

ESTONIAN MARITIME ACADEMY'S REFRIGERATION LAB (MA2-004 AND MA2-005) RULES FOR INTERNAL ORDER AND OCCUPATIONAL SAFETY

- [Estonian Maritime Academy](#)

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- [Form V5-1/0 Internal Work Procedure and Occupational Safety Rules
Review Sheet](#)

1. General safety requirements

1.1. All individuals must undergo occupational safety instruction before commencing work in the Refrigeration Lab. A person who has completed occupational safety instruction confirms, by signature, that he/she has read the regulations and the requirements set out in it and undertakes to comply with them. ([Form V5-1/0](#)).

1.2. Occupational safety instruction shall be conducted in accordance with the Internal Work Procedure and Occupational Safety Rules of the Refrigeration Lab, the requirements of which must be adhered to by all the persons in the laboratory.

1.3. During the occupational safety instruction, the persons commencing work in the laboratory will be informed about the Internal Work Procedure and Occupational Safety Rules, the risk factors in the work environment and the use of personal protective equipment, ergonomically correct working positions and techniques, laboratory work procedures, fire and electrical safety requirements, the locations of first aid equipment and fire extinguishing

equipment, the safety signs used at the workplace and the locations of the emergency exits and routes.

1.4. Occupational safety instruction is conducted by a supervisor/lecturer.

1.5. The lecturer responsible for the laboratories and workshops of the Centre of Maritime Education and Training is responsible for the maintenance of the equipment of the Refrigeration Lab.

1.6. An access card is required to enter the lab; students are allowed to enter only with the permission of the supervisor/lecturer.

1.7. Users of the lab are required to promptly inform the supervisor/lecturer and other lab users of any detected deficiencies or equipment malfunctions. Working with malfunctioning equipment is prohibited; in the event of a hazardous situation, work must be halted immediately.

1.8. Users of the lab are not permitted to operate independently any equipment without prior safety instruction and approval to commence work granted by the supervisor/lecturer. If you have any doubts or questions, please contact the supervisor/ lecturer.

1.9. If you notice another lab user engaging in improper or prohibited behaviour, you should inform him/her and, if necessary, also notify the supervisor/lecturer thereof.

1.10. It must be safe to work in the lab; it is recommended that you move around in the lab only when necessary and without haste, so as not to disturb others. Move with caution to avoid slipping or falling, as well as to prevent injuries and damage to lab equipment. Engaging in activities that interfere with studies in the lab is prohibited.

1.11. The working environment must be organised to ensure safe and ergonomic working conditions. Remove unnecessary and disturbing objects from the work area.

1.12. In the event of failure to comply with the requirements set out in the Internal Work Procedure and Occupational Safety Rules, the laboratory user shall be immediately removed from the work being performed. In the event of repeated non-compliance, the lab user shall be removed from all works.

1.13. Any material damage to the university resulting from the intentional violation or negligence in the fulfilment of the requirements set out in the Internal Work Procedure and

Occupational Safety Rules shall be compensated in full by the person who caused the damage.

1.14. The supervisor of the work/lecturer shall be informed immediately of any accident/injury or fire occurring during laboratory work. Appropriate measures must be taken depending on the accident.

1.15. In case of an accident involving a victim, the victim shall be removed from the danger zone, and if necessary, first aid providers or an ambulance (phone 112) must be called, and it must be ensured that first aid is provided to the victim.

1.16. In the event of a serious accident, the inviolability of the workplace and equipment shall be ensured until the arrival of the chief working environment specialist, the representative of the Labour Inspectorate or the police, and until obtaining permission from them to resume work.

1.17. If it is not possible to ensure inviolability of the workplace and equipment, their condition at the time of the accident must be recorded.

1.18. In case of a serious and imminent risk of an accident, actions shall be taken by applying one's knowledge and available technical means to prevent potential consequences, even if it is not possible to immediately contact the supervisor/lecturer.

1.19. In case of a serious or unavoidable risk of an accident, the persons working in the laboratory must leave the workplace quickly and safely; a person who leaves without permission must not be punished or placed at any disadvantage.

1.20. In case of fire, safety of people and their quick evacuation or rescue from the danger zone must be ensured.

1.20.1. A person who discovers fire is obliged to immediately call the emergency number 112 and provide the following information to the rescue centre:

1.20.1.1. the exact address where the fire is located, details on what is burning, and the person reporting the fire;

1.20.1.2. answers to the questions asked by the rescue official;

1.20.1.3. the person must not end the call until permission to do so is granted.

