

Guidelines for working at Nanolab during the Covid-19 pandemic

Version 11

This is a complete version containing the guidelines for all labs and general behavior. Looking for something specific, please use the table of contents.

Change log:

Changes since last version:

Changes to version 11

Rules about Covid-19 tests

User support and training

Here is an overview of the extraordinary guidelines we have implemented during the Covid-19 pandemic. The guidelines are subject to change over time, depending on our experiences with these current guidelines and changes in overall guidelines and regulations from DTU and the Health Authorities.

All users and personnel have to be able to show a negative corona test result that is not older than around 48 hours to receive training and a not older than 60 hours before they enter the premises.

If you are sick or have symptoms of illness, stay at home. If you get symptoms or get sick while you are at work, go home.

Stay home until you are completely healthy. You are considered sick when there are symptoms of illness - even mild symptoms. If you are in doubt, get tested for infection with the corona virus. If you are tested positive, you must inform your manager/supervisor.

With regards to COVID-19, you are no longer considered to be an infection risk when two days have passed after all symptoms have ceased. Only then can you return to your place of work.

Staff and students must follow the normal sick leave procedures: Notify your immediate manager/supervisor, write to the administration (adm@nanolab.dtu.dk) tell her/him that you are sick and possibly suspect COVID-19, and follow DTU's sick leave guidelines available through DTU Inside.

The current guideline from the Health Authorities can be found at the homepage of the Danish Foreign Ministry <https://um.dk/en/travel-and-residence/coronavirus-covid-19/>.

For more information: <https://www.dtu.dk/english/Service/coronavirus>

At all time, keep 2m distance unless it is absolutely impossible to carry out your work while observing this distance.

Microscopes in building 314 and 307 and the laboratories 1. Floor and in the basement of 346 have to be booked through LabManager.

Contents

Test requirements.....	3
User Support in the cleanroom during Level 5 Pandemic restrictions:	4
Training	4
Training requests for building 314 and 307	4
Cleanroom Introductory course.....	4
Tool package training (TPT).....	4
Tool Training	4
Processing	4
Students and researchers working on internal projects.....	4
Students and researchers working on externally financed projects	4
Commercial companies.....	4
Cleanroom.....	5
Laboratories 1. Floor building 346:	5
Part 1: Booking Rules	6
Part 2: Safety rules – rules to minimize risk of infection	7
1. Entering the laboratories	7
2. Working in the laboratories	7
3. Leaving the laboratories.....	7
Dicer room 1. Floor 346:	8
Basement building 346:	8
Packlab building 347:	8
Building 314 and 307:	9
Building 314:	9
General rules:.....	9
1. Entering building 314	9
2. In the Prep lab.....	9
3. At microscope	10
4. After using the restroom.....	10
5. Exiting building 314.....	10
6. Support.....	10
Building 307:	10
General rules:.....	10
The procedure is as follows:	10
General rules:.....	11
The procedure is as follows:	11
General behavior in DTU Nanolab:	12

Offices:	12
Eating:	12

Test requirements

Current rules allow us to dispense from the 2m distance rule but only for short periods in certain situations where it is absolutely required.

All users and personnel have to be able to show a negative corona test result that is not older than around 48 hours to receive training and a not older than 60 hours before they enter the premises.

With a 60 hour test result it is possible to suffice with being tested twice a week if timed right. Training sessions require often that people cannot observe 2 m distance for a somewhat longer period and therefore we will insist on 48h in these cases.

The test can either be a quick (antigen) test or a PCR test. The 60 and 48 hours refer to when you receive the test result not when the test took place. PCR test results are typically around 24 hours under way whereas a quick test gives results after 15 minutes. However, PCR tests are so much more sensitive that the danger of being contagious is somewhat comparable after 24 hours with a quick test after 15 minutes.

There is a permanent walk-in test center in convenient walking distance from DTU (around 800 m) close to Lyngby stadium (<https://www.ltk.dk/borger/sundhed/coronaviruscovid-19/covid-19-teststeder-i-kommunen>). You do not have to reserve time, first come first serve. Please check the website to verify as this might change and is beyond our sphere of influence.

For training sessions, you have to show a negative test result that is not older than 48h to the trainer prior to training. This rule will be enforced without exemption – no negative test result - no training, you lose your training slot and you are back in line.

