

Annual Lab Safety Training 2020

Research group König

Julia Zach, 17.12.2020



Universität Regensburg



<https://weheartit.com/entry/139603084>

Precautions Hotspots: Your personal protective equipment (PPE)

- Gloves
 - Material must be impermeable and resistant against the product / substance / preparation
 - Note the penetration time of the material vs. your chemicals
- Safety glasses
- Closed shoes
 - Summertime: use second pair of closed lab shoes
- Lab coat vs. your regular clothes
 - More flame and chemical resistant
 - No contamination of others/ other rooms (e.g. kitchen)

When you forget closed-toe shoes
for the lab

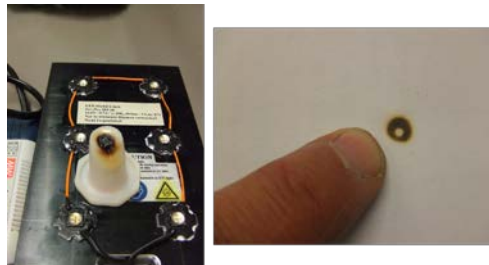


<https://esmemes.com/i/some-girl-at-my-college-came-to-the-chemistry-lab-2224547>

Precautions Hotspots: PPE: Safety goggles



- Group main topic: Working with LEDs
- Orange lens offers protection against UV light, blue/green light up to 530 nm
- Lens in your eye acts as focussing lens:



INCREASE LIGHT INTENSITY ON YOUR RETINA UP TO 500.000x!

Working with light = working with safety glasses

Precautions Hotspots: Hoods

The most important safety facility in the lab!!

Acts also as measure against spreading Covid-19!



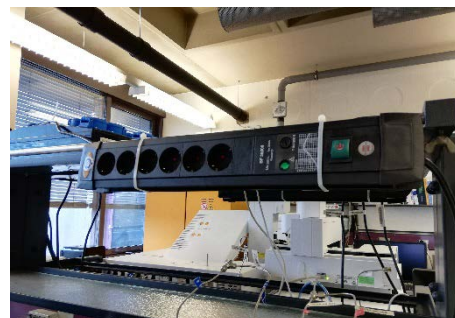
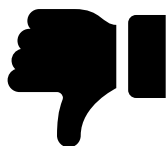
- Don't use it for storage of chemicals, unused things, bulky items
- Close the sash every time it's possible
- Best flow conditions:
 - Necessary distances: 10 cm to sash, 5 cm under apparatus, don't block rear panel of the hood
 - Working in the back area
 - Sash closed as far as possible
 - Use laboratory lift for hot plates, etc.
- Don't run past quickly in front of the hood

Precautions Hotspots: Lab organization

Take a look around in your lab:



- Do you have enough space to work or is your lab only a chemical stock?
 - Lent / unneeded chemicals back to stock/Ernst
 - Check your fridge and freezer for unused chemicals
 - Store toxic, hazardous chemicals and solvents (1L bottles) in the safety cabinets
- Electricity – cooling water: no good partners
 - Reorganize your cables and socket strips!



Precautions Hotspots: Lab equipment - miscellaneous



- High vacuum pump in the overnight lab
 - NOT for solvent removal or drying compounds
Use your lab vacuum line to remove the solvents
 - Use named round bottom flask (no others)
 - Use a joint sleeve or suitable grinding grease



- Water hose connections
 - Use hose clamps (plastic for glass connection, steel for metal connection like cooling block)



Precautions Hotspots: Lab responsible person

- One responsible person for every lab
- Main task: Take a closer look in your lab on safety issues
 - Talk to labmates to follow the regulations
 - Take care that the safety regulations are implemented and followed
 - Report safety problems, e.g. broken devices etc.
 - Inform new employees in the laboratory of the applicable regulations and procedures (e.g. necessary official introduction of N₂-task)
 - Keep an eye on the lab organization (e.g. waste, unused chemicals)
- New signs without phone number (data protection regulations)

Zur Information für die Technische Zentrale
Laborverantwortlicher – im Störfall zu benachrichtigen

