Work Environment Guide

For the Department of Chemical Engineering, Biotechnology and Environmental Technology

Faculty of Engineering, University of Southern Denmark



Information for employees and students. Read this leaflet carefully

Further information is available on http://www.sdu.dk/KBM

Safety Precautions at the Department of Chemical Engineering, Biotechnology and Environmental Technology (KBM)

Alarm in case of fire or other accidents:

Follow the guidelines in the emergency plan

Accidents: In case of accidents call 1-1-2 and direct the ambulance to Campusvej 55 Bygning 43/44

Follow the instructions in the emergency plan

Inform SDU at +45 6550 8888.

In case of acute water damage, power failure and similar: **8888 (+456550 8888)** (SDU extension number) 24-hours.

Poison Information: Poison Control Hotline: +45 8212 1212

Chemical Emergency Response Team: Danish Emergency Management Agency (DEMA), Chemical Lab (Beredskabsstyrelsen, Kemisk laboratorium): +45 4582 5400, <u>http://www.kemikalieberedskab.dk/</u>

Emergency showers and eye cleaners are available in the laboratory Fire extinguishers and fire blankets are placed next to the doors Fire hoses are placed in the hallways

Emergency exits:

Keep informed about emergency exits at the department in order to find your way in case of fire

Employment injuries:

Employment injuries include hazardous exposure of a physical as well as psychological kind.

All employment injuries must be reported to the occupational health and safety management using specific forms. From there the forms will be forwarded to the National Office for Accidents at Work and Occupational Diseases (Arbejdsskadestyrelsen) and if necessary to the Danish Working Environment Authority (Arbejdstilsynet).

Personal protective equipment:

Available at the department:

- Glows
- Hearing protectors
- Security glasses

- Filter breathing apparatus

If there is a need for specific personal protective equipment this can be ordered.

All personal protective equipment can be found in room Ø32-508b-1.

Chemicals:

All chemicals at KBM are registered in a database, "Kemibrug". In the database you can find information on a number of chemicals which can be used for preparation of a work assessment (APV). Furthermore it gives you the possibility to print out labels for your produced solutions.

Please inform the laboratory technicians if you run out of labels.

All chemicals must be returned to the chemical collection. Toxic chemicals (labelled with the hazard symbols "Danger") must be kept in a locked cabinet or returned to the chemical collection immediately after use.

The amount of flammable materials, such as solvents, must not extend 50 fire units per room. Do not keep chlorinated solutions in the vicinity of flammable solvents.

An approved **workplace safety instruction for all substances and materials** has to be made before start working in the labs. Furthermore the safety form need to be fill out and approved forehand and given to the lab team.

General handling of chemicals:

Chemicals, materials and other equipment are purchasing by the laboratory technicians. Needed purchases can be given via an internal request form. The form should be signed by the supervisor and handed in to the lab team. Be aware that purchase can be rejected due to safety and financial causes.

All produced dissolutions have to be marked with the following:

- Content
- Concentration specification
- Production date
- Warning symbol
- Name
- Semester/group
- Responsible supervisor

All arrangements must be marked with identification notes, which can be found in all labs.

You are obliged to follow instructions given by the head of department or one of the working environment representatives.

Classes, either own classes or safety classes have to be worn in all labs working with chemicals.

Care should be taken that chlorinated combinations are not stored near inflammable solvents.

It's forbidden to smoke, eat and drink in the labs.

Lab work:

All tables and fume cupboards must be cleaned daily. Equipment and materials not in use must be removed.

- > Used glass equipment must be rinsed and placed for washing up.
- Used glass equipment containing volatile chemicals must be kept in the fume cupboards.
- > No bags or coats of any kind are allowed in the laboratories.
- Opening windows are emergency exits and must not be blocked by large furniture or experimental arrangements.
- By the end of a working day make sure that all doors to the fume cupboards are closed, that the lights are out and that all, windows and doors are closed and locked.

Under special circumstances the labs can be used outside normal working hours. For this you will need a signed permission from your supervisor. The form which has to be filled out and signed is available from the laboratory assistants.

It is only allowed to work alone in the labs after 4 pm and during the weekends, if one of your colleagues is within hearing distance.

To get access to the labs a code is needed. The code can be collected from the laboratory assistants after reading the Work Environment Guide.

