



EPFL

SV SAFETY VADEMECUM

School of Life sciences

Version 2.2 – December 2018

SV Safety Vademecum

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The present document compiles all the safety rules in place at the School of Life Sciences.

Each collaborator (including administrative or technical staff), Doctoral assistant, Master student or accredited visitor or host, must read it, sign it and return an undersigned copy of this page, at the latest one month after the start of the work contract.

By signing this document, the collaborator hereby acknowledges that he/she has received the SV-Safety Vademecum, has read it and will implement those guidelines within the limitations set by the design and settings of his/her work environment.

Surname _____

Name _____

Function _____

Group/unit _____

Date _____ Signature _____

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Summary

Emergency	Call 115 or 021 693 30 00	Fire doors must be kept closed at all times (except those under automatic control). Keep escape routes, stairways and emergency exits free of non-movable items. Register all incidents and accidents https://scc.epfl.ch/ .
Safety training	FOBS	All EPFL collaborators working more than two months on the campus must take the “Formation Obligatoire de Base en Sécurité” (Mandatory safety training).
	Radioprotection	Mandatory for the persons professionally exposed to ionizing radiations prior starting any activity.
Medical controls	Entry medical check	Mandatory for the persons working with microorganisms, with material from human or animal origin or with animals HBV vaccination is strongly recommended for persons exposed to human biological samples. The personnel that decline vaccination must discuss the situation with his/her hierarchy. Persons working with TB or HIV must have a detection test performed prior starting to manipulate those organisms.
	Radioprotection	Mandatory for the persons professionally exposed to ionizing radiations.
	Nanoparticles	Mandatory for the persons working with class 2 or class 3 nanoparticles.
Laboratory Access	Only persons trained or fully supervised can access the lab areas	Access to confined area is controlled by CAMIPRO rights. The CAMIPRO access card is personal and can't be lent to a third party. If a card is lost or stolen, contact immediately the PCC on 34000. If you forget your card, contact the SV infrastructure store to get a temporary access card.
Laboratory safety	Respect the good microbiological practices	No storage or consumption of food in laboratory areas.
		Clean and decontaminate your work space.
		Minimize the creation of aerosols.
		Respect the obligation and interdiction safety pictograms.
	Personal protective equipment	Always wear adapted personal protective equipment: at the minimum: cotton long sleeve lab coat and gloves. Gloves must be removed when leaving the laboratory (for opening doors, calling lifts, answering the phone).
		Laboratory safety goggles are compulsory when handling hazardous chemicals (characterized with a hazard pictogram), when handling infectious organisms or in areas with an obligation pictogram. Moreover, they are recommended all the time in laboratories. Risks and hazards associated with infectious organisms and chemicals must be known or evaluated before initiating any experiment.
	Handling of chemical and biological products	MSDS (Material and Safety Data Sheet) must be at hand and a risk assessment of the chemical must be performed.
		Be aware of the restrictions concerning the use and storage of inflammable and toxic products (incompatibilities, exposure limits, etc.).
		Be trained for operating specific equipment or accessing restricted area (P2, P3. C-lab, animal house, BIOP, etc.).
	Equipment and infrastructures	Report immediately to your COSEC (or to any support instances) any breakdown or failure in the equipment or infrastructures that can raise a safety issue. Must be authorized by the faculty (signature of access document), the DSPS or by the COSEC in charge of the room.
Waste	Biological waste	Obligation to wear the “Man Down” system when working alone at night and during the weekend. Doors must be kept closed and under CAMIPRO control at all times.
		Waste from genetically modified or from risk group 2 & 3 organisms must be inactivated by heat (autoclave) or by chemical treatment before elimination. If a chemical treatment is preferred, the waste must then be considered as a chemical waste.
	Chemical waste	Antibiotics containing solutions must be inactivated by autoclaving or must be eliminated as toxic waste.
		Every hazardous chemical product or solution that contains a hazardous product is eliminated as a chemical waste. (no pouring down the drain)
		Must be sorted out and eliminated according to the OMoD categories.
		Consult the MSDS for incompatibilities and particular hazards.
	Sharps, needles	Every group is responsible for delivering safely packaged and clearly identified waste.
		Elimination <u>only</u> in yellow sharp-safe boxes

EPFL and the School of life sciences, as an employer, have the responsibility to provide a safe and healthy work environment. The employee has the duty to abide to the safety rules and guidelines and to report any defects in the infrastructures or the equipment or to report any situations that jeopardize health and safety at work.

1. Legal aspects

Health and safety at work is regulated through numerous laws and ordinances. The main pillars for protection of the workers are (i) the “**Loi sur le travail**”¹ (LTr) and (ii) the “**Loi sur l’assurance maladie et accidents**”² (LAA). The “Ordonnance 3 relative à la loi sur le travail (Hygiène, OLT3)”³, in particular the article 3 and 10, regulates the practical aspects of the application of the LTr.

These laws are completed by a series of ordinances regulating specific activities, like the use of chemicals or the manipulation of genetically modified or infectious organisms. A summary of these ordinances is available on the Polylex website (Polylex is the electronic compendium of EPFL laws, ordinances, regulations and directives)⁴.

2. Organization of safety and general responsibilities

The organization of safety at the School of life sciences (Faculty SV) and the global responsibilities are based on the EPFL guidelines entitled “Directive concerning occupational health and safety (DSST)”⁵ 1st December 2012, Status as at 13th April 2018.

- The EPFL direction is in charge of all the aspects of health and safety at work.
The president delegates various tasks and functions:
 - To the Risk Management Committee (CRM): the coordination, quality enhancement and support of safety activities;
 - To the Vice-Presidency for Planning and Logistics (VPPL): operational management via the Safety, Prevention and Health Domain (DSPA) and coordination of the safety network in the Schools. It is responsible for the implementation of the MSST (Mesures de Santé et Sécurité au Travail);
 - To the Vice-Presidency for Academic Affairs (VPAA): the promotion of health and safety within the framework of education, research and professorial careers;
 - To the Schools in their capacity as decision-makers whose mission is to ensure that all necessary measures have been taken to prevent professional accidents and illness.
- The School Deans and College Directors and the professors are the persons primarily responsible for the application of safety measures at the prevention level. For this purpose, the heads of the units are assisted by the safety delegates.⁶
- The Professors and Heads of units are responsible for organizing the safety in their units, implementing the necessary measures (determined by a proper analysis of the risk), dedicating the necessary resources (especially in time) for training, and supervising the respect of the various legal rules and guidelines. They can delegate safety tasks and prevention missions to the “Correspondant de sécurité” (COSEC)⁷.
- The training of the COSEC is under the responsibility of the DSPA⁸. The COSEC must be given a certain percentage of his/her working time to complete the safety tasks described in the COSEC’s job description⁹. Where needed, the COSEC must also complete the tasks of biosafety officer, as defined by the “Ordonnance on contained use¹⁰” and the FOEN guideline entitled “Biosafety officers (BSO): status, tasks and responsibilities¹¹”.
- When a collaborator welcomes a host or a visitor in the laboratory, he must make sure that all the relevant safety issues are addressed (description of hazards, emergency procedures, etc.) and that the correct protective equipment is provided and used.

