

Standard operasjonsprosedyre: Working in DU-044: SOPF status

SOP no: 5-06

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WORKING IN DU-044: SOPF STATUS

1.0 PURPOSE

- 1.1 To tailor a SOP for housing immunosuppressed animals and other animals requiring housing under SOPF (specific opportunist and pathogen free) status in the MDU.
- 1.2 To ensure that only trained personnel have access to DU-044 and DU-050.
- 1.3 To maintain SOPF status in DU-044 and DU-050.

2.0 DIVISION OF RESPONSIBILITY

- 2.1 KPM provides card access to DU-044 and DU-050 to users who are permitted access.
- 2.2 KPM is responsible for making sure that all those with access to DU-044 and DU-050 are given sufficient training in the Department's routine procedures.
- 2.3 Everyone who works in or enters DU-044 and DU-050 must comply with this SOP and other relevant SOPs.
- 2.4 KPM is responsible for keeping the routine procedures and SOPs up to date.

3.0 PROCEDURE

- 3.1 Go directly from the clean corridor to DU-044. You must not enter DU-044 after being in any other animal room/ laboratory/ dirty corridor in MDU.
- 3.2 For those entering the barrier as well as DU-044 on the same day, you should enter the barrier before DU-044.
- 3.3 All equipment taken into DU-044 and DU-050 must be properly sterilized or disinfected. The wheels on trolleys etc. must be disinfected with Virkon at the entrance to DU-044, before moving the trolley into the room (Virkon does not have to work for ten minutes in this case).
- 3.4 Bring all the equipment you need that day in order to reduce the number of times you have to enter and exit the area. Any equipment that are to be sterilized need to be informed at least two days in advance to KPM.
- 3.5 Equipment that are to enter and exit DU-044 the same day, like medium for organ transport, can be brought to DU-044 by users through the small sluice by the reception area. Virkon the item properly and let it set for 10 minutes. If the item is inside a non-sterile bag or box, make sure to Virkon both inside as well as outside of the bag/box.



- 3.6 To pick up the item from the small sluice enter the facility and head left through the double doors. Pick up the item and head for DU-044. You are not allowed to enter DU-007 or dirty corridor before entering DU-044.
- 3.7 Leave your shoes in the corridor outside DU-044, to the left of the door. Put on new shoes when entering the room.
- 3.8 Discard gloves when you enter DU-044 and put on long inner gloves covering sleeves (usually purple).
- 3.9 Outer gloves (usually shorter blue) must be put on before handling any cages and animals. Dirty gloves must be discarded and new ones put on before handling clean equipment. Use the inner pair to handle door handles and computers etc.
- 3.10 When in contact with animals or dirty cages, you should wear a laboratory coat before exiting DU-044. If you prefer to wear a laboratory coat inside DU-044, this must be removed upon exiting DU-044. This is to prevent particles and allergens spreading to the clean corridor. Laboratory coats can be found in a box inside DU044.
- 3.11 If there is no available coats in the box or room, you can in this case of emergency enter the clean corridor, then exit through the dirty corridor. Stay as short as possible in the clean corridor to avoid contamination. You can not return to DU-044 after entering dirty corridor.
- 3.12 To prevent the spread of potential infection between racks, each rack must be handled as a separate entity. This rule also applies when it comes to carrying out all technical tasks, such as breeding and biopsies.
- 3.13 The LAF bench and other work surfaces must be cleaned with soapy water and disinfected with 70% ethanol after handling cages on the different racks. This also applies to technical procedures.
- 3.14 Exercise care when using gloves: do not touch your glasses, scratch your face or handle your telephone etc. with the same gloves as you use to handle animals and equipment. It is better to change gloves once too many, rather than once too few times.
- 3.15 Use the disinfected trolley inside DU-044 to transport animals between DU-044 and DU-050. After use clean the trolley with soap and ethanol. This trolley should never leave DU-044 and DU-050 unless it is to be changed with a new autoclaved trolley.
- 3.16 The disinfected trolley can be used for temporarily storing dirty equipment. The KPM staff is responsible for transporting the dirty equipment to the washery the same day or the following day.
- 3.17 If you are in need of an extra trolley, to for example bring cages outside of DU-044, you can find a trolley in the beginning of the clean corridor. Use Virkon that is hanging by the entrance to the dirty corridor, make sure to spray surfaces and wheels before entering.
- 3.18 It is not allowed to work with the animals housed in DU-044 outside of DU-044 and DU-050. The only time animals can return to DU-044, is when animals are sent to Rikshospitalet for irradiation (see 3.22-3.24).
- 3.19 Use the safety bench class 2 (see picture 1), if possible, when handling animals in DU-050. Use the extractor arm fume hood (see picture 2) when working with animals on the workbench. The fume hood (see picture 3) must be used when working with hazardous chemicals. Clean with soapy water and disinfect with 70 % ethanol all work surfaces and contaminated equipment after use.
- 3.20 For handling of NSG mice or Nude mice (immunocompromised mice) see attachment 1.

