

BIO Safety Cards

Card N°3

Working in a biosafety level 3 laboratory (marked risks) with TB (BSL3 or P3)

1. Access
 - Register with the Health Point to have a TB base-line performed before starting any activity in the BSL3 laboratory.
 - P3 access rights (finger prints or retina scanning) are granted only upon completion of the “FOBS 3 – Biological risks: working in a P2 & P3 environment” course and upon completion of the specific training given by the COSEC in charge of the P3 laboratory.
2. Autoclave :
 - Anyone entering the facility has to first check the autoclave: if an autoclave cycle has been completed, one has to unload it, collect the microbiological test tube and put it into culture. In the meantime, autoclaved bags and containers are stored in the dedicated carts. If the culture test is growth-negative, the inactivated waste can be discarded. If the culture test is growth-positive, the waste must be treated by autoclaving a second time.
 - Inactivated waste can be loaded in the autoclave only from inside the containment. When treating solid waste, a microbiological control test tube must be put inside one of the autoclave bags. When treating liquid waste, the temperature probe has to be put inside one of the liquid container. With TB, always run a “Kill” autoclaving cycle: 60', 121°C, 1 bar.
3. Entering the lab :
 - Sign in on the white board in the corridor.
 - In the corridor, before entering in the anteroom: put on covershoes, a first pair of long arm nitrile gloves, FFP3 mask and hair covers.
 - In the anteroom: step across the separation bench; put on the suit, a second pair of covershoes; secure the first pair of gloves with a tape and put on a second pair of gloves. Remember: do not step back over the separation bench once you wear the gown.
 - Use the airlock for transferring material inside the P3.
4. Keep equipment clean and in good condition.
5. All activities should be confined¹ (use of primary or secondary containments):
 - Work in a biosafety cabinet (laminar flow).
 - Cultures are set in closed vessels that are kept in retention trays. When culture conditions allow it, retention trays must be covered with a lid.
 - Centrifugation is performed in buckets or rotors equipped with safety lids. Upon centrifugation, buckets and rotors must be transferred in the biosafety cabinet before opening the lid.

¹ Some activities, such as stereotaxic injection of viral vectors, cannot be confined. Those activities must first be assessed by the School biosafety coordinator and then authorized by the State authorities. Generally, only the injection steps are authorized outside the confinement. Growth and preparation of risk group 2 viral vectors remain sheer confined activities.

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- Risk group 3 samples are always stored in the P3 laboratory. If one needs to transfer or send non-inactivated material from one P3 to another, it must be triple-packaged.
6. Do not discard TB cultures in the sinks. They must be pre-treated with Vesphene and then autoclaved.
 7. Keep the P3 corridor as clean and sterile as possible:
 - Do not store unsealed cultures, do not leave any open waste bags or plates. A cart is available for transferring cultures/plates around the lab.
 - Monthly rotation duties to clean corridor and rooms have to be organized.
 8. Phone numbers of emergency people are listed next to the phones.
 - In case of accidents with injuries, call 115 and alert the P3 lab managers and/or the “Biosafety EPFL”.
 - In case of a spill outside of the biosafety cabinet, leave the laboratory and go back into the anteroom. Alert the P3 lab managers and/or the “Biosafety EPFL”. Wait at least 60 minutes to allow the removal of aerosols. Treat the spill (you might use the emergency spill kit located in the cupboard located in the anteroom).
 - Report any problem to the lab P3 managers and/or the “Biosafety EPFL”.
 9. When working during off-hours or alone, you must wear the man-down emitter necklace.
 10. Leaving the lab: remove covershoes and the outer pair of gloves in the P3 just before stepping in the anteroom. In the anteroom, remove the Tyvek and discard it. When stepping over the separation bench, remove the second pair of covershoes. Then remove the second pair of gloves and wash your hands. Remove the hair cover and the protection mask just before stepping in the corridor. Sign out on the white board in the corridor.