1.21. As far as possible, begin extinguishing the fire using basic fire extinguishing equipment and close the doors and windows to

prevent the spread of fire.

1.22. When the rescue team arrives at the scene, the person who discovered the fire or the representative of the possessor of the site shall inform the head of the rescue team of the following:

1.22.1. the source and extent of the fire;

1.22.2. the potential hazard to people;

1.22.3. other potential hazards arising from the fire (explosions, hazardous chemicals, electrical equipment, etc.).

2. Safety requirements while working in the laboratory

2.1. Before conducting laboratory work, read thoroughly the user manuals of the equipment.

2.2. Only the work specified in the instructions is permitted; unauthorised experiments are prohibited.

2.3. Do not perform hazardous work operations alone in the laboratory.

2.4. Only employees and students who have received appropriate instruction and training may work independently with mains electricity, gas, or other potentially hazardous devices.

2.5. Storing unnecessary objects, storing and consuming food and beverages in the lab is prohibited.

2.6. When working in the laboratory, use appropriate personal protective equipment, such as gloves and safety glasses, based on the level of risk associated with the task.

3. Safety requirements for handling refrigerants

3.1. Before working with refrigerants/cooling agents, read the (chemical) safety data sheets. The safety data sheets are stored on-site at the workplace (in the laboratory).

3.2. Lab users must adhere to the hazard symbols on the safety data sheets and follow the relevant safety requirements:

- 3.2.1. safety data sheets of refrigerants;
- 3.2.2. safety data sheets of oils;
- 3.2.3. hazard labels;
- 3.2.4. safety regulations for the use of refrigerants;
- 3.2.5. safety instructions for the use of cylinders.

4. Safety requirements for working with electrical equipment

- 4.1. Before using an electrical device, make sure that the sockets, cables and plugs of the electrical devices are undamaged and that the device is suitable for the electrical supply with which it is going to be used.
- 4.2. Do not touch grounded metal objects with the other hand when turning an electrical device on or off.
- 4.3. If you detect a burning smell, see sparks, or notice unexpected heating of a device or any of its parts when using an electrical device, stop the work immediately, disconnect the device from the mains and inform the supervisor/lecturer.
- 4.4. A burning electrical device must be disconnected from the power supply at the electrical panel without touching the device.
- 4.5. Burning electrical equipment must not be extinguished with water. Use a dry powder or CO₂ fire extinguisher to extinguish the fire.
- 4.6. If a device functions differently than usual upon operation, it may be a sign of technical malfunction of the device. In such cases, switch off the device or unplug the cord, and immediately notify the supervisor of the supervisor/lecturer.
- 4.7. If you burn your hands, quickly put your hands under cold running water or moisten the burned areas with a burn relief agent/ointment.

5. First aid in the laboratory

5.1. In the event of a skin burn (excluding open wounds), immediately cool the affected area under cold running water for 15-20 minutes to alleviate pain and prevent tissue damage. If possible, cool the area with ice.

5.2. After cooling, apply anti-burn agents available in the laboratory (if the burn is not an open wound).

5.3. In the event of a serious burn, after cooling, seek immediate medical attention by consulting a doctor or calling an ambulance (phone 112).

5.4. If frostbite occurs, immerse the affected area in 35-40 degree water, then gently dry it and apply an anti-burn ointment.

5.5. If you feel drowsy or dizzy due to a refrigerant leak, immediately move to fresh air and inform the supervisor of work/lecturer thereof.

5.6. If refrigerant poisoning occurs, immediately move the victim to fresh air, clear the victim's airways, remove any clothing that obstructs breathing, call an ambulance (phone 112), and inform the doctor about what happened (provide information about the properties of the chemical that caused the poisoning).

5.7. Clean the wounds caused by an accident with running water, physiological saline solution or any other suitable solution.

5.8. If the wound is bleeding heavily, apply a sterile compression bandage or press the wound with a wound pad until the bleeding stops.

5.9. Apply a plaster or bandage with an appropriately sized wound pad to the cleaned wound.

6. Safety requirements after completing work in the laboratory

6.1. After completing work in the laboratory, each lab user shall tidy up his/her work area and return the tools to their designated places.