

# I. General Lab Security Information

## NOTE:

- Internet: [www.biochemie.uni-freiburg.de](http://www.biochemie.uni-freiburg.de) => Sicherheit
  - ⇒ Links around the topic security
  - ⇒ *Safety Data Sheets*
  - ⇒ Everybody working in our labs *must* inform her-/himself about rules about proper handling dangerous substances by *Safety Data Sheets* before starting to work with them.

## Notice Boards (red frame)

- Manuals for good practice lab work (German, English in prep.)
- Fire protection rules
- Emergency phone numbers
- General security advice
- Important links on security

## Definition of dangerous substances

explosive, fire stimulating, highly inflammable, inflammable,, highly toxic, toxic, corrosive and irritative, cancerogenic, mutagenic and teratogenic substances

## Dangerous substances

- have to be labeled properly
- have to be listed in a certain register
- Teenagers, pregnant and breast-feeding women are not allowed to handle with



## 1. Working with dangerous substances

- When working with dangerous substances always wear **lab coats, protection glasses and -gloves; prefer nitril gloves, espec. for toxic substances like ethidiumbromide**
- **Spilled dangerous substances** have to be removed immediately
- **Storage** up to 1 L / 1 kg per substance at the bench
- **Substitution of dangerous chemicals:** You **must replace toxic substances against less toxic ones** where possible (e.g. stainer/ destainer with EtOH instead of MeOH? CyberGreen instead of Ethidiumbromide?)
- **Acrylamide:** You **MUST use acrylamide solutions** wherever possible (e.g. classical SDS-PAGE, exceptions for higher concentrations: **crystalline acrylamide MUST be handled with gloves, protective glasses and under the hood**)
- special places have to be defined and marked by KMR stickers
- „One glove rule“: take off your gloves everytime you leave the lab, do **not** touch any door handles, etc. with gloves

## 2. Liquid nitrogen



- wear protection glasses and -gloves
- be careful with storage of liquid nitrogen in coldrooms: **Danger of suffocation!!!**
- **Transfer into Dewar containers** only in ventilated places outside the coldroom!
- **Transport in elevators:** Allowed only in the special dangerous goods elevator. If in normal elevator: **No presence of persons is allowed. Clear notice necessary.**

### 3. Microwave



- Be careful when warming solutions in microwaves. They can **boil over!**
- **Note: It is strictly forbidden, to use the microwave for warming solutions, which contain inflammables like ethanol/ methanol (e.g. stainer or destainer) or other dangerous substances => danger of explosion**

### 4. Vacuum



- always wear protection glasses, **protect containers against implosion** by wrapping with film (e.g. from the library), tape, etc.
- you must inform coworkers next to you!!

### 5. Hoods/ Safety cabinets



- working with volatile or dusty dangerous substances only in the flow cabin; for your personal protection close front as far as possible
- storage of inflammable liquids is allowed up to 1 L, in safety cabinets up to 10 L/ substance, in total max 30 L
- no storage of bases and acids in safety cabinets (corrosion)

### 6. Damaged glassware



- check frequently for damaged and harmful glassware and **replace immediately**

### 7. Food, Drinks



- no eating or drinking food in the labs!
- no plants
- no beer bottles, etc. in the cold rooms

## 8. Dangerous work



- ***dangerous labwork is only allowed in the presence of at least one person*** in the same lab (which could get help in case)

dangerous work includes:

- handling dangerous goods (incl. radioactivity)
- handling high voltage like power supplies, or autoclaves
- handling vacuum or liquid nitrogen
- **working in the „Säurekeller“**

## 9. Closing the lab doors

**Tür zu!**

- the last lab person who leaves the lab has to lock the lab door
- in the evening the last person has to check, if all equipment which may cause a fire is switched off and if all windows are closed tightly
- doors of the isotope lab have to be closed

## First Aid



- inform yourself about ***emergency showers, first aid cabinets*** (First Aid medicine, dressing material)!
- in every floor you will find a list of people trained in first aid, tel.numbers, instructions for first aid

## Important phone numbers

Emergency call: 2000

First Aid: 0-19222

Lab Safety: 9031