

LAB RULES
for the Scientific Faculty IV
-Chemistry and Pharmacy-
as of January 24th 2001

1 Aims/objectives

The aims of the following rules are to ensure a utilization of the labs which correspond with environmental protection, job safety and economic efficiency.

This is achieved by careful, competent and appropriate treatment of the building, the equipment, facilities and devices, as well as an economical consumption of energy, water and other media so that

- health and physical state of the lab users remain unaffected,
- environmental pollution is avoided
- and damages in cases of accidents remain small.

2 Ambit and legal basis

The lab rules apply to all users of the scientific faculty IV labs. They are based on the decree concerning dangerous substances of the TRGS 526 labs, the safety rules regarding the treatment of dangerous substances in the University (GUV 19.17), the rules for safety and health protection for labs (GUV 16.17) and the general instructions for the prevention of accidents (GUV 0.1). They are the operating instructions according to § 20 of the instructions for dangerous substances.

3 Duties of the lab users

- 3.1 The users are to *acknowledge* and *observe* the following lab rules. This is to be confirmed by signature.
- 3.2 In case of a grave offence against the duties of these rules, the user can be removed from his working place.

4 Dangers for man and environment

The use of physical, chemical and biological methods including their technical use contains numerous dangers. Man can suffer acute or chronic damages to his health, e.g. injuries, burns, frostbites, corrosions, poisonings, irritations, allergies, infectious diseases, cancer, damages to the genotype and propagation damages. The release of dangerous substances into the air, water or the earth can lead to environmental damages.

5 Protective measures

5.1 General information

The *rules for safety and health protection for labs*, which can be found in every lab, describe in detail appropriate behaviour and complete the present rules. Rules which are of special importance are listed in the following.

- 5.1.1 In a lab you are to work in a manner which does not endanger, damage or bother others more than is necessary. When carrying out dangerous tasks, you are to inform the people nearby about possible danger and the required measures of protection.
- 5.1.2 The leader of the work group regulates the opening times and the authorizations for the labs. It is prohibited to work alone outside the official opening times .
- 5.1.3 Smoking in the labs is prohibited. You may not eat in the labs where poisonous, highly poisonous, carcinogenic, amniotic fluid endangering, genotype changing substances or infectious materials are handled. In those

lab areas which do not handle the materials listed above, the leader of the work group or internship may determine areas where the consumption of food is allowed. You may not store food and beverages together with chemicals.

- 5.1.4 You are to inform the head of the technical office (3333) in case of defects to buildings, facilities and equipment which endanger general safety. Safety exits and rescue access roads must be free of obstacles and sources of danger.

5.2 Safety installations and protective equipment

- 5.2.1 The users are to inform themselves about the type and application of safety installations as well as their locations.
- 5.2.2 All persons present are required to wear safety goggles with side-protection at all times. The necessary protection gear is to be worn in cases with special risks.

5.3 Handling of chemicals

- 5.3.1 When handling dangerous substances, users are to inform themselves about the risks and adequate measures of protection on the basis of operating instructions. Unsupervised workers are obliged to determine and judge risks on their own and to take the necessary measures of protection. This applies particularly when tasks are assigned to others.
- 5.3.2 Chemicals which are stored in the lab must be put in order, arranged distinctly and be reduced to the required amount. Containers must be equipped with a clear substance label and, if a dangerous substance is concerned, be equipped with the required danger-symbols and -labels. It is prohibited to store chemicals in everyday household containers (e.g. in waterbottles). Highly poisonous, carcinogenic, propagation-endangering or genotype changing substances must be accessible only to competent people.
- 5.3.3 Available chemicals, self-made products included, are to be used exclusively for research, teaching and education and may not be used for other purposes or taken outside the building.
- 5.3.4 In case of transportation or pouring chemicals into other containers, the necessary measures against spillage are to be taken. Should dangerous substances leak out, they must be immediately absorbed with adequate materials. These are then taken to the toxic waste disposal. You are to avoid

skin contact with chemicals. Should there be danger of skin contact when handling corrosive, highly poisonous, carcinogenic, propagation-endangering or genotype changing substances, you are to wear protective gloves. You may not use a pipette with your mouth.

