

ESMP & LC Nano Groups Lab Rules

Always ask if in any doubt and do not assume.

or

All I really need to know,
I learned in kindergarten.

Sharing is caring.

Play fair.

Put things back where you found them.

Clean up your own mess.

Don't take things that aren't yours.

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

Safety rules check list

(for everyone in both groups; must be shown to all newcomers)

General rules

- If you notice unsafe conditions or behavior, please *share your concerns immediately*, on our Lab Safety Slack channel and/or with Giusy or Jan.
- **Eating, drinking and smoking** in the laboratories is strictly **forbidden**.
- Locate laboratory **emergency exits**.
- **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 take a photo and share on our Lab Safety Slack channel, before you clean up the mess (but don't do anything that could be potentially dangerous!).
 - All members of both groups are obliged to contribute to the monthly lab cleaning.
- The **lab manager** of the week has the right to trash improperly labeled samples lying around in the lab. When you are the lab manager you must go through all the labs when arriving in the morning and before leaving in the afternoon.
- **Lab coat:** When you handle chemical products or are doing practical work, you must wear a protective coat.
- **Glove usage:** Always wear gloves when working with chemicals. Remove gloves and dispose of them properly after usage.
 - Refer to this link for [glove selection](#).
- **Safety goggles:** Proper eye protection is mandatory in all laboratories requiring eye protection, even if your own work task is not hazardous.
 - See the recommendation on the door of each lab.
- You *must* read Monique Wiesinger's instructions for **proper fume hood usage** before working at a fume hood.
 - The document is available from our [internal website](#).
- When doing work in a **fume hood**, the sash must never be open above the safety height of that particular hood, indicated with yellow-black 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 a low table, 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.
 - The list of designated persons can be found at our [internal website](#).
- Read the **MSDS/SDS** for any chemical you will be working with, **before** you start working with it.
 - SDS Database: <https://ehs.ucop.edu/sds/#/msdscse>
 - In case you are ordering a new chemical, you must check the SDS even before ordering, and you must fill out the chemicals safety pre-order sheet (download from our [internal website](#))
- **Chemicals and solvents** should be **stored** in the designated safety cabinets or in the ventilated areas underneath the hoods.
 - Long-term chemicals storage should be in the bunker.
- Flasks, containers and washing bottles must be **labeled** properly.
- 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 Martin's flow chart (on [our Intranet](#) 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!
- **Sharps** (syringe needles) and broken or irreparable glassware should be stored in separate containers and disposed as chemical waste.
 - The plastic syringe (without the needle) should be disposed in the box for contaminated waste.
 - Refer to Martin's flow chart (on [our Intranet](#) and also in the labs.)

Before you start working

Each person must be able to answer the following questions:

- Where is the fire exit of the laboratory?
- Where are the safety ways and stairways of evacuation?
- How can I reach help and whom should I call?
- Where is the list with emergency phone numbers?
- How do I start a fire alarm?

- Where are the emergency stop buttons for natural gas and electricity?
- Where is the extinguishing equipment (extinguishers, safety blankets, sand buckets)?
- What do I do in case of liquid spill?
- Where are the eye-showers and emergency showers?
- Where is the nearest first aid kit?
- Which are the laboratories with special detectors and how do their alarms sound?
- Which fume hoods are equipped with fire detection?
- 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 SIL (Service des Infrastructures et de la Logistique), and the main safety officers are Antoine Tamborini and Sébastien Schreiber.
 - The lab safety coordinator at PhyMS Limpertsberg is [Olga Astasheva](#)
 - The biosafety officer representing SIL at PhyMS Limpertsberg is [Monique Wiesinger](#).
- SIL provides some safety information at: [ULI > The University > SIL > Sécurité et santé au travail](#)

Please read at least:

- Point 1: Safety organisation scheme
- Point 6: List of safety coordinators
- Point 7: Instructions related to specific risks
 - Biosafety practices
 - Laser safety guidelines (not up-to-date)
- Point 8 : Fire safety and first aid
 - Who is on the emergency rescue response at each campus?
 - Evacuation instructions
 - Working with fire extinguishers
 - First aid
- Point 11 : Safety and hygiene regulations
- Point 12 : Various safety-related procedures
 - Special precautions for pregnant and breast-feeding women
 - Work-related accidents
 - What to do in case of sickness
 - What to do in case of spillage of dangerous substances

- How to behave in case of evacuation alarm, fire, bomb alert, gas leak, nuclear alert, severe storm.
 - Point 13 : Proper workplace posture
 - Point 15 : Waste management
- **Compressed gas tanks:** All orders are made through Astrid Tobias and SIL has to be informed when you order a gas tank.
- Everyone should go through these excellent training videos from UCLA: <https://www.ehs.ucla.edu/training/videos>
- It is recommended to go through also the following safety manuals.
 - EPFL: It is from 2009 but is also in French. <http://scc.epfl.ch/files/content/sites/sbst/files/shared/LivretHTML/index.html>
 - UCLA: Updated June 2016, English only. http://www.chemistry.ucla.edu/sites/default/files/safety/doc/IIPP_2016.pdf
- More information about hazardous Chemicals (from UCLA):
 - [Acute Toxins](#)
 - [Reproductive Toxins](#)
 - [Regulated Carcinogens](#)
 - [Select Carcinogens](#)
 - [Explosives](#)
 - [Pyrophorics](#)
 - [Fire Diamond HFRS Ratings](#)
 - [How to handle and store compressed gas tanks](#)
 - How to handle particularly [hazardous chemicals](#)
 - Working with STENCH compounds: [Volatile and strong order chemicals.](#)

Pregnancy











- You must inform Giusy or Jan ASAP; do not wait.
 - "...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..."- <http://securite.epfl.ch/pregnancy>
- Refer to guidelines from university that can be found [at this link](#) (not recently updated).

Laser safety

- The information provided by the university is currently not up-to-date, but you can find what is available at: https://intranet.uni.lux/the_university/sil/PublishingImages/Lists/Nos_activits_principales/AllItems/Laser_safety_guidelines_EN.pdf

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 (with existing information found at [UL](#), [UCLA](#) and [EPFL](#) websites) for lab safety knowledge of ESMP group members. It is not an official university document.