspectorate for work and mines) [here](#).

Laser safety

- The laser safety officer at DphyMS is Bernd Uder. Please check with him before any work with lasers.

Labeling of chemicals

The dangers of each substance are identified on the label by a pictogram:

Physical hazards				
				
Explosive	Flammable	Oxidizer	Corrosive for metals	Compressed, liquefied gas
Health hazards				Environmental hazards
Highly acute hazards		Chronic or medium acute hazards	Highly chronic hazards	
				
Toxic	Skin or eye corrosive	Irritating, sensibilizing	i) CMR, ii) STOT hazard if swallowed	Aquatic toxicity

Explanations

- CMR = Carcinogenic, mutagenic, reprotoxic
- STOT = Specific Target Organ Toxicity

In addition to the pictogram, the labeling includes:

- a *Signal Word*
 - Word indicating the relative level of hazard
 - "**Danger**" is used for the highest hazards
 - Example: corrosive
 - "**Warning**" used for less severe hazards
 - Example: causing irritation
- *Hazard statement(s)*
 - Phrase describing every hazard individually
 - The hazard class of a chemical is assigned by its hazard statement
- *Precautionary statement(s)*
 - Phrase describing recommended measures that should be taken in five domains:
 - General precautionary statements
 - Prevention
 - Response
 - Storage
 - Disposal

Disclaimer: This document was prepared for lab safety knowledge of ESMP group members. It is not an official university document.