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Category NGI -» Infrastructure -» Premises

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Clean Rooms

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Clean Rooms

1. Purpose
The purpose of this document is to provide instructions on how to clean and work in the clean rooms.

2. Scope
To cover all tasks of the person responsible for the clean rooms and all information needed for a license holder to enter into, exit, clean and work in the clean rooms of the Genomics Facility at SciLifelab, NGI, Stockholm.

3. Responsibilities and authorities
Anyone who has a valid license for work in the clean rooms is authorised and responsible to follow the procedures described in this document. To be able to get a license, training needs to be performed together with a license holder. After that contact should be made with the person responsible for the clean rooms, who will go through the rules of using the clean rooms and issue a license. For information regarding the person(s) responsible see the annual *1360 List of instruments, methods, systems and premises in the accredited operations.*

The person responsible for the clean rooms has the responsibility of issuing licenses, making license controls and the cleaning list for biweekly cleaning (document *1359 Cleaning list for clean rooms*).

4. Description
The clean rooms (A3711, A3730) are entered via an airlock (A3710) and are intended for Pre-PCR work with RNA and DNA samples as well as reagents.

Clean room license is only for personnel working at SciLifeLab alfa floor 3, or personnel directly coupled to research groups at this floor. Any potential external users, especially those that do not fulfill that criteria, are to contact the Team leader lab for experimental in Genomics Production for discussions.

4.1 General rules and lab safety
The rules for the clean rooms are intended to protect us, the samples and the reagents from various types of nucleic acid and nuclease contamination. This includes PCR products from outside the rooms, cross-contamination of DNA or RNA samples, adaptors as well as DNA from our own bodies e.g. hand sweat and dandruff.

- It is important that gloves, lab coats and lab shoes are worn at all times when working in the clean rooms. Change gloves often.
- Transfer of equipment and reagents between the clean rooms should be avoided.
- Amplified DNA is not allowed in any of the clean rooms.
- Phones with headphones may be used but never touch your phone with gloved hands, go to the airlock and remove gloves first.
- The floor is regarded as contaminated area. Never place anything on the floor. If something is dropped it must be thoroughly cleaned before continuing.
- A risk assessment needs to be written before entering a new chemical into the clean rooms. Read the risk assessments relevant to the intended method before starting work in the clean rooms.
- All work with harmful solvents must be performed in the fume hood in the RNA lab. Nucleic acid extraction of any kind and from any material is to be performed in the fume hood and the front glass should be kept in the lowest position possible at all times.
- Reserve adequate time for the lab work so that unnecessary stress can be avoided.
- Maximum number of peoples at the same time in the rooms are 6 people in A3711 and 4 people in A3730.

If there are any questions or if anything goes wrong, please contact the people responsible for the clean rooms.

4.2 Enter into, exit and work in the clean rooms

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4.2.1 General instructions for work in the clean rooms

- All laboratory work except instrument handling is to be performed at the bench-top hoods. The hood Jalta as well as its pipettes are reserved for working with RNA. The hood and pipette rack are marked with RNA work only. The hood Lima is primarily for working with RNA but working with DNA is allowed.
- Clean the hood and surrounding working areas with DNA-Erase and DAX Ytdesinfektion (or 70% ethanol) before and after use. Start the hood cleaning with the front, continue with the sides, the back and then the working surface. Also clean the outside of the glass.
- Clean all items (pipettes, tip boxes, racks, tubes, plates etc.) with DAX Ytdesinfektion (or 70% ethanol) before and after using them in the hood.
- Empty your waste bin and bring out the trash after finishing your lab work.
- Refill disposable articles (gloves, tips etc.).
- Empty the waste for plastic items and the trashcan in the airlock when needed.
- Replace the yellow risk waste when 75% full.
- "The yellow bins shall only be labelled with the stickers Stickande/Skärande smittförande avfall (sharps and infectious waste). Note that Stena does not accept chemical labelling on the yellow bins."

4.2.2 The airlock

The airlock is shared between the clean rooms belonging to the platform and a cell lab belonging to a research group. The right hand side of the airlock is used for the clean room, thus everything going in or out of the clean rooms (including reagents and consumables as well as lab coats and shoes) should be placed on the bench or shelves on this side. The left hand side is used for the cell lab, so nothing belonging to the clean room should be placed or stored on this side. No containers/tubes/plates should be opened in the airlock.

Before entering the airlock, remove and leave outdoor shoes outside. Do not enter wearing lab coats from other labs. Before opening the airlock door make sure that the doors to the clean rooms and the cell lab are closed as only one of the doors to the airlock should be open at any time. If not, alert the personnel in the airlock, clean room or cell lab to close the door completely.