3. EPFL Health and safety at work services

3.1. The Safety, Prevention and Health Domain (DSPA)

The DSPA (i) responds to emergency and (ii) offers various services related to workers protection (i.e. occupational health)¹².

3.2. Health Point

¹ http://www.admin.ch/ch/f/rs/c822_11.html

² http://www.admin.ch/ch/f/rs/c832_20.html

³ http://www.admin.ch/ch/f/rs/c822_113.html

⁴ <http://polylex.epfl.ch/page-79650-fr.html>

⁵ <http://polylex.epfl.ch/security>

⁶ <http://search.epfl.ch/search/ubrowse.action?acro=CSF-SV>

⁷ <http://search.epfl.ch/ubrowse.action?acro=COSEC-SV>

⁸ <http://securite.epfl.ch/op/edit/page-79051.html>

⁹ See the appendix of the DSST document on: http://polylex.epfl.ch/files/content/sites/polylex/files/recueil_pdf/1.5.1_dir_sante_securite_travail_fr.pdf

¹⁰ http://www.admin.ch/ch/f/rs/c814_912.html

¹¹ <http://www.bafu.admin.ch/publikationen/publikation/00597/index.html?lang=en>

¹² <http://securite.epfl.ch/page-34437-en.html>

The DSPS is in charge of the Health Point¹. The Health Point offers services in:

3.2.1. Occupational health²

- Prevention of work-related accidents and illnesses
- Advice and evaluation of risks
- Monitoring of professional exposure in specific cases (maternity, chronic exposure to hazardous substances).

3.2.1.1. Monitoring of professional exposure

When working at the school of life sciences, several medical measures must be concluded:

- *Entry medical check-up.*

Collaborators (including regular staff, visitors and students) working for more than 3 months at the School of life sciences with biological materials must undergo this entry medical test. Every collaborator must fill the on-line "[Professional exposure](#)" form that can be found on the SV-safety home page³. Depending on the activity profile, collaborators will be asked to undergo a specific entry medical check-up.

Important:

The medical entry check must be performed within 2 months from the start of the activity at the School of life sciences. If not, CAMIPRO access rights to the laboratory will be removed until the completion of the check.

- *Protection against HBV*

The vaccination against human hepatitis B virus (HBV) is required for collaborators who manipulate materials from human origin (blood, biopsies, primary cells). Take contact with "Occupational health" at the Health Point.

- *Follow-up of Mycobacterium tuberculosis (MTb) and HIV exposure*

Collaborators working with MTb or HIV are tested for these agents before the start of their activities and then twice a year. Contact "Occupational health" at the Health Point for more information.

- *Exposure to nanoparticles*

Collaborators involved in activities with class 2 (nano2) or class 3 (nano3) nanoparticles (see pt. 6.8.4.2) must refer to the Health Point for a primary control that is repeated every two years.

The SUVA requires this compulsory control.

- *Follow-up of workers professionally exposed to ionizing radiations.*

Collaborators exposed to open source of radioactive materials or operating irradiators must register with the Health Point medical check. This physical capacity check is required by the SUVA. Use the on-line registration form⁴.

- *Noise exposure*

A risk analysis and control of exposed personnel (e.g. staff of the washing facilities) has to be carried on every two years.

The **protection of the personal medical data** is guaranteed by the physician (Health specialist) in charge of the Health Point.

3.2.1.2. Maternity (Pregnancy and health protection)

The "Ordinance on the protection of maternity"⁵ sets the principal measures that govern health protection at work during pregnancy. For all questions in relation with pregnancy, it is recommended to contact the Health Point as early as possible. Specialists will provide assistance in assessing your work environment. According to the circumstances, the following scenario might occur:

- A. You envisage getting pregnant: Take contact with the Health specialist at the Health Point for an evaluation of the dangers in relation with your work environment or activities (chemicals: carcinogenic, mutagen or toxic products; microorganisms from risk group 2 and above) and for advice on precautions to foresee.

¹ <http://securite.epfl.ch/healthpoint>

² <http://securite.epfl.ch/op/edit/occupationalhealth>

³ <http://sv-safety.epfl.ch>

⁴ <http://inform.epfl.ch/?form=Radioprotection&formlang=en>

⁵ http://www.admin.ch/ch/f/rs/822_111_52/index.html

- B. You are pregnant but would like to keep it confidential: Take contact with the Health specialist or the Occupational hygienist at the Health Point for a preliminary risk analysis and an evaluation of the work place. If necessary, a visit of the work place will discreetly take place.
- C. Your pregnancy is officially announced to the human resources and to the head of the unit: Following the announcement, an appraisal of the workplace will be conducted by the Health specialist or the Occupational hygienist who will establish a risk evaluation report that will be handed over to the pregnant woman, her hierarchical superior and her gynecologist (accordingly to the ordinance on the protection of maternity¹).
- D. Need for rest and privacy: During pregnancy and breastfeeding, female employees and students may, on request, use the infirmaries for rest and or privacy. Please send an email to sante@epfl.ch.

It is recommended that women inform the head of the unit as soon as they know they are pregnant in order to discuss preliminary measures².

3.2.2. Primary care³

- Primary care with trained nurses
- Vaccine booster
- Prevention campaign

4. EPFL Health and safety at work services

4.1 Emergency numbers

In case of fire, explosion, accidents, flooding, chemical spillage, gas leakage:

- Dial 115
- 115 can be dialed from every EPFL mobile or fixed phone
- When using a private mobile phone, dial 021 693 00 00

4.2 In case of fire or explosion

4.2.1. Alarming

- Dial 115 or 021 693 30 00 or press on the Fire emergency button located near the exits of the laboratory area (see pt. 4.1).
- If possible, provide help and assistance to people in danger, but do not put yourself at risk.
- Turn off gas, electrical and laboratory equipment. Remove any flammables from hazardous area.
- In case of a fire:
 - Use a nearby fire extinguisher to control and/or extinguish the fire.
 - Leave the building: close all doors and windows; follow the emergency exit signs.
 - Report anyone who might have remained in the building and report any particular danger.