- 3.21 When you leave DU-044, exit through the clean corridor. If you have worn a coat and it is not to be reused, place it in the bag for dirty laundry inside DU-044. Disinfect inner gloves with 70% ethanol. Change your shoes upon leaving.
- 3.22 The unpacking of imported animals must take place in DU-044. The room manager in DU-044 cannot enter DU-007 to pick up animals - this must be coordinated with other staff. Spray the transport cage one extra time with Virkon right outside of DU-044 before moving it into the room. Virkon must be left to work for 10 minutes in this case.
- 3.23 Animals exported to Rikshospitalet for irradiation, if returned to DU-044, must be prepared in DU-044.
- 3.24 Upon returning from Rikshospitalet, the animals must be handled like imported animals. The inner radiation disc (picture 4) must be disinfected with Virkon in DU-007 and left to work for 30 minutes. The user cannot enter DU-007 to deliver or pick up animals if returning to DU-044 this must be coordinated with the staff at KPM. If returned to DU-044, the disc must be disinfected one extra time with Virkon right outside of DU-044 and left to work for ten minutes before moving animals into the room. Unpack the animals: The disc must be handled as dirty. Do not handle animals, animal cage or other equipment with gloves that has touched the disc! Prepare the animal cage with new, clean gloves. Top off food and add a tunnel/ igloo. Leave the lid off. Open disc. Change gloves and move animals to the new cage. Give the animals water. Place the disc in a bag. Discard gloves. Wash the bench with soapy water and disinfect with Prochlor. Place the disc in DU-007 at the close of the working day to return to the user.
- 3.25 The room manager must ensure that laboratory coats are taken to be laundered every Friday.
- 3.26 Disinfect door handles and door openers with 70% ethanol daily, including those by the entrance to DU-044.
- 3.27 The LAF bench must be disinfected with Prochlor at the close of the working day.
- 3.28 Empty the freezer of cadavers inside DU-050 every day. Bring the cadavers to the big freezer in the dirty corridor.
- 3.29 Bring the dirty equipment out through the clean corridor and place it on the dirty side of the washery (KPM staff).

4.0 HEALTH, SAFETY AND ENVIRONMENT (HSE)

- 4.1 Everyone using the facility must have adequate training to ensure the use of proper clothing and PPE.
- 4.2 Everyone must have undergone sufficient training in order to ensure that the animals are handled properly.
- 4.3 Work must be carried out on a ventilated bench or LAF bench in order to minimise exposure to allergens and infectious agents and to limit the spread of such agents to the surroundings.
- 4.4 All those handling chemicals must have undergone sufficient training and have access to the proper PPE in order to ensure that the chemicals are used safely.
- 4.5 Everyone must be familiar with the Eco Archive and the safety data sheets for the chemicals to which they may be exposed.