Showing on the mobile phone is fine, however if this is not possible (e.g. you meet in the cleanroom) you can mail the test result. We will of course observe GDPR and delete the mail after verification.

Ordinary users and personnel do not need to show a test result prior to entering the premises. However, we reserve the right that senior Nanolab personnel will ask you to produce a negative test result not older than 60 hours. Failure to comply will result in longish quarantine from the premises.

Please be fully aware that the test requirement does not dispense from the 2m distance rule in general (nor any other CoVID-19 rule, especially not the usage of personal protection equipment). It allows us to dispense for exactly and only the time it takes to allow for situations, where conducting training (or assist users, carry out important work) is impossible when keeping a distance of 2 m.

Do not be too concerned about the exact age of the test result. You do not have to leave the cleanroom immediately once your result is older than 60 hours, but please stay within a reasonable (few hours) time period.

Should you get a positive test result please go into self isolation immediately, do not come to DTU and follow the guidelines laid out by the authorities.

User Support in the cleanroom during Level 5 Pandemic restrictions:

During times where regulations (e.g. social distance) prevent us perform usual training we can offer the following:

An attempt to summarize how we can help users best possible while observing level 5 rules and regulations.

Training

Training requests for building 314 and 307

Contact Jakob Wagner with your training request. Please fill in the access request form as usual.

Cleanroom Introductory course

We have a severe backlog and reduced training capacity because of the regulations.

Contact Jesper Hanberg in order to assess your possibilities for training.

New users are encouraged to sign up and take the online parts of the course and online parts of relevant TPTs. In order to make the practical part of the course/ training as efficient as possible it is recommended that, you familiarize yourself with the tools you are planning to use through a careful study of manuals and relevant videos.

Tool package training (TPT)

You can take the online parts of the relevant courses and online parts of TPTs. For the hands -on part inside the cleanroom contact Jesper Hanberg.

Tool Training

Users with a recently expired authorization have a possibility to get their authorization renewed without specific training at the tool. training@nanolab.dtu.dk

For other users with expired authorization we offer “re-authorization training” in the cleanroom. Contact Jesper Hanberg.

Processing

Students and researchers working on internal projects.

If you need training for a single step in your process flow:

Ask an authorized colleague to do the processing for you. If this is not possible, contact Jesper.

If you need training for a full process flow:

Contact Jesper with a request for training and your full detailed process flow.

Students and researchers working on externally financed projects

If you need training for a single step:

Ask an authorized co-worker to do the processing for you.

If this is not possible, we might be able to train you, in very urgent cases and if our resource permit we can do the processing on the project. We will register equipment and time usage in LabManager on behalf of the user and project. Contact Jesper Hanberg for details.

If you need training for a full process flow:

Contact Jesper with a request for training and your full detailed process flow.

Commercial companies

Same as for above.

Cleanroom:

It is obligatory to wear face masks in the cleanroom and all the common research infrastructure labs at all times. This is standard procedure in many cleanrooms and especially effective in a situation when you are talking to another person. Please follow the instructions when and where to put on and discard the mask.

Our gowning area and the corridors leading to that area are not designed for keeping a distance of 2 meters. We have laid out rules for entering and using the gowning area, most explicit on the dirty side, where people spent most of the time. Please remember that the gowning area (on both sides) is a transit area and the main bottleneck regarding usage of the cleanroom. Therefore try to minimize the time you stay in this area, be swift in your gowning procedure, do not talk with other people unless absolutely necessary while being in the gowning area. Be considerate when you pass people in the corridor, step to the side, hold your breath for the moment passing. Wait outside the gowning area until it is your turn and the waiting zone inside is vacant.

When using glasses, wipe them down with alcohol. Should you have accidentally touched yourself in the face with gloved hands, clean your gloved hands with alcohol before you touch anything else and change gloves in the gowning area.

You will observe that we installed measures ensuring that the cleanroom suites are hung with a distance, and the cleanroom hood is placed separately in the room above your shoes. Please observe these arrangements and make sure that your cleanroom suit does not touch any other suit already hanging there.

Gowning being a major bottleneck, we have decided that you should leave the cleanroom immediately through the nearest exit in case of alarm. Do so, also in case of mild evacuation (ventilation alarm). Proceed as if it would be an immediate evacuation (hard evacuation) and proceed (still in your cleanroom suit) immediately to our collection and gathering area in front of building 358. Stay there until a Nanolab staff member will give you further instruction. Remember to keep distance, also in this situation.