4.2.2. Evacuation of the building

- In the event of an emergency necessitating evacuation of the premises, a siren will sound intermittently throughout the building.
- Everyone must calmly leave the building immediately.
- If possible, take your CAMIPRO card and personal belongings (keys and wallet) with you.
- Use stairwells only and follow the emergency exit signs.
- **Do not use lifts.**
- Proceed to the official designated assembly point⁴ where headcounts can be taken.
 - Meeting point SV-AI buildings: Parking Esplanade
- Evacuation will be supervised by members of the fire brigade.

4.3 In case of accident

¹ http://www.admin.ch/ch/f/rs/822_111_52/index.html

² <http://securite.epfl.ch/pregnancy>

³ <http://securite.epfl.ch/op/edit/nurses>

⁴ <http://plan.epfl.ch/?lang=fr&room=point+de+rassemblement>

4.3.1. Alarming

- Keep calm – Assess rapidly the situation
- If trained, check ABC (Airways, Breathing, Consciousness)
- Dial 115 or 021 693 30 00 (see pt. 4.1)
- Give as much pertinent information as possible (number of victims, location, bleeding etc.).
- Reassure the injured person: tell the person that help is on the way.

4.3.2. Reporting accidents and incidents

In order to improve safety at work, it is important to report each accident or incident to DSPS. By reporting injuries, chemical or biological spillages, hazardous settings, defective instruments, faulty appliances, you help to identify hazardous activities, dangerous processes or inappropriate infrastructures for which safer solutions or settings can be found.

- The link is on the webpage <https://scc.epfl.ch/>. If possible, the questionnaire should be answered by the person(s) involved in the accident or incident. Otherwise (e.g. in the case of a hospitalization), the task of registering an event falls on the COSEC of the unit in which the accident or incident took place.
- Accidents with a medical follow-up must be reported by the collaborator to the human resources (HR)¹ who will administrate the case for the Swiss national accident insurance (SUVA). Otherwise the medical fees will be directly charged to the collaborator.

4.4 Emergency aids

4.4.1. First aid kit

- First aid kits (and refills) are provided free of charge on the purchasing platform for safety equipment on the [DSPS homepage](#).
- To install the equipment on the wall, submit a request to DII using the “[Demande de travaux](#)” [webportal](#)².

4.4.2. Emergency eyewash units

- Eyewash units must be ordered through a request to the DII using the “[Demande de travaux](#)” [webportal](#);
- Eyewash bottles have an expiry date that must be checked from time to time.
- When (even partially) used or when expired, eyewash bottles must be returned to the SV store;
- Ready-to use replacement bottles can be ordered free of charge on the DSPS home page or obtained from the SV store.

5. Safety training for SV collaborators

5.1. Obligatory basic safety training FOBS1 and FOBS2

The FOBS1 is the general basic safety training for EPFL employees. It focusses on:

- First emergency measures (Fire and accidents).
- Prevention

The FOBS 2 is the specific training for people working in a lab with micro-organisms, chemical products, nano-powders, lasers, etc..

The FOBSs are compulsory for all new EPFL collaborators. You will be asked to register for the next available session when you collect your personal CAMIPRO access card.

More information on dates, training content and course location can be found on the DSPS FOBS webpage³.

5.2. Radioprotection training

According to the Ordinance on radioprotection, the local Radioprotection officer must ensure that workers professionally exposed to ionizing radiations are aware of the risks and know how to handle radioactive material or ionizing sources before initiating any work with such material. To abide to this obligation, the School of life sciences organizes a training focusing on:

- Radioprotection basics
- Radioactive waste management

² <http://travaux.epfl.ch>

³ <http://securite.epfl.ch/fobs/en>

Collaborators handling ionizing sources without being registered by the SUVA and without prior training will be forbidden to use such material for the rest of their contract at EPFL.

5.3. Introduction to the laboratory environment

New collaborators, short-term academic hosts, summer or bachelor students must be introduced to their new work environment by the head of the unit (or, by delegation, by his COSEC).

The introduction must include the following topics:

- Laboratory rules (storage of products/chemicals; waste management; cleaning; registration of specific task in logbooks, etc.)
 - Main and specific hazards
 - Code of practices and procedures
 - Use of instruments and equipment
 - Access to specific working zones
-

6. Laboratory safety rules

6.1. Basic aspects

- Laboratories and offices must be kept free of any material, objects or equipment unrelated to work.
- Emergency ways and exits (including stairways) must be kept free of any stationary material, equipment, furniture, objects (such as bikes, sport equipment), etc. The minimal width for the pathway is 1.2 meter.
- Extinguishers and safety showers must be visible and easily accessible.
- Doors are crucial firebreak elements. They help to contain fumes and noxious vapors. They must be kept closed at all time.

6.2. Access to laboratory areas

Laboratory and secured/restricted areas¹ are accessible only with CAMIPRO rights.

- The CAMIPRO card is personal. It is strictly forbidden to lend it to any third party.
- If the CAMIPRO card is lost, immediately alert the PCC on 34000.
- Protectas has the mission to control CAMIPRO cards and the identity of users. In case of fraudulent or illegitimate use, the CAMIPRO card will be confiscated and would be returned only after assessment by the Head of the DSPS. Depending on the circumstances, access rights of the card owner and of illegitimate card users might be temporary suspended. Upon second offence, administrative sanctions will be engaged.
- Specialized training is a mandatory prerequisite in order to obtain access rights to secured/restricted area.
- Once trained, the regular staff can get access to the laboratories 24h/24, 7d/7. Apprentices and bachelor students can access the laboratory areas during normal working hours (Monday to Friday, 07h00 to 19h00). Master students, academic hosts, external collaborators and trainees have unrestricted laboratory access, providing that they have the formal consent of the laboratory head and that they have completed the laboratory safety training.

6.3. Working off hours

The SV official opening hours are from 07.00 to 19.00. Outside of the official opening hours or during weekends (including official holidays), additional rules apply:

- Obligation to carry the "Man down" (also called DATI: emergency system when working alone in restricted area (C-lab, P2, P3, histology core facility, flow cytometry core facility, proteomics core facility etc.).
- Announce your presence to the PCC (phone 34000) when working alone
- Respect the official rest areas when performing long-term or overnight experiments

Refer to the document "Rules for "off-hour" work in SV laboratories"² for more information.