If you are in doubt of anything, please do not hesitate to contact members of the <u>work</u> <u>environment group</u>.

WASTE:

Waste paper must be placed in the standard office bins or in black refuse sacks.

Waste glass: Empty glass packaging, bottles and similar must be cleaned to remove chemicals residue and placed in one of the waste glass containers, which can be found in the basement hallway. Hazardous chemical residues **must** be destroyed immediately and safely **by the user**, before the empty packaging is placed in the waste glass containers in the basement. Glass and bottles containing toxic chemical residues must be collected together with laboratory waste and placed on the blue pallet in the basement room B02. Waste bottles must be labelled with waste group and pH value. **REMEMBER** to state everything you know about the waste, i.e. all components must be written in 'waste components' space (affaldets bestanddele). Afterwards, the waste bottle must be placed on the blue pallet in basement room B02.

Needles, scalpels and other sharp objects must be placed in the yellow needle containers.

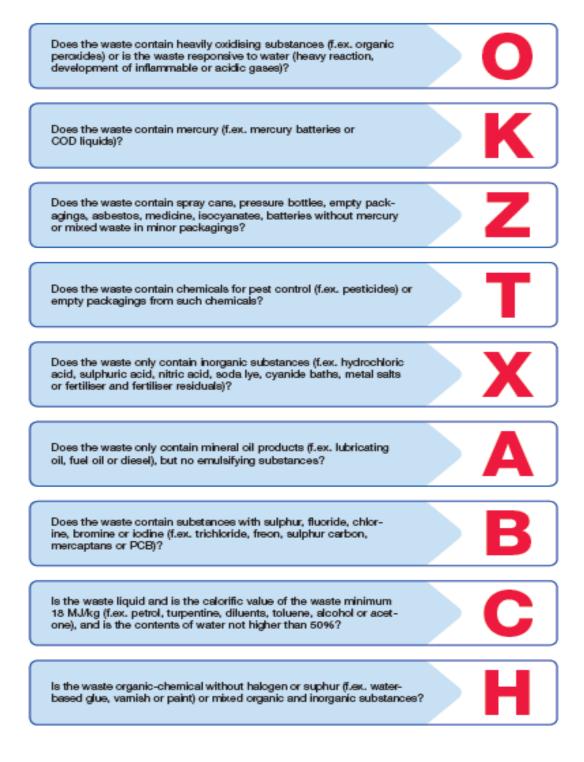
All chemical waste will be sent to 'Nord' in Nyborg for incineration.

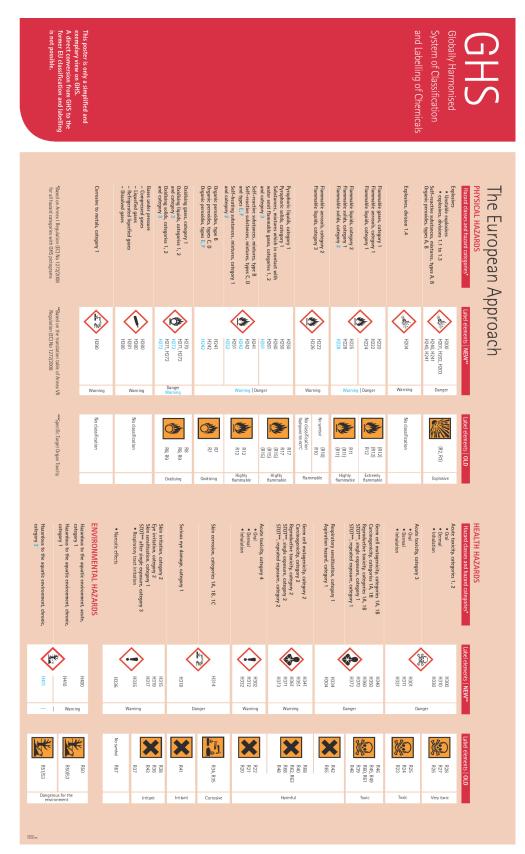
The waste will be classified according to Nord's alphabet:

Guide as to classification

Classification into waste groups

The guide as to classification shows an overview of Kommunekemi's waste groups. It illustrates how to prioritise, sort and pack the waste property. As a main rule you have to separate various waste types.







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