Rely+ On Virkon	CAS no	Pictogram	Hazard statements	Precautionary statements
Pentapotassium bis(peroxymonosulphate)	70693-62-8		H315 Causes skin irritation	P102 Keep out of the reach of children. P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
bis(sulphate)	6915-15-7			
Malic acid	5329-14-6		H318 Causes serious eye damage.	P262 Must not come into contact with the eyes, skin or clothing.
Sulphamidic acid	25155-30-0		H335 May cause respiratory irritation	P280 Wear protective gloves/protective clothing/eye protection/face protection.
Sodium dodecylbenzenesulfonate	7727-21-1		H412 Harmful to aquatic life with long-lasting effects.	P303+P361+P353 IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
Dipotassium peroxodisulphate			EUH208 Contains dipotassium peroxodisulphate. May produce an allergic reaction.	P305+P351+P338 IF IN EYES: Rinse carefully with water for several minutes. Remove contact lenses if used and easy to do. Continue rinsing. P311 Call a POISON CENTRE or doctor/physician. P501 Dispose of contents/container in accordance with local regulations.

Contac Prochlor	CAS no	Hazard statements	First aid
Calcium Hypochlorite	7778-54-3	H272 Oxidiser - may intensify fire H302 Harmful if swallowed H314 Causes severe skin burns and eye damage H400 Very toxic to aquatic life EUH031 Contact with acids will generate toxic gas	Skin contact: Wash immediately with plenty of soap and water. Eye contact: Rinse eye under running water for 15 minutes. Contact a doctor. Ingestion: Rinse mouth with water. Inhalation: Move to fresh air after inhalation of vapours. Contact a doctor.

Kemetyl technical ethanol 96%	CAS no	Pictogram	Hazard statements	Precautionary statements
Ethanol	64-17-5	 	H225 Highly flammable liquid and vapour H319 Causes serious eye irritation	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P370 + P378 In case of fire: Extinguish with carbon dioxide (CO2), foam, powder or water.

5.0 EQUIPMENT AND MAINTENANCE

- 5.1 Shoes, laboratory coat, gloves
- 5.2 Laf bench
- 5.3 Safety bench class 2
- 5.4 Extractor arm fume hood
- 5.5 Fume hood
- 5.6 Irradiation disc with box
- 5.7 The premises must be cleaned in compliance with current procedures.
- 5.8 Trolleys must be sent to the washery to be cleaned on a regular basis and the wheel fixtures should be sprayed with silicone spray as and when needed.

6.0 HISTORY AND EDITING

- 6.1 Created 02.02.2021 (Frøydis Kilmer)
- 6.2 16.02.2021: Export and import of animals for irradiation, entry to DU-044 before the Barrier (Frøydis Kilmer)
- 6.3 27.04.2022: Added sentences about use of trolleys and how to bring equipment inside by users. (Helene Tandberg)
- 6.4 21.07.2022: added sentence about NSG mice and its attachment.
- 6.5 Revised 13.07.23 no new changes. (Helene Tandberg)

7.0 REFERENCES

- 7.1



Picture 1: Safety cabinet Class 2



Picture 2: Extractor arm fume hood



Picture 3: Fume hood



Picture 4: Irradiation disc

Attachment 1 handling NSG mice:

Handling of NSG mice in KPM

General information

- Housing always in individually ventilated cages designed to minimize the spread of airborne particles between cages.
- Change cages weekly to prevent the accumulation of commensal organisms that might infect NSG.
- Change water 2 times a week.

Handling techniques

1. If there are immunocompromised animals on the rack, these cages should be disconnected from ventilation by careful loosen the cage before disconnecting the rack. These should be put back in place after the rack is reconnected.
2. Immunocompromised animals are changed first.
3. Change cages under a laminar flow hood.
4. Disinfect laminar flow hood before use.
5. The cages are "dirty" on the outside, so gloves must be changed after the lid is opened and before touching the animals.
6. Handle mice with gloved hands that have been sanitized with ethanol.
7. Change gloves before the lid of the new cage is closed.
8. Disinfect the hood in between changes with 70% ethanol.
9. The bench is washed with soapy water and disinfected with 70% ethanol before changing the rest of the cages on the rack.
10. Dirty equipment should be sent to the wash hall.