6.4. Reminder of the basic rules

Everybody working in a laboratory area must be trained according to the risks specific for each work environment. The mandatory minimal requirements are:

- The participation to the FOBSs (see pt. 5.1);
- The introduction to his/her new work environment by the COSEC of the unit (see pt. 5.4).

6.5. Good microbiological practices

The "WHO Laboratory biosafety manual"³ provides practical guidance in "Laboratory safety principles" and in "Good microbiological practices". Those principles and practices apply at the School of life sciences, including the following rules:

- No consumption and/or storage of food and/or drinks in laboratory areas, including the office desk zone located in open space laboratory area.
- Wear the adequate personal protective equipment (PPE) (see pt. 6.6).
- Laboratory coats or gowns must not be worn outside the laboratory.
- No open shoes.
- Long hair must be tightened in a ponytail or a bun or use a hair cover.

¹ For example: BSL2 (P2) or BSL3 (P3) laboratories, radioactivity or irradiator rooms, the animal house, FACS or histology facilities,

² Rules for "off-hour" work in SV laboratories

³ <http://www.who.int/csr/resources/publications/biosafety/Biosafety7.pdf>

- Pipetting by mouth is prohibited.
- Minimize the creation of aerosols.
- Decontaminate your work area before and after work
- Use a decontamination product in appropriateness to the type or the form of the microorganisms you are working with (bacteria, virus, spores, algae, worms etc.). Refer to the SV-safety website for more information on products and techniques for decontamination.
- Identify your cultures, stocks, samples with your name, the name of the strains, designation of clones and the date. Upon control, all samples found without a name, a proper designation and a date will be discarded without notice.
- The same as above applies for any solution or stock products left unnamed, unidentified and without a proper date.
- It is forbidden to transport liquid cultures or chemical solutions by hand between laboratories, facilities, buildings. Use buckets or transport trolleys.
- Announce all accidents (cuts, inoculation, splashes in the eye, animal bites) involving microorganisms, genetically modified organisms, biological fluids or laboratory animals to the SV-safety unit using the on-line form (<https://scc.epfl.ch/>).
- Take immediately care of small spills
- In case of consequent (large) spills, call 115. Consequent spills will depend on the volume/surface, dangerousness (infectious organisms, toxicity, threat to the environment etc.).

6.6. Personal protective equipment (PPE)

The adequate “Personal protective equipment” (PPE) must be worn. The minimal compulsory PPE for laboratory work is:

- A cotton, long sleeves, front-buttoned **laboratory coat**;
- Top-front closed shoes or ideally laboratory safety shoes;
- Safety **gloves**;
- In addition, **safety goggles** must be worn for all activities with a risk of projection into the eyes of hazardous biological or chemical liquids (characterized with a specific hazard pictogram) or of particles (saw dust, nanofibers, biological tissues, abrasive materials) or as soon as the Material and Safety Data Sheet (**MSDS**) of the products in use requires it.

Gloves are worn within the laboratory area. At least one glove must be taken off whenever leaving the laboratory or moving to another building for opening doors, switching on/off lights, calling lifts, etc. Gloves must respond to minimal quality standards: for biological and chemical activities, they must qualify for the EN374-2 and EN374-3 European norms.

Safety medical goggles can be ordered for collaborators working on a regular basis with chemical solutions or in activities involving a high risk of projections into the eyes. Safety medical goggles must be ordered through the DSPS after completing the ordering form that can be found on the website of the DSPS¹.

For activities with a risk of inhalation and ingestion of dangerous substances, a facial filtering particles mask (type FFP) must be worn. Discuss with the DSPS or COSEC which model among the FFP1, FFP2 or FFP3 types is the most appropriate.

The DSPS can provide special PPE (gas protection mask, air-pulsed respirators, heat-protection equipment). After expertise by the DSPS specialist, the most adapted safety equipment will be delivered².

6.7. Biological risks

When biological material or genetically modified organisms are in use, one should, according to the “Ordinance on contained use”³ and the “Ordinance on the protection of workers exposed to microorganisms”⁴:

- Assess the risk:
 - By determining the risk group of the organisms;
 - By defining the class of activity of the experimental process (BSL1, BSL2 or BSL3);

¹ <http://securite.epfl.ch/medicalgalsses>

² <http://securite.epfl.ch/EPI/en>

³ http://www.admin.ch/ch/f/rs/c814_912.html

⁴ http://www.admin.ch/ch/f/rs/c832_321.html

- By establishing the containment measures required for the manipulation of the organisms (P1, P2 or P3);
- By defining the minimal personal protection measures (type of PPE).
- Implement the appropriate medical surveillance of the workers (see pt. 3.2.1.1).

6.7.1. Working in a biosafety level 2 (BSL2 or P2) environment

Working in a BSL2 laboratory implies the following restrictions:

- BSL2 (P2) access is restricted to trained personnel.
- Training is provided either by the COSEC of the unit or by the person in charge of the BSL2 laboratory.
- The “Safety in 10 Steps” [Series N° 3](#) document provides a short summary of P2 rules.
- An access document must be signed by the trainee, the trainer and the Biosafety EPFL. This document is filed by the SV Infrastructures which deliver the access.
- Apprentices and bachelor students are not allowed to work unsupervised in a BSL2 environment, whereas master students can work independently after being properly trained.
- All BSL2 users must undergo the entry medical check (see pt. 3.2.1.1)
- The BSL2 personal protective equipment consists of:
 - A blue surgeon-type gown (e.g. In research BSL2 laboratories) or a Tyvek-type suit (e.g. In the animal facility)
 - Gloves
 - Safety glasses (when required; see pt. 6.4)
- Whenever work with BSL2 organisms is performed outside the containment of a biosafety cabinet, the following PPE must be worn:
 - Overshoes
 - FFP2 respiratory mask.
 - Safety glasses (when required; see pt. 6.4).
- Cleaning in a BSL2 laboratory is the responsibility of the users. Floors must be cleaned at least once a week. Cleanings must be recorded in a log book.
- The Head of the unit (or, upon delegation of the task, his/her COSEC) must establish a register compiling the main BSL2 strains (and their most relevant derivatives/mutants). This register must be available on request during controls or audits. It should list the name of the strains/clones and their precise storage location.
- It is compulsory to wear the “Man down” system (also called DATI) when working alone “off hours” or during the weekends (see pt. 6.2).
- Report all accidents and incidents to the DSPS (see pt. 4.3)

6.7.2. Manipulating BSL2 materials

Among the rules governing the manipulation of BSL2 material, in particular note that:

- BSL2 material is manipulated within the containment of a biosafety cabinet. Special protection measures and decontamination procedures must be put into place for experimental steps that cannot be performed in a biosafety cabinet.
- Formation of aerosols must be reduced to a minimum. Centrifugations are carried out in rotors or buckets with safety lids. Buckets or rotors must be open in the containment of a biosafety cabinet.
- BSL2 samples must be doubled-packaged for internal transport and for storage. The second packaging must be water-tight and must stand a fall of 1 m without opening or breaking.
- All primary cell lines derived from untested human or animal tissue samples are by definition BSL2. To be considered as BSL1, material from human origin must be tested for the absence of HIV, HBV and HCV. The anamneses must also indicate that the donor is healthy. Primary cell lines derived from SPF animals are however considered low risk and can therefore be established in a BSL1 environment.
- All the waste that was in contact with risk 2 organisms must be inactivated before elimination (see pt. 7.3).