A small video, showing how to enter the cleanroom, explaining the new gowning rules is available in LabManager. We are trying hard to provide a safe environment that allows as many users as possible to their work and conduct their research. Please help us by being patient, considerate and understanding and thereby contribute to an environment where we all can achieve what we set out to achieve despite this difficult situation.

Laboratories 1. Floor building 346:

Scientists from different research groups use the research laboratories. In these times, it is a logistical challenge to regulate the usage of such a facility. We are in the process of optimizing the usage according to two main criteria:

- 1) Minimize the risk of virus contamination
- 2) Maximize throughput

To ensure compliance with all rules and recommendations of the health authorities, we have defined a number of rules and restrictions adapted to our environment. Please read these rules carefully. Not complying with these rules can result in a high risk of contaminating you and other users of the labs. If you have doubts and questions, please

come forward with them (preferably to Stephan or Majken) and if you see behavior that will risk contamination please tell us and/or remind users in a friendly way.

If you are a new user of the Labs in building 346 it is absolutely necessary, that you receive the safety instructions by Majken to among others familiarize yourself with the alarm systems (sounds) and that you are always aware of the route to the nearest emergency exit. The building has installed several highly toxic gas supply systems and it is therefore of paramount importance that you are familiar with emergency procedures. Be sure that you have read and understood the brochure about working in bldg. 346. This brochure is available at the reception in building 347.

Part 1: Booking Rules

The laboratories are divided in different zones, see schematics below. There are the following restrictions:

- Wet chemistry lab (145): Maximum 4 users. Each of the 3 work zones A,B,C can be booked separately and used by maximum 1 person; the flexible zone D can't be booked but used by maximum 1 person and only for short activities such as dishwasher loading/unloading or weighing samples. If you need to do real sample preparations or experimental activities, book one of the other zones.
- PHOENEEX lab (151): Maximum 3 users. Each of the 2 work zones E,F can be booked separately and used by maximum 1 person; the flexible zone G can't be booked but used by maximum 1 person for short activities such as plasma treatment.
- 3Dprinting/polisher lab (155): Maximum 1 user. The lab can only be booked as a single zone (zone H).

Please coordinate bookings with the other main users of the respective zones and update the Google calendar <https://calendar.google.com/calendar/b/2/r/week/2020/6/4> ; user name researchlabs346@gmail.com ; login "Building346". Respect the booking times, but talk to each other if you need more time on the day or want to switch bookings. If you booked a time slot, but have periods where you don't have to be physically present (waiting periods), then leave the laboratory and wait in the office instead. In that case, other users can use the zone **after agreement** with the persons that booked the time slot. If possible, book half/full days and avoid short time slots in the middle of the days blocking the access for others.

