



# **Safety Concept Specific to Organizational Units in Accordance with CO and SAMV For Level 1 and 2 Laboratories at the University of Zurich (UZH)**

Valid for:	ORGANIZATIONAL UNIT (E.G. INSTITUTE, CLINIC)
Valid as of:	DATE
Replaces version of:	DATE
Head of organizational unit:	NAME
Biosafety Officer:	NAME
Head's signature:	
BSO's signature:	



## Explanatory notes on the Safety Concept Specific to Organizational Units

### General situation and objectives

For activities with pathogenic and/or genetically modified organisms, the risk to persons, animals and the environment can never be entirely excluded. Consequently, facilities which work with such organisms are subject to CO<sup>1</sup> and SAMV<sup>2</sup> regulations. These ordinances require the university's organizational units (OU; institutes and clinics) to draw up a specific safety concept for their operation.

This OU-specific safety concept with emphasis on biological safety governs aspects which go beyond the general biosafety concept of the University of Zurich (UZH). The regulations contained in the university safety concept are binding for UZH OUs; modifications and supplements to the safety concept are summarized in the present document.

### Structure and use

The following document is divided into two parts:

**Part 1** describes the core document of the OU-specific biosafety concept, which explains which aspects are regulated in this document. Additionally, key points of the university safety concept are included and possible amendments are indicated.

**Part 2** constitutes the specific section of the safety concept. Here, the OU-specific changes to the university safety concept are documented and operating procedures (SOPs) are laid down as well as information on persons and organisms. This template provided by the Department of Safety, Security and Environment must be completed accordingly (sections highlighted in pink). The OU-specific appendices must be completed and, if necessary, supplemented or modified.

A copy of the title page with the specific information is to be submitted to the Department of Safety, Security and Environment.

### Author and credits:

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<sup>1</sup> Swiss Ordinance on the Contained Use of Organisms (CO)

<sup>2</sup> Verordnung über den Schutz der Arbeitnehmerinnen und Arbeitnehmer vor Gefährdung durch Mikroorganismen (SAMV) = Ordinance on Occupational Safety in Biotechnology



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## 1. Scope of the safety concept specific to the organizational unit

The template for the OU-specific safety concept has been drawn up by the Department of Safety, Security and Environment. Generally applicable aspects of biological safety are addressed in the university safety concept, which is binding for the institutes and clinics. The following document governs changes and additions to the university biosafety concept.

The following operational safety concept was implemented on *DATE* by *NAME OF INSTITUTE*.

Particular aspects of the safety concept are always updated when the hazard situation has changed (e.g. new process, new project in class 2, new organisms, existing premises repurposed or new premises used).

## 2. Safety objectives

At the UZH OU work may be performed with hazardous chemical, radioactive and biological substances, for which the risk to people, animals and the environment cannot be entirely excluded. The University of Zurich takes the necessary safety precautions to protect people, animals and the environment from the negative effects of such work and substances and thus exercises its responsibility for the occupational safety and health protection of its staff.

## 3. Safety organization

The **Management/Board of the Organizational Unit (OU)** has operational responsibility for the safety of persons and the environment including workplace safety. It ensures implementation and adherence to the operational safety concept and defines the required organizational structure (**APPENDIX SB1 «Organigram»**). The OU makes the necessary financial and personnel resources available in order to maintain the biological and chemical safety and provide radiation protection (**APPENDIX SB2 «Financial means for biological safety»**). The safety officers are familiar with the guidelines of the university safety concept and adhere to these generally valid principles. The duties of the safety officers are specified in their job specifications. These job specifications also provide information on the obligations, tasks and competences of **Lab** or **Project Managers** and regulate the responsibilities under normal conditions and in case of an incident. OU-specific amendments and supplements to this job specification are set out in (**APPENDIX SB3 «Amendments and supplements to BSO job specification»**).

Generally speaking, the UZH and the head of the respective OU are liable to third parties. However, they can take recourse to **employees**, who willfully or negligently violate the safety regulations or who have failed to intervene where it would have been necessary and where it would have been possible according to their competences.

## 4. Emergency response: Planning and incident management

### 4.1. Telephone numbers in case of emergency and contacts for safety issues

Important phone numbers in case of emergency and the addresses of contact persons for issues concerning safety are posted at the **First Aid Stations** and in every lab. Address and phone lists of the emergency services and the UZH Department of Safety, Security and Environment can be found in the university safety concept. OU-specific information is listed under (**APPENDIX SB4 «Emergency**



phone list of OU»). All changes are reported to the Department of Safety, Security and Environment.

#### 4.2. Safety documentation for emergency services

To ensure the safe deployment of emergency services in case of fire or other incident, important information is compiled in the following documents.

- a. Emergency response plan (fire sections; access routes; premises in which work is conducted with organisms; storage areas and quantities of organisms, as well as radioactive isotopes or flammable or explosive chemicals). Updated emergency response plans may be obtained from the Department of Safety, Security and Environment and should be available in **APPENDIX SB5 «EMERGENCY RESPONSE PLAN»**. If facilities are repurposed, thus leading to a change in the emergency response plan, this must be discussed with the Department of Safety, Security and Environment and the emergency response plan adapted accordingly.
- b. Project and organism lists. **APPENDIX SB6 «PROJECT AND ORGANISM LIST»**

#### 4.3. Emergency planning: Procedures for lab incidents and emergency situations

Detailed emergency plans for diverse scenarios have been laid out in the university safety concept. OU-specific practices are defined under **APPENDIX SB7 «OU emergency planning»**.