- Collaborators manipulating blood from human origin, the collaborators of the CAV and the persons involved in projects dealing with HBV transgenic mice must be controlled for their HBV vaccination status.

6.7.3. Working in a biosafety level 3 (BSL3 or P3) environment

In terms of conditions of access (training, code of practice, off-hours rules, code of practice, strain register, logbook, cleaning etc.), the same rules already defined for BSL2 (P2) apply (see pt. 6.7.1). However, users must take into consideration the following:

- All P3 users must undergo the entry medical check and be tested for HIV or TB depending on the activities performed in the laboratory. (see pt. 3.2.1.1)
- The P3 personal protective equipment consists of:
 - The complete Tyvek-type suit (CAT. III; Type 4B, 5, 6) for work in the conventional P3 laboratory;
 - A blue surgeon-type gown for work in the P3** (HIV, HBV) laboratory;
 - Double gloving;
 - Respiratory protection: FFP3 mask type;
 - Overshoes;
 - Hairnet (caul) ;
 - Safety glasses (when required; see pt. 6.4).
- Report all accidents and incidents to the DSPS (see pt. 4.3).
- The ordinance on the protection of pregnant women forbids pregnant women to perform BSL3 and BSL3** activities. Only work performed under certain conditions can be tolerated after a proper "risk assessment" run by the EPFL Biosafety coordinator and validated by the EPFL "Occupational health specialist".

6.7.4. Manipulating BSL3 materials

The code of practice of the P3 laboratory must describe all the experimental procedures run in the laboratory. Users must therefore perform a proper risk analysis¹ and then implement the measures derived from it. One should at least consider the following:

- BSL3 material is handled exclusively within the containment of a biosafety cabinet.
- Formation of aerosols must be avoided. Centrifugations are carried out in rotors or buckets with safety lids. Buckets or rotors must not be open outside of a biosafety cabinet. Do not vortex Eppendorf tubes or do not shake tubes/vessels that cannot be closed with a proper screwing cap.
- BSL3 samples must be triple-packaged for internal transport and double-packaged for storage. Storage can only take place in a P3 environment. The second packaging must be water-tight and must stand a fall of 1 m without opening or breaking.
- All the waste produced in a BSL3 laboratory must be inactivated by autoclaving before elimination (see pt. 7.3).

6.8. Working with radioactivity

According to the Ordinance on radioprotection (ORaP)², a worker using or being exposed to ionizing radiations³ is considered as a "Person Professionally Exposed to Radiation" (PPER).

- The use of ionizing radiations is under the responsibility of the SV faculty Radioprotection officer (RPO)⁴. The RPO authorizes and supervises the activities, oversees the authorizations and manages the waste.
- PPER must be registered by the SUVA.
- The registration implies:
 - A radioprotection medical check (see pt. 3.2.1.1);
 - A radioprotection training;
 - The written approval of the head of the unit.

¹ [Lien sur la page BSL3](#)

² http://www.admin.ch/ch/f/rs/c814_501.html

³ Originating from radioactive open sources (e.g. for kinase assay or metabolic labeling) or closed sources (X-rays generator or gamma-irradiator).

⁴ The name and contact numbers of the RPO in charge is indicated in the contact box of the SV-safety webpage.

Use the “Radioprotection” registration link on <http://sv-safety.epfl> at least three weeks in advance to initiate the process.

- PPER are monthly monitored for possible contamination (urine sample counting and/or reading of dosimeter).

6.9. Working with chemicals

The use of chemical substances is principally ruled by the Law on chemical products (LChim, ref 813.1) and the Ordinance on chemical products (OChim, ref 813.11). The ordinance on the decrease of risks relative to chemical products (ORRChim, ref 814.81) lists some types of substances with a prohibited or strictly limited use.

The following only highlights some of the fundamental rules governing the use of chemical products. A more comprehensive guideline is available on <http://sv-safety.epfl.ch/> under the Safety information tab¹. Additional information on chemical hazards can also be obtained from the safety website of the School of basic sciences².

6.9.1. Use of chemical products

- Any collaborator using chemical products in his/her experimentation must know their properties.
- The “**Material Safety Data Sheet**” (**MSDS**) is the reference document that describes the properties of the chemical product. The MSDS provides essential information on the handling, the storage, the elimination and the safety issues [including personal protective equipment (PPE)] of the chemical products used or stored in the laboratory.
- Chemical hazards must be identified and pointed out with the proper warning pictograms. Precautions statements and emergency procedures must be available.
- As mentioned under the point 6.5, the compulsory minimal PPE in the laboratory consists in a cotton laboratory lab coat, top-front closed shoes, gloves and safety goggles when working with chemical solutions characterized by a specific hazard pictogram, **unless** the MSDS indicates additional measures which will then apply.
- In Switzerland, the producer (at EPFL, the research unit or service) of a particular waste holds responsibility until the end of the recycling process or the destruction of the waste. By default, reactive chemical products must be eliminated without prior inactivation, unless it is specifically required.

6.9.2. Storage

- The list and place of storage of the chemical products used or stored in the laboratory must be kept up-to-date.
- Toxic substances must be stored in a locked ventilated cabinet.
- Flammable products must be kept in ventilated cabinets.
- Be particularly aware of interactions when storing chemicals: e.g. separate acids from bases.
- Liquids and solids are kept separately. Liquids are kept in a retention tray whose size is sufficient to retain the volume of the largest container.
- Storage volume restrictions apply: e.g. 100 L of flammable products per ventilated cabinet of the type EI90; Maximum of 15 L in temporary storage or usage in the fume hood during the day; containers or bottles for a maximum 2.5 L of inflammable products outside a ventilated cabinet for usage during the day. No storage of inflammable products outside a ventilated cabinet. Refer to the EPFL “Directive concerning the storage of inflammables on premises (LEX 1.5.7)”³ for additional information.