Wet chemistry research Lab - 346/145

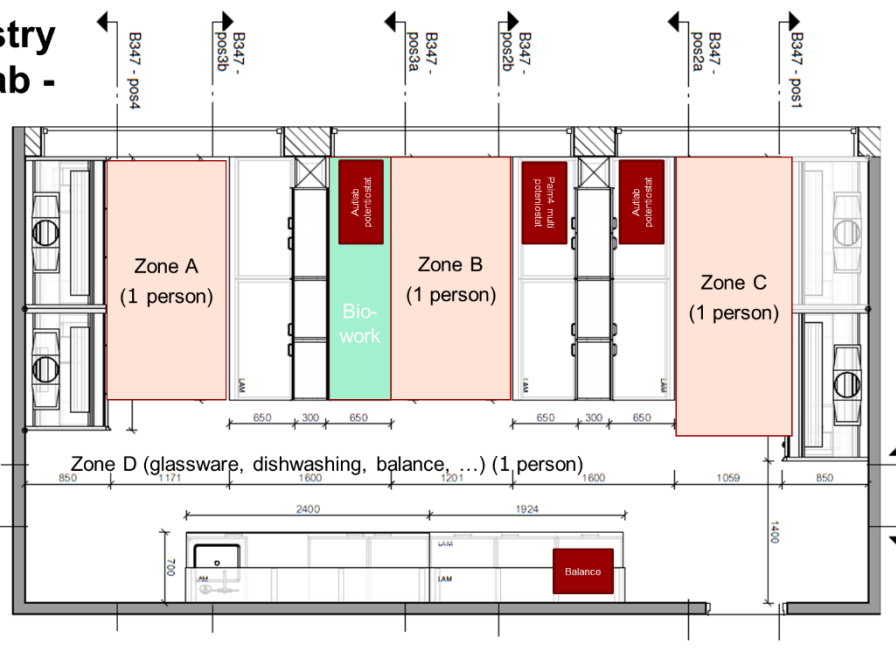
Total maximum 4 persons

Zone A: 1 person
2 fumehoods

Zone B: 1 person
Autolab potentiostat
Palm4 multi potentiostat

Zone C: 1 person
Autolab potentiostat

Zone D: 1 person
only short activities or transit



PHOENEEX Lab – 346/151

Total maximum 3
persons

Zone E: 1 person

Laser writer

Probe station

BMF 3D printer

Zone F: 1 person

Furnaces

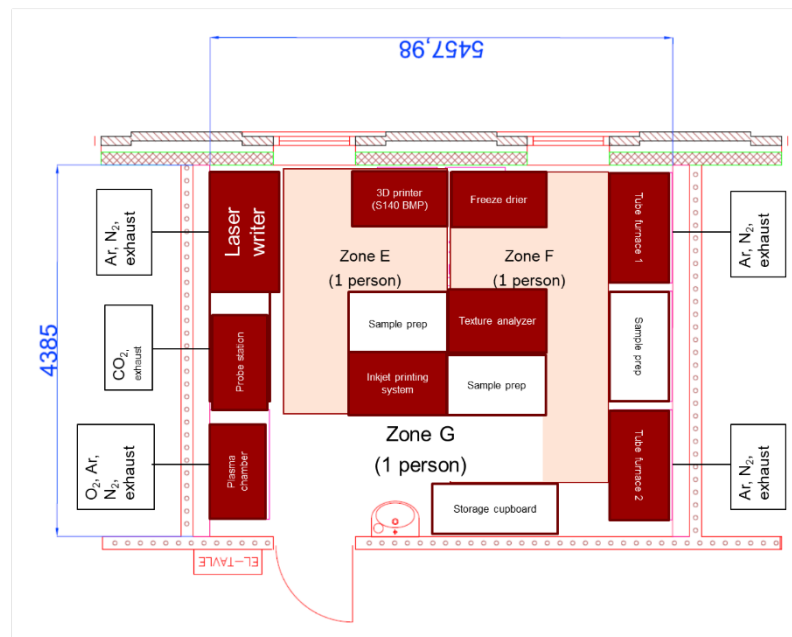
Texture analyzer

Freeze drier

Zone G: 1 person

Plasma chamber

Inkjet printer



Part 2: Safety rules – rules to minimize risk of infection

Explicit rules on how to minimize the risk of infection are given here. Please note that all the general rules and guidelines about good laboratory practice are still valid. **If you are ill or have ANY symptoms of the COVID-19 illness you are not to be in the workplace.** If you get symptoms of illness while being at work, then go home.

1. Entering the laboratories

- Bring as few personal belongings as possible into building 346. Use your office instead for storing bags or leave them in the hallway outside the lab.
- If you have long hair, put it up
- Wash your hands in the wash rooms
- On the small table on the first floor in 346 outside the labs there is hand sanitizer; disinfect your hands
- On the same table there is 70% ethanol. If you need to bring your laptop, mobile phone, pens or other personal items, clean them with ethanol before entering the lab
- Put on gloves if you are going to work in the wet chemistry lab, they should be available on the same table
- Put on your lab coat stored on the hangers outside the lab
- Enter the laboratory
- Put on safety glasses. Safety glasses are disinfected with 70% ethanol before use
- Before starting your experiments clean the workspace with 70% ethanol

2. Working in the laboratories

- Only 1-2 persons allowed in each zone, see booking rules and schematics above
- Gloves and face mask are mandatory in the labs at all times. Do not touch your face with your gloves. If you do so, change to new ones.
- If you use the fume hood or the balance, clean the shields/cover with 70% ethanol afterwards
- Maintain at least 2 meter physical distance to other people in the building
- Communicate with other users in the lab in order to avoid misunderstandings

3. Leaving the laboratories

- After completion of your experiments and leaving for the day, clean the workspace with 70% ethanol
- If you are the last user, clean surfaces in the shared workspace (e.g. Zone D) with 70% ethanol
- Keep the laboratory as tidy as possible, this is now even more important than usual
- Take off lab coat and safety glasses
- Leave the laboratory

- Take off gloves and throw them in the trash bin
- Wash hands with soap and finish using hand sanitizer at the exit

DTU Nanolab's research laboratories on the 1. floor in 346, are laboratories which are predominantly reserved to Nanolab staff and are not bookable in LabManager. It is therefore strictly necessary that you coordinate the usage of these labs with the main user group. For the labs in building 346, 1. floor please coordinate usage with Stephan Keller.

