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**Work procedure and safety instructions for carrying out research and experimental work  
in SIE Research Baselab of Medical Biochemistry U02B-206**

**1. General safety requirements**

- 1.1. Each person, who commences work in the laboratory, is required:
- to undergo basic instruction at the workplace;
  - read the Safety Instructions of the Department of Biomedical Engineering;
  - and confirm it by his or her signature in the journal for registration of provision of laboratory safety instruction at the workplace.

Instruction shall be provided by the immediate supervisor in the research laboratory on the basis of these safety instructions.

When providing basic instruction, the following safety instructions on the operations to be given; moreover, the equipment and tools to be used that have been compiled and confirmed by the employer/instructor shall be introduced to the employee:

- the hazards of the working environment and the use of the required personal protective equipment;
  - ergonomically correct working positions and techniques;
  - the work procedure prescribed for the employee;
  - safety of and safety requirements for handling chemicals;
  - safety of and safety requirements for handling biological material;
  - safety of and safety requirements for handling hazardous waste;
  - fire safety and electrical safety requirements;
  - the emergency phone number, the location of first aid equipment and fire-fighting equipment;
  - the safety signs used at the workplace and the locations of emergency exits and routes;
- 1.2. An employee is allowed to perform the work only if he or she has read the safety rules for performing the work. In the event of doubt or questions, the employee must contact the supervisor in order to obtain explanations.
- 1.3. Before commencing a new (unfamiliar) operation, the risk factors related to the operation must be determined and safety rules must be prepared on the basis of it. Safety rules must be approved by the immediate supervisor.
- 1.4. An employee must promptly notify the supervisor, the working environment specialist and the head of the structural unit if he or she or his or her colleague has had an accident. The victim must be removed from the danger area. If possible and if the person has knowledge and skills for provision of first aid, he or she shall provide medical first aid. Where necessary, call an ambulance (phone number 112) or contact a doctor.

**2. Safety requirements before commencement of work**

- 2.1. A person may commence work only if he or she has carefully read the work instructions and he or she has been allowed to perform the work independently. It is forbidden to use devices, which are not functioning properly.
- 2.2. The working environment must be organised so that safe and ergonomic work can be ensured. Remove unnecessary and disturbing objects from the work area.
- 2.3. Read the chemical safety data sheets before using hazardous chemicals.

**3. Safety requirements during work**

- 3.1. An employer is required to use a device in accordance with the user manual of that device.
- 3.2. The supervisor must be promptly informed of the occurrence of any malfunctions of the device(s).
- 3.3. During automatic operation of the devices, make sure that safe mode operation of the devices is ensured and, if possible, automatic switch-off is allowed in case of failure.
- 3.4. When a person is handling hazardous chemicals and/or biological material, he or she must wear personal protective equipment. The procedure for using personal protective equipment has been laid down in the Safety Instructions of the Department of Biomedical Engineering.
- 3.5. When working with hazardous chemicals and/or biological material, caution should be exercised to prevent splashing/dripping of the material on the surrounding surface or outside the containers used.
- 3.6. All the works with gases that are harmful to health or with very volatile liquids must be performed in a fume hood.
- 3.7. Containers containing concentrated acids or alkali must be placed in a metal bath.
- 3.8. Do not pour flammable liquids, non-neutralised acids, caustic alkali or other hazardous chemicals into sewerage.
- 3.9. Disposable containers and pipette tips that have come into contact with biological material must be collected in hazardous waste containers.

**4. Safety requirements after completion of work**

- 4.1. Switch off all the devices that are not used anymore and that need not be in a continuous operation mode.
- 4.2. Clean the workplace.
- 4.3. Always wash your hands before leaving the laboratory.

**5. Safety requirements in emergency situations**

- 5.1. Switch off power supply of the equipment.
- 5.2. In case of a failure of the main power supply system of the laboratory, press the red emergency button on the wall next to the door below the switchboard.
- 5.3. In case of ignition of devices or chemicals, act in accordance with the Safety Instructions of the Department of Biomedical Engineering.

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