6.9.3. Problematic chemical substances and nanoparticles

6.9.3.1. Highly hazardous chemicals

Some chemical products can be highly problematic⁴. Indeed reagents like fluorhydric acid, osmium tetroxide, picric acid or ethidium bromide rise serious issues in handling, storage and waste management. Refer to the MSDS or to the safety pages of the School of Basic sciences⁵ or of the School of Life sciences⁶ for additional information.

6.9.3.2. Nanomaterial/nanoparticles

“Nanomaterial” is defined as a natural, incidental or manufactured (engineered) material in an unbound state or as an aggregate or agglomerate where, for 50% or more of the particles, one

¹ <http://sv-safety.epfl.ch/page-44157-en.html>

² <http://sb-sst.epfl.ch/chemical-hazards>

³ [Directive concerning the storage of inflammables on premises](#) (LEX 1.5.7)

⁴ <http://sb-sst.epfl.ch/files/content/sites/sbsst/files/shared/Documentation/List%20of%20substances%20subject%20to%20authorization%203022012.pdf>

⁵ <http://sb-sst.epfl.ch/chemical-hazards>

⁶ <http://sv-safety.epfl.ch/page-44157-en.html>

or more external dimensions are in the size range 1 nm to 100 nm. A material with a specific surface area (SSA) by volume greater than $60\text{m}^2/\text{cm}^3$ is also considered as a nanomaterial.

Due to their small size, inhaled nanoparticles will deposit deep in the respiratory tract. Nanoparticles can cross cell membranes and cause oxidative stress to cellular organelles. They can penetrate healthy intact skin and translocate to organs. Handling of nanomaterial can therefore cause a potential health risk. To minimize workers' exposure, the SUVA together with a group of experts established a set of technical, organizational and personal protective measures that have been compiled in the "Directive on the work with engineered nano-materials"¹. Depending on the type of particles (nanopowder vs. nanofibers), the state of the material (dry, in suspension, in a matrix), the quantity (<1 mg; >100 mg), the process (application vs. production), the environment (closed vs. open), the activities involving nanoparticles will be classified in Nano1, Nano2 or Nano3.

Nano activities must be declared to the DSPS. In addition, Nano2 and Nano3 activities require specific organizational and infrastructural measures and must be followed up by the Occupational hygienist. There is a periodic medical surveillance for Nano2 and Nano3 users who must contact the Health Point to set up an appointment.

6.9.4. Cryogenics

Cryogenic liquids, nitrogen in particular, and dry-ice (carbon dioxide) are commonly used for storage purposes. Cryogenics represent several sources of hazards and must be manipulated with great care².

- Cold burns:
At atmospheric pressure, liquid nitrogen (LN2) boils at -196°C and can cause rapid freezing on contact with living tissue, which may lead to frostbite. The compulsory PPE for the collection of LN2 consists in a face shield, a pair of cryogenic gloves, a lab coat, trousers and protective shoes
- Asphyxiation:
As liquid nitrogen evaporates it will reduce the oxygen concentration in the air and might act as an asphyxiating product, especially in confined spaces. Nitrogen is odorless, colorless and tasteless, and may produce asphyxia without any sensation or prior warning.

Detection³ for O_2 is compulsory when the amount of cryogenic liquid for a container is:

- a) In a non-ventilated area: $> 0.3 \text{ l per m}^3$ of storage space.
- b) In a ventilated area: $> 0.4 \text{ l per m}^3$ of storage space.

The same ratio applies for the transportation of LN2 containers on lifts. If the ratio $V_{\text{LN2}}/\text{m}^3$ is > 0.3 , the container containing the cryogenic liquid must be transported unaccompanied. Only good lifts can be used. If access to the lift can't be denied during a transport of liquid nitrogen, a banner mentioning the hazard and forbidding the use of the lift must be affixed on the lift panel board.

- Explosion:
Since the liquid to gas expansion ratio of nitrogen is 1:694 at 20°C , a tremendous amount of force can be generated if liquid nitrogen is rapidly vaporized.

6.9.5. Gas

In addition to the inherent chemical/toxicological properties of the gas, one needs to take into consideration the dangers associated with high pressure when working with compressed gas cylinder.

When handling or working with compressed, users must in particular pay attention to the following points:

- High pressure:
The filling pressure of compressed gases can be up to 200 bars. There is therefore a danger of burst or rupture due to pressure. The gas can be rejected accidentally in case of leakage due to valve or safety device deficiency. With the temperature raising, the pressure in compressed gas bottles raises strongly, increasing therefore the risk of explosion.
- Transport:
To transport a bottle, never drag, slide or roll it. Get a cylinder cart or truck and use it; never transport with regulator in place, use protective cap instead. Make sure the cylinder is secured to the cart during transport.
- Storage and use:
 - Compressed gas cylinders must be kept in fireproof ventilated cabinets (type EI90).

¹ [Directive on the work with engineered nano materials : exposure potential and control measures](#) (LEX 1.5.5)

² <http://sb-sst.epfl.ch/cryogenic-hazards>

³ http://sb-sst.epfl.ch/files/content/sites/sbsst/files/shared/Documentation/DirectiveInterneCryogenie_en.pdf

- Compressed gas presenting chemical incompatibilities must be stored in separate containment.
- Depending on the type of gas (inert, flammable, toxic or oxidizing), small volume of compressed gas can be stored in a laboratory. Refer to the “Directive concerning the storage of gas cylinders”¹ for more details on the volume and the numbers of bottles that can be present in a laboratory.
- Cylinders must be secured at all times to a fixed location (wall, non-movable piece of furniture) at a point approximately 2/3 of its height (using chain, plastic coated wire cable, commercially available cylinder straps etc.). They should be secured individually, i.e. one bond per cylinder.

6.10. Maintenance and reparation of equipment

All instruments and laboratory devices must be decontaminated and/or cleaned before being moved or transported to the workshop for repair or maintenance. Indicate to the workshop collaborators the decontamination/cleaning procedure that was used and inform them on the residual risks. If the decontamination is not possible or problematic, contact the workshop team for advice before moving any equipment or laboratory device.

7. Laboratory safety rules

EPFL applies a strict policy in terms of waste disposal. General information is provided on the DSPS webpage dedicated to waste management². The Schools must organized waste collection according to their specific requirements. Everything that is recyclable or poses a threat to the environment is sorted out.