Dicer room 1. Floor 346:

- Only one user, use gloves at all times. Always use facemasks.

Basement building 346:

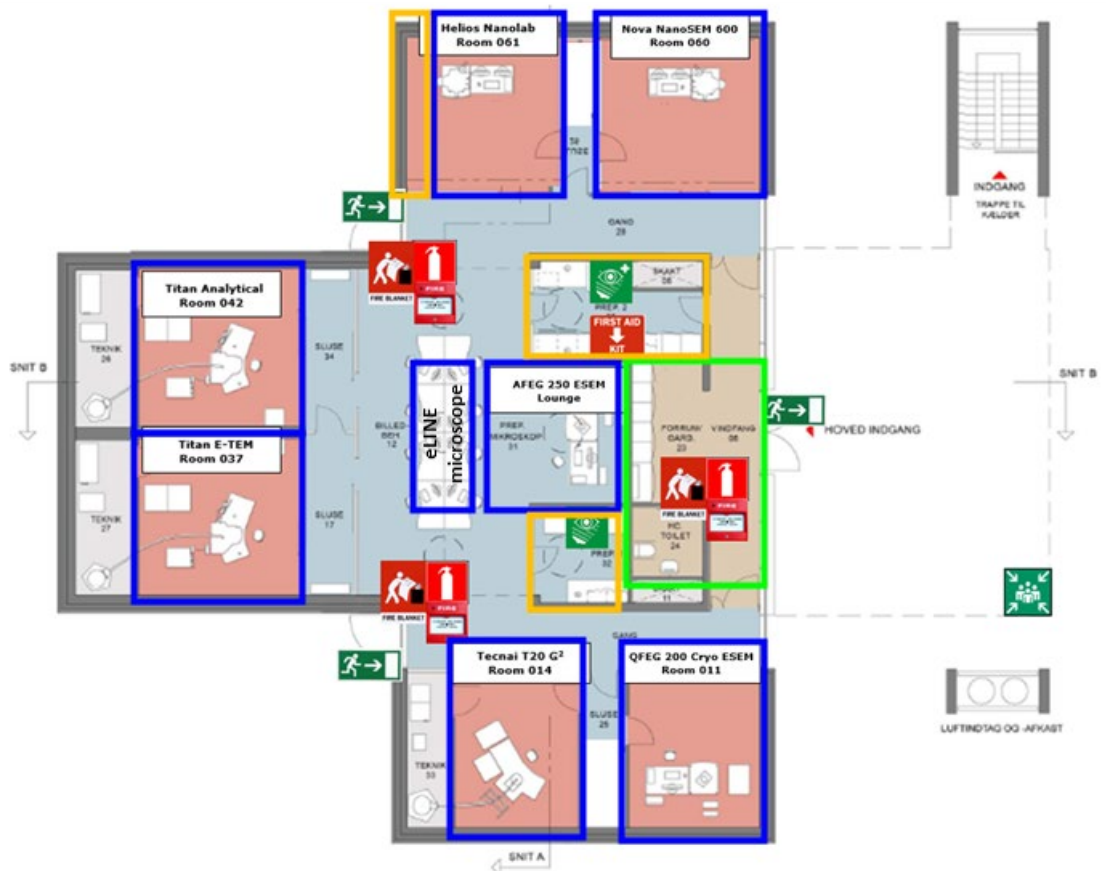
- Max 2 persons per room. Always use gloves and if more than one person in the room, use facemask at any time also when sitting in front of the tool.
- Bring as few personal belongings as possible into the room.

Packlab building 347:

- Only two persons per room, facemask required at all times.
- You have to book packlab presence in labmanager. Max 2 persons are allowed per room.