5.3.5 Self-inflammable substances are to be stored apart from combustible material. Chemicals which could set dangerous gases or fumes free must be sucked off when stored constantly.

5.3.6 Pressure gas-bottles may be transported only with a screwed off protective cap using special transportation carts. In the lab they must be secured against falling over and be protected from heating up. Gas fittings may be installed and exchanged only by instructed personnel. Pressure gas-bottles whose outflow safety valves cannot be manually opened are to be marked and put out of action. Pressure gas-bottles with poisonous or other health endangering gases should be sucked off constantly if installed in the lab, e.g. in an outlet. You should use the smallest possible trading unit for these gases.

5.4 Implementation of experiments

5.4.1 You are to observe the security information in the work regulations. For experiments which are carried through overnight or are in some other way not supervised, information concerning the reaction is found at the position of the test apparatus; it gives at least the equation of the reaction with notifications about the amount of substances and the dangers.

5.4.2 Flammable liquids may be heated only in small quantities (in test tubes) with an open flame. Larger quantities of flammable liquids may be heated only electrically, with reflow-cooling and under constant supervision. If more than three litres of (highly) inflammable liquids are heated in containers with thin sides, you are to use an appropriate basin with honey comb grates or a suitable filling. For experiments which are carried through overnight you may use only rooms which are electrically controlled, equipped with a fire indicator, or in outlets.

5.4.3 Tasks which could set dangerous substances such as gas, steam, aerosol or dust free, must be carried through in outlets. You are also to ensure that those emitting dangerous substances do not reach the air in dangerous quantities.

- 5.4.4 If the offlet is not equipped with an alarm signal which indicates the failure of the machine, the user himself is to install a simple controlling device (strips of paper, thread etc.) within his field of vision. Doors and windows must be kept closed or else the efficacy of the offlet is impaired.
- 5.4.5 Faulty apparatuses and defect electrical devices may not be used.

5.5 Waste

- 5.5.1 You are to separate toxic waste from other waste. Chemicals which are not rated as dangerous substances can be added to the normal waste, which can be fed to the sewage. The disposal of dangerous waste is described in isolated cases in the operating instructions. For further details see the guidelines for waste disposal of the University of Regensburg.
- 5.5.2 Dangerous wastes are to be collected according to instructions in marked containers for toxic waste. The user is to arrange for the replacement of containers which are no longer receptive (Tel. 3333).
- 5.5.3 Highly reactive substances like explosives or organic peroxides must be chemically inactivated before being fed to the sewage.
- 5.5.4 You may not leave wastes or chemicals in the corridors, balcony exits or roof terraces.

5.6 Hygiene

You are to thoroughly wash your hands when a task is completed. In order to avoid skin damages, please observe the skin protection plan. You may not keep or store chemicals in the changing areas. Work coats used in labs may not be worn in libraries, lecture rooms, seminary rooms or the cafeteria.

5.7 Behaviour in cases of danger; First aid

- 5.7.1 Rescuing injured or trapped people from danger zones has priority over other measures. Despite all urgency, you must nevertheless proceed with care and use the available protection gear. If people are injured, you are to inform the ambulance/doctor on call (tel. 0919222) and the control room of the technical office (3333). You are to meet and direct the rescue party at the chemistry meeting place.

- 5.7.2 You are to give first aid to injured people immediately. There is a list of emergency numbers and ambulances in every lab.
- 5.7.3 If poisonous or flammable gases or steams are set free in a lab, or if larger quantities of poisonous or easily flammable fluids are spilt, you are to urge all people present to leave the danger area immediately. This area may not be entered again unless with protective gear (if required) and until the mediatransmissions have been turned off.
- 5.7.4 Should a fire break out, you are to lead endangered people to safety, to alert the fire brigade by pressing the buttons to set off the alarm and to fight the hearth of the fire with fire extinguishers. People who are not helping are to leave the danger zone. The fire protection regulations will regulate the rest.

6 Special risks

Apart from the risks of dangerous substances, there are special dangers involved when applying certain physical-technical or biological methods. You are to observe the special instructions for the protection from these dangers.

7 Coming into force

This lab order was put into force on January 24th 2001 by the resolution of the board of the department and is part of the regulations of the faculty.