7.1. Office and house-hold waste

Typical office or house-hold waste is collected in the 35 L blue garbage bags with the EPFL pictogram. For collection of used paper, use the special cardboard boxes provided. Recyclable material can be put in either of the SV waste collections rooms³ in which material such as cardboard, plastic ware, batteries, empty lead canister, glassware, metallic objects, etc., can be dropped off. Please use these facilities for making a little plus for the environment.

7.2. Laboratory waste (waste from bio-medical research laboratory)

Laboratory waste represents a first category of special waste: it is collected in the white/red-stripped garbage bags. Typical laboratory waste is made of:

- Plastic ware, pipettes, tips, tubes used during experiments. Tubes and flasks containing liquids must be emptied before being disposed of.
- Non-genetically modified and non-infectious organisms, fixed biological samples, biological material inactivated by autoclaving;
- Non-toxic or non-hazardous chemical products;
- Used personal protective equipment (gloves, disposable lab coats);
- [...]

Do not overfill those bags. The cleaning team must be able to handle them safely.

Special cases

- Sharps, needles, broken glass, cover slips, and microscopy slides are collected in the sharp-proofed yellow boxes. Once $\frac{3}{4}$ full, those boxes are tightly closed and brought to the chemical waste room. The will be eliminated as special waste.
- Sharp material that needs inactivation before elimination is collected in heat-resistant sharp-proofed boxes labeled with a biohazard pictogram. Those boxes are collected by the Infrastructure team for autoclave treatment.
- The 5, 10 and 25 ml plastic pipettes are discarded in the UN 3261 plastic-coated cardboard boxes.
- Glass Pasteur pipettes are discarded in the 30 L yellow plastic containers.
- Bottles that have contained non-dangerous chemical products must be thoroughly rinsed before being sorted out and eliminated as glass materials. The label must be removed or crossed out, otherwise the

¹ "Directive concerning the storage of gas cylinders (Lex 1.5.6)

² <http://securite.epfl.ch/waste>

³ [AI0235](#) & [SV0515](#)

bottle is still considered as material contaminated with chemical products and, if found during a random check by the used-glass contractor, will result in a penalty that will be financially reported on the units.

If glass debris, sharps, razor blades or needles are found in the waste (i.e. not packed in a closed sharp-safe container) coming from one laboratory area or laboratory floor, all the waste coming from that area or floor will be sorted out and the fees will be reported on the implicated units.

7.3. Biological and cell culture waste

All the waste from genetically modified or from potentially infectious (risk group 2 and above) organisms must be inactivated before elimination. It includes the organisms themselves (cells, animals, viral vectors, infectious agents) and the consumables that were in contact with them.

A complete set of rules and guidelines is available on <http://sv-safety.epfl.ch/page-93500-en.html>.

BSL1 waste

- **Solid BSL1 (P1) waste**, which was not in contact with GMO, can be discarded with the laboratory waste (see point 7.2).
The waste that was in contact with GMO is discarded in the UN 3291 plastic-coated cardboard boxes.
- **Liquid BSL1 (P1) waste** (either from GMOs or from non-modified BSL1 organisms) is collected in plastic container. After treatment with Bleach, Virkon, Lysetol, Gigasept AF, Trigen or Sodium hydroxide (NaOH), the liquid is discarded in the 600 L containers located in the AI0235 or SV0515 waste room. Transport and decanting of the treated P1 solutions is the responsibility of the users. Chemically-treated waste is then eliminated as special waste (Cridec).
- Media containing hazardous chemicals (such as strong acids, formaldehyde, phenols) must be disposed of as a hazardous product and thus treated like a chemical waste (see point 7.4).
- **Soft BSL1 (P1) waste** (agar tubes or plates) are disposed of in the 50 L yellow plastic containers. The content will be autoclaved before discarding the waste as a normal laboratory waste (see point 7.2).

BSL2 waste

- **Solid or soft (BSL2 waste)** must be inactivated by autoclaving before being discarded as a normal laboratory waste (see point 7.2).
- **Liquid BSL2 waste** must be inactivated by autoclaving, unless it contains significant amounts (> 1% or > 0.5M) of dangerous chemicals such as bleach, aldehydes, phenols, acids). The autoclaved material is then decanted in the 600 L containers located in the AI and SV waste rooms. Other inactivating methods might be considered. However, they must be fully validated before being implemented.
- For heat inactivation, the waste is collected in autoclave bags, in autoclave containers or in autoclave bottles. Autoclave bags must be closed with a plastic strap, autoclave containers must be sealed with a clipable lid and autoclave bottles must be secured with the appropriate safety cap. Bags, containers and bottles are then decontaminated with the appropriate chemical (70% Ethanol, Meliseptol, Biocidal, Biosanitizer, etc.). Once ready for collection, the SV-infrastructure team will take care of them. The SV-infrastructure website¹ provides more information on BSL2 waste collection and treatment.

BSL3 waste

- All BSL3 (P3) waste is decontaminated before leaving the P3 containment. Unless validated by risk assessment, P3 waste is obligatory inactivated by heat treatment.

Other biological waste

- Animal waste must be sorted out carefully. Carcasses must be returned to the animal house for proper elimination.
- Human organs and body parts must be returned to the hospital for proper disposal. Human biopsies can be eliminated through one of the above-mentioned channel, depending on their dangerousness.
- Consult the waste section of the SV-safety website² for additional useful information and tips.

BSL3 waste

- All BSL3 (P3) waste is decontaminated before leaving the P3 containment. Unless validated by risk assessment, P3 waste is obligatory inactivated by heat treatment.

¹ <http://sv-in.epfl.ch/dechet>

² [Waste management](#)

Other biological waste

- Animal waste must be sorted out carefully. Carcasses must be returned to the animal house for proper elimination.
- Human organs and body parts must be returned to the hospital for proper disposal. Human biopsies can be eliminated through one of the above-mentioned channel, depending on their dangerousness.
- If required, the waste section¹ of the SV-safety website provides additional useful information and tips.

7.4. Chemical waste

Unused chemical products, chemical waste products or chemical containers must be sorted out² and eliminated according to the categories defined in the Ordinance on the movement of waste (OMoD)³.

- Chemicals products and their packaging must be eliminated through the chemical waste channel. There is no pouring of hazardous chemical solutions down the drain. Similarly, hazardous chemical products and their packaging are not mixed with normal laboratory waste.
- Solutions containing EDTA or chelating agents are eliminated through the chemical waste channel
- When possible, chemical products should be eliminated in their original packaging.
- Chemical incompatibilities⁴ must be taken into consideration before mixing waste products.
- All chemical waste must be labeled (name of product, description of mixtures), characterized (warning pictograms), categorized (OMoD code)^{5,6} and identified (name or code of the producer).