Building 314 and 307:

Building 314:



General rules:

- Only 1 person is allowed to work in each electron microscope room and prep lab.
- Maintain at least 2 meters physical distance to other people in the building.
- Wearing a mask or face shield is mandatory whenever you are moving around in the building (it's not needed when you are sitting at the instrument).
- Communicate with other users in the lab in order to avoid misunderstandings.

1. Entering building 314

1. Wash hands with soap in the bathroom
2. Use hand sanitizer found at the entrance.
3. Clean sample box with 70% ethanol

2. In the Prep lab

1. 1 person at a time is allowed in the prep lab.
2. Be aware that most users have to use the prep lab to some extent. Be quick about your business without rushing.
3. Communicate when you see other people needing the prep lab in order to maintain physical distance.
4. **Before** starting to work, clean the workstation with 70% ethanol which can be found in the middle area.
5. **After** finishing the work, clean the workstation with 70% ethanol which can be found in the middle area.

3. At microscope

Starting your experiment

1. Clean workstation and binoculars (if present) with 70 % ethanol which can be found in the middle area
2. Work on your experiment

Finishing your experiment:

1. Transfer data to personal network storage
2. Clean workstation and binoculars (if present) with 70 % ethanol which can be found in the middle area

4. After using the restroom

1. Wash hands with soap and finish using hand sanitizer

5. Exiting building 314

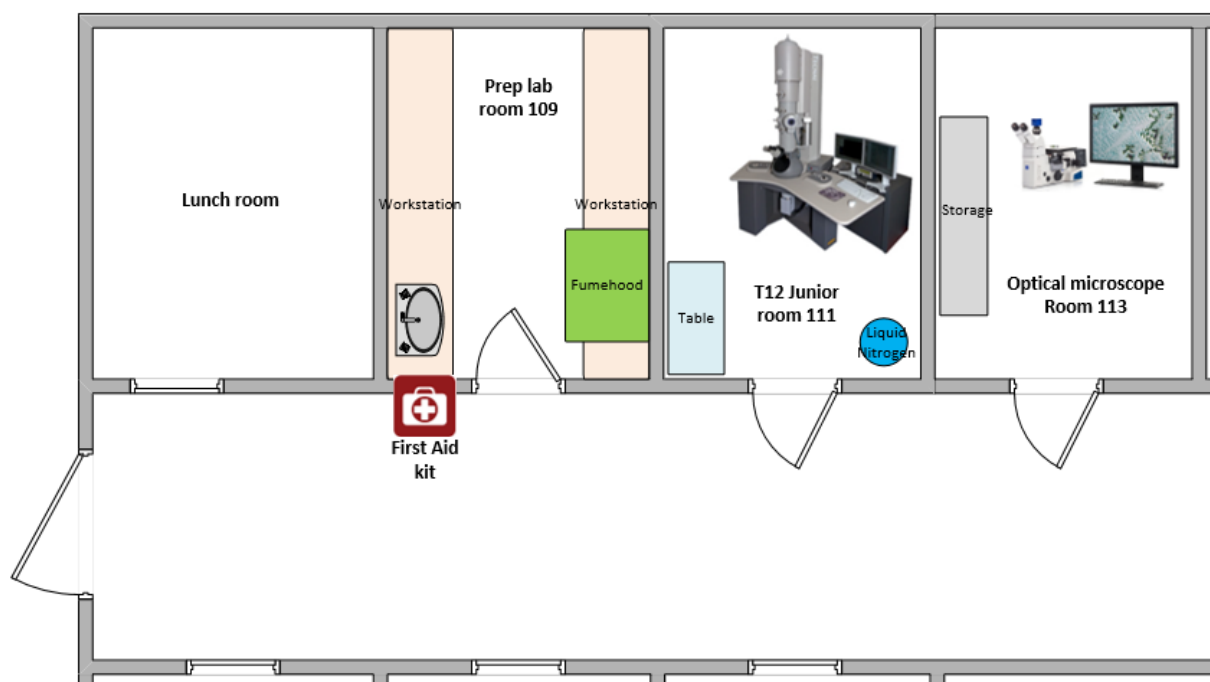
1. Clean your box and tools with 70% ethanol
2. Wash hands with soap and finish using hand sanitizer at the exit

6. Support

1. Use the Teams channel for the microscope to ask for help/support online (you will be added to the respective Teams channels, when permitted access to 314)

Building 307:

Prep lab room 109, T12 Junior room 111 and room 113



General rules:

Only 1 person is allowed to work in the prep lab and microscope rooms.

