



NRFIS Laboratory Rules

This document sets out the main health and safety policies and rules of conduct for the NRFIS Laboratories. These basic rules provide behaviour, hygiene, and safety information to avoid accidents in the laboratory. They cover what you should know in the event of an emergency, safety equipment, safely using laboratory equipment, and basic common-sense rules. Room specific safety rules might be in place for specific processes, equipment, and materials.

This document should be considered as an addendum to the Department of Engineering Health and Safety Policies (<https://safety.eng.cam.ac.uk/>), and hence does not replace it. Project and test specific risk assessments will still be required regardless of whether any additional measures compared to those set out in this document need to be put in place or not.

A. General Rules

- A.1 Be sure to read all fire alarm and safety signs and follow the instructions in the event of an accident or emergency.
- A.2 Ensure you are fully aware of the /building's evacuation procedures.
- A.3 Make sure you know where your lab's safety equipment (including first aid kit(s), fire extinguishers, and eyewash stations) is located and how to properly use it.
- A.4 Know emergency phone numbers to use to call for help in case of an emergency.
- A.5 Make sure you are aware of where your lab's exits and fire alarms are located.
- A.6 Open flames should never be used in the laboratory unless you have permission from a qualified supervisor.
- A.7 If there is a fire drill, be sure to make safe any experiment or equipment.
- A.8 Always work in properly ventilated areas.
- A.9 Laboratory glassware should never be utilized as food or beverage containers.
- A.10 Each time you use glassware, be sure to check it for chips and cracks. Notify your lab supervisor of any damaged glassware so it can be properly disposed of.
- A.11 Never use lab equipment that you are not approved for or trained on by the technical staff or technical manager.
- A.12 If an instrument or piece of equipment fails during use, or is not operating properly, report the issue to a technician. Never try to repair an equipment problem on your own.
- A.13 If you are the last person to leave the lab, make sure to close all the doors and turn off all ignition sources.
- A.14 Do not work alone in the lab.

- A.15 Never lift any glassware, solutions, or other types of apparatus above eye level.
- A.16 Make sure you always follow the proper procedures for disposing lab waste.
- A.17 Report all injuries, accidents, and broken equipment or glass right away, even if the incident seems small or unimportant.
- A.18 If you have been injured, yell out immediately and as loud as you can to ensure you get help.
- A.19 In the event of a chemical splashing into your eye(s) or on your skin, immediately flush the affected area(s) with running water for at least 20 minutes.
- A.20 If you notice any unsafe conditions in the lab, let the technical manager know as soon as possible.
- A.21 Never hesitate to ask questions especially if there is any question concerning proper operating procedure. Be sure that you understand every instruction before proceeding.
- A.22 Computers dedicated to the operation of an instrument should not be used for any private work or the storing of private files for example music, pictures, papers, etc.

B Housekeeping safety rules

- B.1 Always keep your work area(s) tidy and clean.
- B.2 Labels and equipment instructions must be read carefully before use.
- B.3 Make sure that all eyewash stations, emergency showers, fire extinguishers, and exits are always unobstructed and accessible.
- B.4 Only materials you require for your work should be kept in your work area. Everything else should be stored safely out of the way.
- B.5 Only lightweight items should be stored on top of cabinets; heavier items should always be kept at the bottom.

- B.6 Solids should always be kept out of the laboratory sink.
- B.7 Any equipment that requires airflow or ventilation to prevent overheating should always be kept clear.

C Personal protection safety rules

- C.1 Always wear safety boots in the ground floor (G-xx) and first floor (1-xx) laboratories.
- C.2 Always tie back hair that is chin-length or longer.
- C.3 Always wear gloves when handling unknown substances.
- C.4 Make sure that loose clothing or dangling jewellery is secured, or avoid wearing it in the first place.
- C.5 Never wear shorts or skirts in the lab.
- C.6 When working with equipment, hazardous materials, glassware, heat, and/or chemicals, always wear face shields or safety glasses.
- C.7 When handling any toxic or hazardous agent, always wear the appropriate gloves and goggles.
- C.8 After performing an experiment, you should always wash your hands with soap and water.
- C.9 When using lab equipment and chemicals, be sure to keep your hands away from your body, mouth, eyes, and face.

D Chemical safety rules

- D.1 Never smell or taste chemicals.
- D.2 Do not pipette by mouth.
- D.3 Every chemical should be treated as though it were dangerous.
- D.4 Do not allow any solvent to come into contact with your skin.
- D.5 Never leave containers of chemicals open.
- D.6 All chemicals should always be clearly labelled with the name of the substance, its concentration, the date it was received, and the name of the person responsible for it and stored in the proper location (e.g. yellow hazardous material cabinets).
- D.7 Before removing any of the contents from a chemical bottle, read the label twice.
- D.8 Never take more chemicals from a bottle than you need for your work.
- D.9 Do not put unused chemicals back into their original container.
- D.10 Chemicals or other materials should never be taken out of the laboratory.
- D.11 Chemicals should never be mixed in sink drains.
- D.12 Flammable and volatile chemicals should only be used in a fume hood.
- D.13 If a chemical spill occurs, clean it up right away.

- D.14 Ensure that all chemical waste is disposed of properly.

E Electrical safety rules

- E.1 Make sure all electrical panels are unobstructed and easily accessible.
- E.2 Whenever you can, avoid using extension cords.
- E.3 High voltage equipment should never be changed or modified in any way.
- E.4 Always turn off a high voltage power supply when you are attaching it.
- E.5 Use only one hand if you need to adjust any high voltage equipment. It is safest to place your other hand either behind your back or in a pocket.

F Laser safety rules

- F.1 Do not look into a laser, even if you are certain it is "eye" safe.
- F.2 You should never keep your head at the same level as the laser beam.
- F.3 Always keep the laser beam at or below chest level.
- F.4 Do not walk through laser beams.