As a rule, the instructions on escape routes, fire extinguishers and manual alarm buttons, which are posted in lab facilities and other locations, must be observed.

For minor accidents or emergency situations, responses should always follow the same pattern and in a linear sequence.

#### 1. Leave the danger zone → 2. Alert → 3. Secure → 4. Take action

Minor incident	Emergency situation
1. Get an overview (keep calm)	1. Leave the danger zone (keep calm)
2. Inform BSO or CSO/RSO	2. Alert emergency services; Tel. 112
3. Isolate the contaminated area	3. Secure & rescue
4. Disinfect and/or decontaminate	4. First response, extinguish, etc.



#### 4.4. Reporting a lab incident

Lab incidents involving activities with class 2 organisms are reported with the designated forms. Prepared report forms can be found in all level 2 labs and can be obtained from the BSO if required. A copy of the filled out report form is sent to the Department of Safety, Security and Environment, c/o Occupational Medicine.

The forms are kept on file by the BSO and the supervisor for at least 5 years.

#### 4.5. Medical records

The guidelines for medical records are set out in the university safety concept. A list of employees who have or have had a medical record is available under [APPENDIX SB13 «Employee directory»](#).

### 5. Risk assessment

#### 5.1. Reporting obligation, project list and inventory of biological agents

Consistent with the regulations of the university safety concept, the risks involved in activities with GMOs have been assessed. Ongoing and completed projects and the organisms used to date are entered under [APPENDIX SB6 «Project and organism list»](#) and are reported and updated in accordance with the Containment Ordinance on the Ecogen internet platform. The labs and/or group leaders responsible for the projects are listed as well. [Datasheets](#) on each [class 2 organism](#) used are collected in a [separate folder](#).

### 6. Safety measures and code of conduct

#### 6.1. Biological safety

##### Lab safety rules and operating instructions (Standard Operating Procedures, SOPs)

Lab safety rules and details on the use and maintenance of biosafety cabinets are defined in the university safety concept, which also outlines the handling of blood samples and the safety guidelines for keeping animals. OU-specific SOPs are listed under [APPENDIX SB9 «SOPs»](#) and the protocols are filed in the respective folder.

#### 6.2. Transport of organisms or potentially infectious biological agents

Details regarding sent and received samples are noted in the datasheet [APPENDIX SB8 «Sending and transporting samples»](#).

#### 6.3. Disposal of biologically contaminated waste

The disposal methods for biologically active waste are detailed in the [«Guidelines on the Treatment and Disposal of Waste at the University of Zurich»](#) Further information on handling waste from class 2 laboratories can be found in the university safety concept.

Information on specific disposal methods within an OU is detailed in [APPENDIX SB11 «OU disposal methods»](#).



#### **6.4. Chemical safety and radiation protection**

Details on chemical safety and radiation protection can be found in the university safety concept. OU-specific interfaces of these different safety areas are listed under **APPENDIX SB12 «Interfaces of safety areas»**.

#### **6.5. Purchase, service and maintenance of equipment**

The machines and devices employed must correspond with the latest safety regulations. The respective **conformity declarations** and the corresponding **instruction manuals** are kept in a **folder**. A list of the safety-relevant equipment and the responsibilities defined for these are available under **APPENDIX SB15 «List of safety-relevant equipment»**. **Maintenance schedules** for the equipment classified as safety-relevant are set up. The financial means made available by the OU for biological safety enable the periodic maintenance of safety-relevant equipment and the procurement of suitable disinfectants as well as centrally purchased consumables (autoclave pouches).

#### **6.6. Employee directory and maternity protection**

Employees who have worked to date in level 2 labs of the OU are documented under **APPENDIX SB13 «Employee directory»**. This list contains the dates when work began and ended in the class 2 lab. In addition, the employees, group leaders and/or BSOs are to initial this list to show that staff has been instructed according to their tasks. Women of childbearing age have been made aware of the fact sheet and checklist on maternity protection, which is available on the website of the Department of Safety, Security and Environment. Reported pregnancies and the resulting access limitations are also indicated in this directory.

#### **6.7. Access control and identification of level 2 work areas**

Regulations governing access authorization to BS2 labs are found in the university safety concept. Changes in the access authorizations can be documented in **APPENDIX SB14 «OU-specific access rules»**. The log sheet which lists access of external staff and visitors is kept in a separate folder.

#### **6.8. Hygiene plan**

The disinfectants used in the OU are listed in **APPENDIX SB15 «Hygiene plan»**. Also documented are the cleaning intervals and disposal of any waste. Dates and incidents in relation to special cleaning by the university cleaning staff are also included in this appendix.

### **7. Training and further education**

Staff training as well as further training events attended by the BSO and the group leaders on aspects of biological safety are listed in **APPENDIX SB16 «Training»**. Periodic training courses for BSOs and interested group and/or project leaders are financed by the means made available by the OU.



- SB1 Organigram organizational unit
- SB2 Financial resources
- SB3 Amendments and supplements to BSO job specification
- SB4 Emergency information
- SB5 Emergency response plan
- SB6 Project and organism list
- SB7 OU emergency planning
- SB8 Sending and transporting samples
- SB9 SOPs
- SB10 Hygiene plan
- SB11 Maintenance plan
- SB12 Interfaces of safety areas
- SB13 Employee directory
- SB14 OU-specific access rules
- SB15 List of safety-relevant equipment
- SB16 Training and further education