Once in the airlock put on lab shoes and a lab coat. Put on appropriate size gloves. Before entering the clean room, make sure that the doors to the corridor and cell lab are closed.

When leaving the airlock to the corridor, remove gloves and dispose them in the trashcan in the airlock. Remove the lab coat and hang it on the hooks dedicated for lab coats and **place the shoes on the shoe rack**. Exit the airlock.

4.2.3 Refilling RNase and DNase-free water, bringing ice and disposable items into the clean rooms

Collect the container to be filled with RNAse and DNAse–free water and cover with aluminum foil before taking it out from the room. Refill with RNAse and DNAse-free MilliQ water. When back in the airlock dispose the aluminum foil and when you are done with your work recycle the aluminium in the trashcans in the recycling room. Date the container with date of refilling and sign with signature (only NGI staff) or full name. Do not use MiliQ water > 7 days after the container was refilled.

Before bringing ice to any of the clean rooms, collect disposable bags from respective room. When you have filled the bags with ice and are back in the room, the bags are emptied into containers specifically meant for the purpose. These containers should NOT be removed from the rooms. Dispose of the bags to the trashcans in the room.

Laboratory equipment and reagents used in the clean rooms should to be delivered in unbroken packages. Clean the packages with DAX Ytdesinfektion (or 70% ethanol) after entering the airlock. Store the clean packages or unpack the contents in the cupboards in the airlock. The cupboards in the airlock are for the storage of disposable items for the clean rooms but it is NOT a storage room for any reagent or original delivery boxes. Dispose of the package accordingly.

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4.3 Biweekly cleaning of a clean rooms

4.3.1 Biweekly cleaning of clean rooms

Change gloves several times during this procedure.

- Clean the bench-tops, tops of freezers/refrigerators/hoods, sinks and chairs with DNA-Erase and DAX Ytdesinfektion (or 70% ethanol). Wipe from the top towards the bottom and then from back towards yourself.
- Clean the outer surfaces of laboratory equipment with DAX Ytdesinfektion (or 70% ethanol).
- Empty waste and refill disposable articles (gloves, tips etc.) as needed.
- Sweep the floor with the room designated mop, do not use the same mop for all the rooms. Use the pre-wetted covers and start from the back of the room and work towards the exit. Change the mop cover often.
- Change the sticky floor covers next to the entrance of the clean rooms.

When the cleaning of the clean rooms is done, continue to clean the airlock. See ***4.3.2 Biweekly cleaning of airlock.***

4.3.2 Biweekly cleaning of airlock

- Clean the bench-tops, washbasin and shoe stand with DNA-Erase and DAX Ytdesinfektion (or 70% ethanol). Wipe from the top towards the bottom and then from back towards yourself.
- Empty waste and and refill disposable articles (gloves, tips etc.) in the storage cupboard. Check the list on the cupboard for the amount of items that need to be refilled.
- Replace the yellow risk waste when 75% full.
- Empty the trashcan and the plastic waste container.
- Dispose of used lab coats into the laundry and replace them with clean ones.
- Sweep the floor with the room designated mop. Use the pre-wetted covers and start from the back of the room and work towards the door that leads to the corridor. Change the mop cover if needed.
- Fill in your signature to the list on the door.
- Send email to the next cleaning crew for a reminder.

4.5 Ethanol storage in the clean rooms

- No ethanol should be stored in the airlock. All ethanol and DAX Ytdesinfektion bottles in the clean room should be stored in the fume hood in the RNA room except for small dispensing bottles used when cleaning hoods and benches.
- No more than one bottle of 96% (or 99%) and one bottle of DAX Ytdesinfektion (or 70% ethanol) should be stored in the clean rooms except for the small dispensing bottles used for cleaning hoods and benches.
- Maximum allowed number of small dispensing bottles in the clean rooms are 2 bottles in the A3730 room and 3 bottles in A3711.

4.6 Environmental conditions

As there are no instruments in the clean rooms that are particularly sensitive regarding ambient temperature and/or humidity this is not monitored. The lab is very frequently used by laboratory staff (except on weekends) and in case of any staff experiencing extreme temperatures (hot or cold) or extreme humidity a team leader lab or facility manager should be contacted and a deviation started. Read more in document *1009 Deviations and User feedback.*

SciLifeLab admin can be contacted by making a ticket in their support system: http://intranet.scilifelab.se/support/.

5. External references

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DOC 1359:11 Cleaning list for lab areas
Related document

DOC 1040:13 Premises used at NGI Stockholm
Related document

DOC 1360:14 List of Instruments, Methods, Systems and Premises in the Accredited Operations
Related document

DOC 1009:10 Deviations and User Feedback
Related document