

## **Rules for working at the KIT Synchrotron Chemistry Laboratory (2.1.3) Building 348**

Please read and follow these rules carefully. They are intended to ensure your safety and the safety of others working around you in the Chemistry Laboratory (2.1.3), if in doubt Please ask.Thank you!

Note that in case of accidents and associated legal proceedings concerning liability, failure to follow these rules will be taken as evidence of negligence.

- 1) The Chemistry Laboratory (2.1.3) is part of the KIT Synchrotron, therefore working in the Chemistry Laboratory (2.1.3) presupposes that you are qualified to work in the Synchrotron Hall – i.e., that you have received safety instructions for the Synchrotron Hall within the last 12 months. Note in particular that the emergency procedures in case of accidents or fire in the Chemistry Laboratory (2.1.3) are the same as those described in the safety instructions for the Synchrotron. Remember the emergency telephone number – 3333.
- 2) Working in the Chemistry Laboratory (2.1.3) also requires that you are experienced and qualified to work in similar labs at your home institution. The safety requirements applying at your home institution also apply during your visit to the Synchrotron.
- 3) In general, work in the Chemistry Laboratory (2.1.3) is permitted at any time, including nights and weekends. However, note that German law forbids hazardous procedures when you are alone in the laboratory. You must make sure that there is somebody within calling distance before beginning any hazardous work.
- 4) No smoking, eating or drinking in the Chemistry Laboratory (2.1.3). No food or drinks are to be taken into the Chemistry Laboratory (2.1.3) at any time. Refrigerators and freezers in the Chemistry Laboratory (2.1.3) are exclusively for storage of chemicals and sample materials, no food or drinks are allowed.
- 5) Before you begin work, note the location of the emergency shower, eye shower, fire extinguishers, fire alarms and other safety equipment. Be sure that you know how to operate this equipment. Note where the telephone is so that you can call 3333 in an emergency. Note also the emergency off switch on your left as you enter the lab, which cuts the power to all equipment in the lab.
- 6) Note the location of the first aid kit, take a look at its contents and make sure you'd be able to use it in an emergency. Please enter details of any use of the first aid kit in the log book provided ("Verbandbuch").

- 7) Be aware of others around you in the lab at ALL times – is somebody standing too close to your experiment, without the necessary protective clothing? Are you standing too close to somebody performing hazardous or potentially hazardous procedures?
- 8) Forms are provided (in the holder on the left hand side of the entrance door) which need to be completed and displayed using the clipboard and stand provided (This is a different form from “Chemistry Laboratory Application (2.1.3)”). It is to detail the work and to let others know who to inform if anything goes wrong in your absence.

If Hazardous or Potentially Hazardous procedures are to be executed in the Laboratory then this has to have been clarified and agreed beforehand with those responsible for the Chemistry Laboratory (2.1.3). In cases of Hazardous procedures a declaration will be issued and must be displayed outside the Laboratory such work can restrict access to the Chemistry Laboratory (2.1.3).

- 9) Don't obstruct the walkways and escape routes in the Chemistry Laboratory (2.1.3).
- 10) The doors of the fume cupboards must be kept closed, and the working surfaces in the fume cupboards must not be obstructed.
- 11) Before you bring a gas bottle into the lab, make sure that the gas you're using isn't available from the gas supply taps. If you do have to use bottled gas, the bottle must be well secured in an upright position. Consider how much gas you're releasing into the lab atmosphere and whether the ventilation is adequate. *Please see point 8 above.*
- 12) It is your responsibility to inform yourself of special handling requirements for the chemicals and sample materials you are working with, and to observe these requirements (see point 15 below). We provide fume cupboards, as well as protective clothing such as lab coats, disposable gloves and eye protection. If your work requires more elaborate protective clothing or special handling equipment, please consult us well in advance or bring these items with you. *Please see point 8 above.*
- 13) It is also your responsibility to inform yourself of special requirements for the storage of the chemicals and sample materials (see point 15 below) you bring into the Chemistry Laboratory (2.1.3), and to follow these. We provide spark-protected refrigerators and freezers, ventilated cupboards for volatile/flammable substances and special cupboards for acids and bases. If the requirements for storage of your chemicals and sample materials are not covered by these facilities, *please consult us well* in advance of your visit.
- 14) Finally, it is your responsibility to take care of the safe and legally compliant disposal of the chemicals and sample materials you bring to the KIT Synchrotron (see point 15 below). Small amounts of non-hazardous, easily degradable chemicals may be poured down the sink, but only do this if you're certain that it's permitted for the chemical in question. Otherwise, waste materials should be collected in suitable vessels which will then be delivered to the Waste Disposal Facility of KIT north campus. EVERY vessel/package must be clearly labeled with the exact contents, with owner/contact information, and date, together with the appropriate international hazard symbol and hazard warnings. Whenever possible, the easiest way to do this is to use the vessel that the chemical was originally delivered in – otherwise, use the hazard symbol stickers provided. Waste materials may be pooled in principle, but consider possible chemical reaction hazards

and/or environmental issues. In particular, halogenated and non-halogenated solvents should not be pooled, and heavy metals should also be kept separate. If in doubt, do not pool. Note that the Synchrotron does not provide disposal of your sample materials and chemicals as a guaranteed service – where disposal is difficult or expensive, you will be required to take the waste materials with you when you leave. *If in doubt ask.*

- 15) Your primary source of information on safe usage, storage and disposal of chemicals is the material safety data sheet (SDB/MSDS) delivered with the chemical in question. Otherwise, you'll find a number of informative databases on the Intranet of KIT. A computer is provided so that access to the chemical database of KIT "ChemA" can be accessed and other information on the Web.
- 16) Rinse and clean your used laboratory glassware using the dishwasher provided. Do not place glassware with closed necks, pipettes in the dishwasher which can be difficult to clean. Clean it yourself with the appropriate solvent (dry with compressed air or other means) and replace in the cupboard ready for the next user.
- 17) Broken glass must be disposed of in the special trash can provided, not in the general trash. This is to prevent injury to the staff who empty the trash cans.
- 18) The instruction manuals for all equipment and instruments in the Chemistry Laboratory (2.1.3) are available in the cupboard next to the solvents cupboard or in a labeled drawer/cupboard. Please read the manual before trying to use the equipment, in order to protect yourself as well as our equipment. Also, please observe and comply with any special instruction or warning signs on the wall near the equipment. *If in doubt ask.*
- 19) We do not have staff to clean up after you!! You are expected to clean up your workplace before you leave, including wiping down the bench. Do not leave any spillages. Failure to observe this requirement may lead to refusal of your future beamtime applications.

And finally: your suggestions for improving the safety and efficiency of the Chemistry Laboratory (2.1.3) are welcome at any time. It is your duty to inform us of any safety issue we may have overlooked.