# PERSONAL PROTECTIVE EQUIPMENT - PPE

Personal Protective Equipment (PPE) means any equipment to be worn or used by a worker to ensure protection against one or more risks involved in their work. PPE should only be used when no risk prevention (risk reduction at source, replacement or limited use of hazardous agents), collective protection, or work reorganisation methods and procedures are available instead. The Head of Teaching and Research is responsible for assessing and choosing the most appropriate PPE, while the University structure concerned is responsible for buying and making PPE available. Students, on their part, must properly use, take care of and avoid tampering with PPE, as well as reporting any defects or specific issues.

### **Eye protection**

Eye protection is mandatory in all laboratory areas where chemical agents are used or stored. Students attending teaching laboratories are provided with safety glasses before starting work. Safety glasses are also available in research laboratories.

### Safety glasses

Safety glasses have impact-resistant lenses and lateral shields. They must be worn at all times whenever there is a possibility of substances, particles, objects or splinters coming into contact with the eyes.





Because they do not adhere to the face, safety glasses do not provide sufficient protection in the event of a significant chemical spill, as the substance could drip down the sides and reach the skin. Instead, they should be used for protection against small splashes, e.g. those produced in opening a test tube.

## Safety goggles

Safety goggles must be worn whenever there is a possibility of a significant amount of a chemical being splashed. Safety goggles are also impact resistant and can be worn over prescription glasses. Most of them have anti-fog valves.





#### Face shield

A face shield should be worn for protection in the event of using large amounts of a chemical or for shielding against solid particles.







## **Hand protection**

Nitrile or latex gloves protecting from splashes or accidental contact are usually sufficient in the context of a teaching or research chemical laboratory. If you are allergic to the material of which your gloves are made, please inform the Laboratory Manager, who will supply an alternative. Good protection depends very much on how you wear your gloves and how careful you are when you use them.

When using gloves, please remember that:

- 1. Gloves must be worn at all times when there is a risk of touching a chemical with your hands.
- 2. Gloves are effective only in the short term. Over time, all gloves allow for most organic compounds to seep through, to a different extent that is inversely proportional to their thickness.
- 3. Before using gloves, inspect them for damage or contamination (cuts, punctures, decolouration, etc.).
- 4. Remove rings, bracelets and watch before wearing gloves.
- 5. Use gloves in the right size.
- 6. Never reuse disposable gloves.
- 7. In the event of a spill on your gloves, remove them and wash your hands immediately.
- 8. Remove your gloves as soon as they show any sign of damage.
- 9. Wearing gloves affects grip pay more attention than usual when handling things.
- 10. Gloves must be removed before touching any surface that must not be contaminated (handles, telephone, etc.).
- 11. Never use gloves outside the laboratory. If you need to remove something from the laboratory, only wear one glove and use your ungloved hand to open doors.
- 12. Special gloves must be worn for handling hot or abrasive materials (e.g. broken glass) these are not suitable for chemicals.
- 13. Wear two pairs of gloves for handling carcinogens or antiblastic drugs.
- 14. Always follow the removal procedure below and turn your gloves inside out before disposing of them among special waste.
- 15. Always wash your hands after removing gloves.
- 16. After removing gloves, discard them in a dedicated solid waste container.

How to remove contaminated gloves safely	
	Lift the glove near to the wrist area.
	Slowly and carefully peel the glove towards your fingertips while turning it inside out, so that the internal part is exposed.
	Continue peeling the glove towards your fingertips.
	Remove the glove completely and keep it in your gloved hand.
	Slide a finger of your ungloved hand under the remaining glove until approximately half of the finger.
	Turn your finger by 180 degrees and start peeling the glove towards your fingertips. In this way, the first glove you removed will remain inside the one you are removing. Turn the second glove inside out too.



Take the gloves with your ungloved hand, only touching the uncontaminated inside of the glove. Peel off the glove to uncover your other hand's fingertips too. Discard the gloves in a dedicated container. Wash your hands thoroughly.

# **Respiratory protection**

Respiratory protection is normally not necessary in a chemical laboratory where fume cupboards are present specifically for this purpose. However, you may need to wear respiratory PPE in the event of an emergency or during routine or extraordinary maintenance. In those cases, students must leave the premises.

## **Body protection**

As a general laboratory coat made of cotton is not regarded as personal protective equipment, each student is required to purchase one. Wear your coat in the laboratory for identification purposes. Wear it buttoned, sleeves rolled down. Keep it clean and tidy. Your laboratory coat has no cuffs but elastic bands at the wrists to avoid getting trapped during work. If central cleaning is not available, take your laboratory coat home in a sealed bag and wash it separately from other clothes. Remove your laboratory coat upon leaving the laboratory or research area, and put it back on when you return.