Annex 9 Laboratory rules

**The laboratory rules set out below are an expanded and, to some extent, interpreted list of the principles of good microbiological practice from SAMV[[1]](#footnote-1). They take into account the different working situations in laboratories used for microbiology and molecular biology. This template must be adapted to the situation in the particular plant.**

Basic rules for safe working in a laboratory used for microbiology or molecular biology[[2]](#footnote-2)

1. Windows and doors of the working areas are closed during work.
2. It is forbidden to drink, eat, smoke or take snuff in the workrooms; cosmetics are not to be applied there. Foods must not be kept in the working area.
3. A laboratory coat or other prescribed protective clothing must be worn while working with toxic or carcinogenic materials or with microorganisms in workrooms. Specifically, that means:

* Contaminated gloves must be cleaned or replaced immediately.
* When using gloves, care must be taken to ensure that no organisms or hazardous substances are dispersed as a result of telephoning, opening doors of whatever kind, using water taps etc.
* In the working area, protective glasses with side protection and, if possible, a cover above the eyes should be worn while working with hazardous biological or chemical substances; people who wear glasses may wear prescription safety glasses or eye protection over their normal glasses. The wearing of eye protection is not necessary for work in a safety workbench.
* Protective clothing must be removed when leaving the working areas.
* Gloves must not be worn outside the laboratory.

1. Mouth-pipetting is forbidden; pipetting aids must be used.
2. The use of syringes and cannulae must be kept to the absolute minimum. They must be disposed of properly after use[[3]](#footnote-3).
3. During all manipulations, care must be taken to ensure that aerosol formation is prevented as far as possible.
4. Upon completing the work and before leaving the working area, an employee must wash his hands carefully and, if appropriate, disinfect and grease them, paying attention to protection of the skin.
5. The working areas should be cleared up and kept clean. The benches must be disinfected before and after use according to the hygiene concept. Only the equipment and materials actually needed must remain on the workbenches. Stocks are stored only in the designated areas or cupboards.[[4]](#footnote-4)
6. The identity of the microorganisms used is checked if there is a certain probability of contamination by pathogenic organisms or if it is required to assess the potential risk. *The principles of identification testing are governed by separate operating instructions at (company name).*
7. With regard to work involving microorganisms, employees are to be instructed verbally and in relation to the particular place of work (according to their prior knowledge) before the commencement of the work.[[5]](#footnote-5)
8. Vermin must be controlled regularly.
9. The keeping and use of personal items (e.g. bags, mobile telephones etc.) in the working area must be kept to a minimum.
10. Contaminated equipment must be autoclaved or disinfected before being cleaned.
11. Waste containing pathogens must be collected according to the requirements of the disposal concept and rendered inactive by autoclaving or disinfection.
12. If infectious material is spilled, the contaminated area must be shut off and disinfected immediately. Safety-related laboratory incidents must be reported to the Biosafety Officers.[[6]](#footnote-6)
13. First-aid instructions for accidents involving pathogenic organisms must be accessible immediately in the working area. All accidents must be reported to the relevant managers and the Biosafety Officers.[[7]](#footnote-7)
14. Expectant and nursing mothers must not work with infectious human pathogenic microorganisms or materials containing such microorganisms. The exceptions are set out in the Maternity Protection Ordinance.[[8]](#footnote-8)
15. Before working with hazardous chemical substances and before carrying out tests in which hazardous substances could be released, the potential risks must be established and the necessary safety measures taken. With regard to activities involving hazardous chemicals, the relevant precautions set out in the safety data sheets must be observed and the rules on the handling of these substances (e.g. ethidium bromide, cytotoxins etc.) set out in precise detail in specific operating instructions.
16. Work with foul-smelling or toxic substances and highly flammable gases must only be carried out in the fume hood. The additional safety measures required in the particular case must be observed.
17. Flammable liquids which need to be stored in cool conditions and extremely flammable and highly flammable substances must be kept only in refrigerators or freezers with an intrinsically safe interior.
18. Pressurized (gas) cylinders must always be secured by tying or chaining (e.g. to the laboratory bench) to prevent them from falling over. They must be transported only on the vehicles designated for this purpose.
19. With regard to work involving radioactive isotopes, the relevant laboratory rules for work with ionizing radiation must be observed.

|  |  |
| --- | --- |
| Compiled / authorized |  |
| Date |  |

1. According to the Annex of the Ordinance on the protection of personnel from hazards due to microorganisms (Verordnung vom 25. August 1999 über den Schutz der Arbeitnehmerinnen und Arbeitnehmer vor Gefährdung durch Mikroorganismen / SAMV). [↑](#footnote-ref-1)
2. Apply appropriately to cell cultures. Points 1 to 11 correspond to the *Principles of good microbiological practice*. [↑](#footnote-ref-2)
3. See also template *Measures to prevent infectious diseases transmissible by blood* and the SUVA publication *“Verhütung von Berufskrankheiten in diagnostisch-mikrobiologischen Laboratorien”* / Order No.: 2869/27d  
   **Order address:**<https://www.suva.ch/material/Dokumentationen/verhuetung-von-berufskrankheiten-in-diagnostisch-mikrobiologischen-laboratorien> [↑](#footnote-ref-3)
4. The guidelines of the Federal Coordination Commission for Occupational Safety are complied with: *– Chemische Laboratorien* (Guideline No. 1871 of the Federal Coordination Commission for Occupational Safety)   
   – *Brennbare Flüssigkeiten – Lagern und Umgang* (Guideline No. 1825 of the Federal Coordination Commission for Occupational Safety)   
   – *Säuren und Laugen* (Guideline No. 6501 of the Federal Coordination Commission for Occupational Safety)  
   **Order address:**[www.ekas.admin.ch/](http://www.ekas.admin.ch/) » Dokumentation » EKAS Richtlinien » **Aktuell gültige EKAS-Richtlinien oder direkt** [www.ekas.admin.ch/index-de.php?frameset=208](http://www.ekas.admin.ch/index-de.php?frameset=208) [↑](#footnote-ref-4)
5. The general operating instructions, laboratory guidelines and (operating) instructions relating to specific substances, organisms and activities must be read and implemented before the commencement of work. [↑](#footnote-ref-5)
6. In this regard, pay attention also to template *Emergency planning: action in the event of incidents in the laboratory* and *Report sheet for laboratory incidents.* [↑](#footnote-ref-6)
7. See footnote 6. [↑](#footnote-ref-7)
8. Exceptions are possible if an occupational health specialist examines the working situation and detects no additional danger. Regarding the legal background, see Art. 62 of Ordinance 1 to the Labour Act (Verordnung 1 zum Arbeitsgesetz / [ArGV1](http://www.admin.ch/ch/d/sr/8/822.111.de.pdf); SR 822.111) and Art. 10 and 17 of the Maternity Protection Ordinance (Mutterschutzverordnung / [MuSchV](http://www.admin.ch/ch/d/sr/8/822.111.52.de.pdf); SR 822.111.52). [↑](#footnote-ref-8)