A complete set of rules and guidelines is available on <http://sv-safety.epfl.ch/page-93500-en.html>.

7.5. Radioactive waste

All radioactive products with a half-life shorter than 90 days (e.g. 32-P, 35-S and 125-I) are stored on site (in the C-labs or in the radioactive waste room) until the activity falls 100 times below the exemption limits. They are then eliminated according to their physical, chemical and biological characteristics. Radionuclides with a half-life longer than 90 days are collected once a year by an official enterprise contracted by the federal state for long period storage at the Paul Scherrer Institute or for destruction by specialized companies (e.g. Valorec).

The authorization to use radionuclides is linked to the obligation to monitor all the radioactive waste produced. Before elimination, users must therefore duly fill the provided follow-up document that must accompany each radioactive waste packing.

- With the exception of double labeling experiments, radioactive waste must be sorted out and stored according to the type of radio-isotope.
- Liquid waste is kept separate from solid waste.

8. Safety tasks and administrative duties

All members of the SV Faculty (collaborators, students, visitors) have various obligations to fulfill in order to set up a good organization of health and safety at work.

8.1. Professors, principal investigators, heads of units

- Organize the safety structure in his/her unit.
- Appoint a COSEC and allocate him/her a percentage of his/her working time for safety tasks.
- Allocate time to his/her employees to follow the required safety trainings and workshops.
- Must perform a risk assessment of the activities run in his/her unit. The risk assessment protocol must be made available to authorities on demand.
- According to the EPFL guidelines entitled "Directive concernant la gestion des organismes"⁷ and "Directive concernant la procédure interne pour des projets soumis à notification/autorisation selon l'OUC et l'OPTM"⁸, announce to the "EPFL Biosafety unit" all biological activities involving natural or genetically modified organisms and/or potentially infectious/pathogen organisms from risk group 2 and above

¹ [Waste management](#)

² [Management of chemical waste in the School of basic sciences \(SB\)](#)

³ http://www.admin.ch/ch/f/rs/c814_610.html

⁴ <http://sv-safety.epfl.ch/page-44157-en.html>

⁵ [Management of chemical waste](#) http://sb-sst.epfl.ch/files/content/sites/sbst/files/shared/Documentation/TriDechetsChimiques_en.pdf

⁶ <http://sv-safety.epfl.ch/>

⁷ http://polylex.epfl.ch/files/content/sites/polylex/files/recueil_pdf/ENG/1.5.1_dir_sante_securite_travail_eng.pdf

⁸ http://polylex.epfl.ch/files/content/sites/polylex/files/recueil_pdf/ENG/1.5.3_d_notifications_autorisations_selon_OUC_an.pdf

in order to notify them to the “Federal coordination center for biotechnology”. This notification is an absolute legal requirement.

- Edit the “Code of practices” and/or the related “Standard operating procedures” of the work performed in his/her laboratories.
- Make sure that the emergency measures specific to the activities or processes run in his/her laboratory are known to his/her staff.
- Establish the list of the organisms used in his/her unit. Indicate the risk group and the place of storage.
- Establish the list of the chemical products used in his/her unit and their place of storage.
- Perform a risk assessment of the work place and communicate the objective risks to new employees (with an emphasis on the specific risks for women in age of procreating and on the specific risks linked to the manipulation of human samples).
- Authorize his/her employees to use radioactive sources or to work with ionizing radiations.

8.2. COSEC

The tasks of the COSEC are described in the appendix of the Directive concerning occupational health and safety (DSST), which can be found on the EPFL Polylex website¹. In particular, the COSEC must:

- Perform, under the authority of his/her superior, specific tasks of those mentioned above. Those tasks must be defined by the superior and the COSEC.
- Welcome new collaborators and introduce them to the specificities of his/her new work environment.
- Coordinate the creation and the yearly update of the “Door safety data sheets” for the rooms allocated to his/her unit.
- Communicate to his/her superior all the safety issues running in the unit.
- Check that all the accidents and incidents happening in his/her unit are announced via the web application.
- Implement emergency measures (e.g. halt of a dangerous experiment) to get rid of an immediate risk.
- Check the safety equipment (personal protective equipment, safety kits).

8.3. Collaborators, visitors and students

- Enrol in the « Formation obligatoire de base en sécurité (FOBS) » training course.
- When working in the laboratory environment: within three months of the start of the activity the « SV laboratory safety course ».
- Read and sign the present document and return it.
- Conform to the federal laws and ordinances governing health and safety at work and abide to the EPFL rules and guidelines.
- Be aware of the existing risks and conscious of his/her exposure to specific hazards. If not, ask immediately your head of unit or your COSEC
- Follow the good microbiological practices.
- Report to the Head of the unit, the COSEC, or the DSPS any defects or situations that jeopardize health and safety at work.
- Register for the entry medical check.
- When working with Mycobacterium tuberculosis or HIV, register with the Health Point for a preliminary blood test, prior any manipulation of the infectious organisms.
- When working with radionuclides or ionizing radiations, nanoparticles: register with the Health Point for the compulsory SUVA medical examination.
- In case of pregnancy, register with the Health Point for a risk evaluation of the work place and of the activities.

8.4. Upon leaving EPFL

- Sort out your chemical solutions and eliminate everything that is old, unidentified or hazardous.
- Sort out your biological material. Destroy and eliminate all unnecessary cell cultures and samples.

¹ http://polylex.epfl.ch/files/content/sites/polylex/files/recueil_pdf/ENG/1.5.1_dir_sante_securite_travail_eng.pdf

- Cancel with the Office of biotechnology all the notifications associated with your work at EPFL.
- Contact the Health Point to close down all your open medical files (entry medical check, HIV or TB survey; radioprotection or nanoparticles health monitoring, etc.).
People under HIV or TB surveillance must provide a blood sample for a final test.
- Get back your personal “Radioprotection monitoring document” from the Radioprotection officer.
- Return your CAMIPRO card and all your access keys.

9. Important notice

Failure to observe the safety rules might result in the obligation to take again specific safety courses, in a temporary or permanent blockage of laboratory access rights and/or in administrative sanctions.

10. Versioning

23.06.2013	version 1.0	
10.12.2013	version 1.1	
14.10.2014	version 2.0	Update of biological waste management section Shortening of deadline period for signing the document. Correction of spelling and editing mistakes
04.03.2015	version 2.1	Suppression of ophthalmic controls.
03.12.2018	Version 2.2	Minor changes