Laboratory Guidelines
(for students working in the Department of Chemistry)

Updated: Oct 2017 Prepared by: Tim Causon and Andreas Hofinger-Horvath

Regulations are essential for the safe and orderly running of laboratory classes! Major infringements may result in the issue of a temporary ban from the laboratory.

These guidelines are posted in all teaching laboratories

To ensure that the laboratory classes commence on time, all students must be present in the specified laboratory prior to the beginning of the class.

The head assistant and other designated assistants are responsible for compliance with the laboratory guidelines, the application of appropriate precautions, and all other aspects of laboratory safety.

General practice in the laboratory

Eating, drinking, chewing of gum, smoking, and use of multimedia devices for communication such as the use of radio is **strictly forbidden** in the laboratory. Preventing accidents is each person's personal responsibility. Do not rely on others!
If something is unclear in the written instructions, ask an assistant or tutor **before** you start – misunderstanding is often the root cause of accidents.
Consider performing a test run **before** beginning the actual experiment. Only chemicals specified in the laboratory instructions/manual and documentation (Skriptum) may be used for carrying out of experiments.

Safety

The wearing of safety glasses and lab-coat is compulsory for all students in all areas of the laboratory.
Wearing contact lenses is prohibited (without exception) in all areas of the laboratory.

The use of temporary crutches (or similar mobility aids) in the laboratory is forbidden due to safety reasons. (Solutions for individuals to complete the course at a later time point will be offered in such circumstances).
Any person who is pregnant may not work in the laboratory due to safety reasons. If you suspect or know that you are pregnant, please contact the occupational doctor (Arbeitsmedizinerin) and the laboratory head. **Please consider your safety with this issue seriously!** (Of course, solutions for individuals to complete the course at a later time point will also be offered in these circumstances)

Clothing
Lab coats should be clean, of knee-length with long sleeves and made from 100% cotton. Wearing of skirts and shorts is prohibited all year (leggings and tight pants are allowed). Fully enclosed shoes and safety glasses are mandatory, as is the wearing of gloves when required. Long hair must be tied back away from the face. Jewellery (especially on the hands and long chains/necklaces) may not be worn in the laboratory. Coats, jackets, bags and the like must be stored in the lockers outside the laboratory.

All work must be carried out while exercising caution. Contact between chemicals and eyes, skin and mucous membranes must be avoided (protective clothing/equipment such as gloves can be obtained from the laboratory technicians).
In case of **eye exposure** to chemicals, immediately rinse thoroughly (eyes must be open) using running water, then for a few minutes using an eye wash bottle (or eye washer)!
Pipetting by mouth is forbidden. Use a pipette bulb!
Chemicals should be rinsed immediately from **skin** (face, hands) for a few minutes with cold water in cases of exposure.

Clothing should be washed thoroughly with water in case of spillage of chemicals. Thoroughly soaked clothing should be removed immediately!
In case of catching fire (clothes, hair), immediately use a fire blanket or emergency shower (located at the laboratory exits) to extinguish.

In case of any kind of injury or laboratory accident, on duty assistants must be informed immediately and without exception

Fire safety:

In rooms or work areas that are designated as fire- or explosion hazard, no fire or naked flames of any type (e.g. match, cigarette lighter, candle) or electrical equipment may be used (so-called explosion protection). Note that cold rooms and freezers are absolutely not suitable for the storage of flammable chemicals. No flammable liquids may be used or stored near open flames (only exception is the use of small quantities in the context of microbiological work - after consultation with the teaching staff).

Maintaining a suitable workplace:

Only items required for carrying out the task at hand should be on the working bench space. These items should be at hand: clean lab coat, paper towel, spatula, tweezers, permanent marker, lab journal, lab instructions (Skriptum, lab manual), calculator.

Labelling:

The laboratory is cleaned and remaining items on the benches removed at the end of each day. When taking over a locker in the laboratory, check that all listed glassware and laboratory apparatus are present and stored in your locker. Glassware or sample containers that are left in the fume cupboards, refrigerators, or cool rooms must be clearly labelled with the ***name of the student***, ***the date*** and a ***clear description of the contents***.

Lab equipment: general

Balances, photometers, centrifuges, microscopes, water baths etc. must be treated with care. If in doubt about the proper use of any laboratory instrument, ask an assistant for help. All equipment must be maintained and left in a clean state and turned off at the end of the day.

Balances

Check the level prior to use (report any issues to a laboratory technician)
Pay attention to different weighing precision and ranges for the balance being used.
Balances must be kept clean and cleaned immediately in case of spillage.

Chemicals

Always keep chemicals free of contamination – never return chemicals to the original container if excess has been taken. Following use, close the reagent bottle immediately with the correct lid and then remove and dispose of any spillage.
Take note of hazard symbols (see GHS), together with the related information concerning potential hazards and safety recommendations.

Waste disposal

The proper disposal of waste from work in student laboratory classes follows the rules for hazardous waste as defined in the respective lab manual or on posted instructions in the laboratory.
More information about this is available from the on-duty assistants or can be found on the department website.

http://www.chemie.boku.ac.at/laborordnung-und-sicherheit-im-chemielabor/entsorgungshinweise/

Environmental management

The BOKU has developed an environmental management system based on the European Ecological Audit Directive (EMAS-VO 761/2001). See: http://www.boku.ac.at/emas/