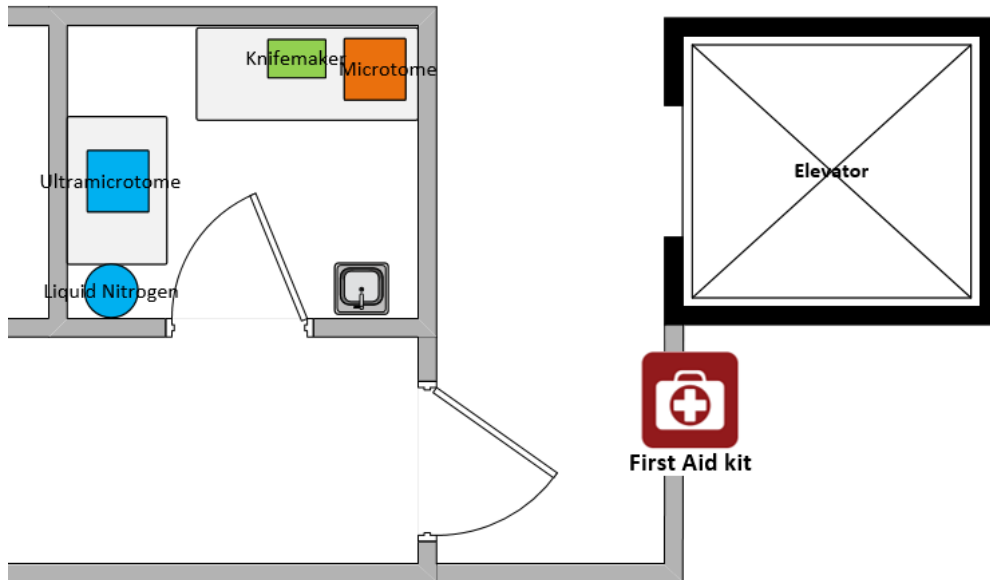
The procedure is as follows:

1. Enter prep lab room 109
2. Wash hands with soap and finish with hand sanitizer
3. Disinfect personal belonging (sample box, tools) with 70% ethanol

4. **Point 1-4 applies to room 109, room 111 and room 113**
5. **Before** starting to work, clean the workstation with 70% ethanol
6. **After** finishing the work, clean the workstation with 70% ethanol
7. Wash hands with soap and finish with hand sanitze in room 109

Building 307:

Ultramicrotome basement room 906



General rules:

Only 1 person is allowed to work in the ultramicrotome room.

The procedure is as follows:

1. Enter ultramicrotome room
2. Wash hands with soap and finish with hand sanitizer
3. Disinfect personal belonging (sample box, tools) with 70% ethanol
4. **Before** starting experiment, clean workstation with 70% ethanol
5. **After** finishing experiment, clean workstation with 70% ethanol
6. Dispose face mask (if used) in trash can
7. Wash hands with soap and finish with hand sanitizer

General behavior in DTU Nanolab:

Offices:

- You can work only one person in the small offices.
- Maintain distance, e.g. move your desks.
- Be sure to tidy up for cleaning.
- Help out sanitizing - e.g. door handles, light switches, taps, coffee makers and copiers.
- Start the day with good hand hygiene. Be sure to wash your hands or use hand sanitizer after arriving at work.
- Sanitize your cell phone before sharing it with others.
- Finish your workday by cleaning your workstation with cleaning wipes, alcohol or regular cleaning products.
- Pay particular attention to good hygiene when visiting the toilet.
- Keep yourself informed about the CoVID-19 situation and minimize possible spread. Please follow the rules written on the posters from the Danish Health Authorities.
- Avoid shouting or singing, in all cases where it is difficult to maintain 2 meter distance e.g. if you need to discuss data, results or problems etc. in front of a computer screen with a colleague, wear a facemask.
- You have to work from home if your presence is not required or relevant. Please write in the absence calendar and add a phone number where to get hold of you.

Eating:

- To comply with distance requirements and to minimize the spread of infection in common areas, you have to observe the max occupancy of the respective rooms at all times. Eat in the office, or if necessary, eat in turns. No gatherings beyond 5 persons no matter the size of the room and its max capacity.
- Remember to maintain distance also when using the lunch tables outside.