Name:	Fr. Zach	Raum Nr.:	32.1.82
Telefon dienstl.:	4574	privat:	0175/1818103

Precautions Hotspots: Chemical safety – storage - disposal

- Storage
 - Register stocked chemicals at removal in the list in the storage room
 - Lent / unneeded chemicals
 - from our group back to Ernst (also empty containers without storage number)
 - from other group back to the group
 - Store toxic, hazardous chemicals and solvents (1L bottles) in the safety cabinets
- Disposal
 - Bring old/not usable chemicals for disposal to Ernst
 - Chemical labelled waste containers to nightroom
 - Downstairs lab: direct to disposal service



Emergency Hotspots: Behaviour in emergency cases

**IN CASE OF
FIRE**



LEAVE THE
BUILDING BEFORE
PUTTING IT ON
FACEBOOK

<https://www.safetyservicesdirect.com/humorous-and-funny-health-and-safety-signs-154-c.asp>



In the event of fire

Keep calm

Report the fire  **Activate MANUAL CALL POINT**
(Activates automatic fire command system)

NEXT STAIRCASE
(Fill in nearest manual call point)

In addition:
Call Control Room (Leitwarte) at 0941/943-3333

WHAT happened in detail?
WHO is calling?

Get to safety   Warn people in danger
Take helpless people with you
Close doors and windows
Follow designated rescue routes
Do not use elevators
Follow instructions
 Proceed to assembly point


Attempt to extinguish fire
without putting yourself at risk


 Use fire extinguisher
 Use fire hose

Fire Safety Regulation pursuant to DIN 14 096

In an emergency

Keep calm


Urgent measures  Secure the hazard area
Provide first aid

Report the emergency  **EMERGENCY SERVICES 112**
(University phones: Dial prefix 09 or 01)

What happened?
Call Control Room (Leitwarte) at 0941/943-3333
WHERE did it happen and where is the nearest emergency meeting point (Rettungstreffpunkt)?
WHAT happened?
HOW MANY PEOPLE are injured?
WHAT KIND of injuries?
WAIT for questions!

Await emergency services at the level of the subsurface road at the emergency meeting point

(Fill in nearest emergency meeting point / Rettungstreffpunkt)

 Poison-Emergency München (089) 19 240
Poison-Emergency Nürnberg (0911) 398 2451

Emergency Hotspots: First Aid

- Know the site of your emergency and eye showers!
- First Aid Cases
 - Big box in the night room (32.1.15)
 - Small box in the kitchen
 - Tell Britta, if something is running out of stock
- Skin contact with phenols, cresols and xylenols
 - Use PEG 400 in night room
- Hg-Kit also in the night room (under Biotage device)
- First responders in our group:
Britta, Regina, Ernst, Julia, Uli



Emergency Hotspots:

Fire protection

- Do you know your fire protection equipment in your lab?
 - Do you know our fire protection in our group?
-
- Emergency shower
 - Fire alarm
 - Fire extinguisher
 - Gas masks
 - Meeting point in case of fire: parking area next to the nitrogen tank
-
- Fire protection assistants:
Britta, Regina, Ernst, Rudi, Julia



Emergency Hotspots: Important places

Assembly point



Re-entering is prohibited until the acoustic fire alarm has been shut off and explicit permission to re-enter the building

Emergency meeting point



- Case of emergency
→ Meeting point for ambulance, police



New emergency point during current construction sites



Hygiene and infection measures against SARS-CoV-2 spreading

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<https://pixabay.com/de/illustrations/covid-corona-coronavirus-virus-4948866/>



Where to find information?

- Group specific hygienic concept and measures:
 - You get the concept at the first lab safety instruction with Ernst
 - Available on our homepage:
www.uni-regensburg.de/chemie-pharmazie/organische-chemie-koenig
- University specific information (some in English)
 - University homepage:
www.uni-regensburg.de/interne-kommunikation/corona-infos
- Bavaria specific information in English
 - BR 24 homepage:
www.br.de/nachrichten/deutschland-welt/coronavirus-in-bavaria-assistance-in-english



New QR codes and ventilation concept

- QR codes: Getting contact data from non-permanent group members
 - research students, members from other groups for e.g. analysis, technicians, visitors, etc.)
 - Instruction next to the code
 - Research students: Registration before starting still necessary (Julia: Lab space availability and request to Corona Task force, Petra: usual registration)
- Ventilation concept specifically for every room
 - Information on the door

Thanks for your attention!
**Don't forget to confirm your participation by
your signature on the list at Ernst's lab!**



And this is why women live longer than men..

