

Standard operasjonsprosedyre: Importing user equipment to the MDU

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IMPORTING USER EQUIPMENT TO THE MDU

1.0 PURPOSE

- 1.1 To reduce the risk of importing unwanted microorganisms to KPM.
- 1.2 To ensure that all equipment imported to KPM is handled in a way that will maintain the safety of personnel, animals and the environment.
- 1.3 To ensure that equipment is not damaged during import.
- 1.4 To ensure that users, when properly trained, can import smaller amounts of equipment.

2.0 DIVISION OF RESPONSIBILITY

- 2.1 KPM's staff must ensure that everything that is brought into KPM is sterilized/disinfected in accordance with KPM's guidelines.
- 2.2 Everyone must wear proper personal protective equipment (PPE).
- 2.3 KPM staff must have undergone proper training before attempting to sterilize/disinfect equipment.
- 2.4 Users are not allowed to import equipment unless proper training has been given by KPM. Smaller amounts of equipment can then be imported by the user.
- 2.5 KPM is responsible for importing larger and more bulky equipment. Importing larger equipment will incur an extra cost to the user. KPM must provide the user with a price estimate.
- 2.6 Users are required to keep themselves updated on the latest data sheets and user manuals and to provide relevant information to KPM regarding for example HSE. Users must ensure that all relevant information is given to KPM regarding how to safely handle and store equipment.
- 2.7 Users must ensure that any equipment imported to KPM can withstand the required sterilization/disinfection process.
- 2.8 KPM might not be able to sterilize user equipment during vacations and holidays. Notice of this will be sent to all KPM users by e-mail.
- 2.9 Users must enter (and remove) chemicals and pharmaceuticals in the Chemical Manager in Eco online.
- 2.10 Users must remove equipment belonging to the group that is no longer in use. All employees/affiliated staff and students are required to comply with the routines for correct waste disposal ([Hazardous waste management - Institute of Basic Medical Sciences \(uio.no\)](#)).



3.0 PROCEDURE


- 3.1 When submitting a FOTS application, the user must submit an HSE declaration and risk assessment for animal experiments to KPM when requested to do so. No other items than those approved by KPM can be imported into KPM.
- 3.2 The user has to ensure that all disposable equipment delivered to KPM is completely new, inside its sealed original package.
- 3.3 The user must deliver the equipment in one whole batch to KPM at least three working days before the equipment is needed. Everything must be clean before delivery. Equipment that can be autoclaved and fits in autoclave bags must be packed and sealed with autoclave tape.
- 3.4 The user must deliver the batch of equipment together with a notice stating the researcher's name, mobile phone number, the relevant lab number and the date when the equipment will be needed. The user should include any other information that may be important or relevant.
- 3.5 Everyone must wear proper (PPE): chemical resistant gloves covering sleeves, safety glasses, a facemask with a proper filter and a lab coat. KPM does not provide a proper mask for the personal use of the user when handling disinfectants. Make sure to bring your own mask and safety glasses.
- 3.6 The user must inform KPM about the type of sterilization/disinfection that is not suitable for any specific equipment delivered to KPM.
- 3.7 Equipment must be able to withstand either hydrogen peroxide (H_2O_2), Virkon, Prochlor, 70% ethanol or being autoclaved. See the flow charts in appendix 1.
- 3.8 **Autoclave:** equipment that can tolerate high temperatures, moisture and pressure can be sterilized in the autoclave.
- 3.9 **Vaporized/atomized hydrogen peroxide (H_2O_2):** vaporized/atomized H_2O_2 is used to sterilize items that cannot be autoclaved, is too bulky/large or cannot be sprayed with Virkon or Prochlor. Electronic items must be sterilized with vaporized H_2O_2 . KPM will use the H_2O_2 chamber or room DU-007 for this purpose. Only specially trained personnel can use DU-007 for sterilization.
- 3.10 **Virkon and Prochlor:** smaller, non-delicate items that can get wet can be disinfected with Virkon or Prochlor. Prochlor and Virkon are corrosive and items should be rinsed after disinfection. Virkon has to be left to work for at least 20 minutes. Virkon must be pink in colour. Prochlor has to be left to work for at least one minute.
- 3.11 **70% Ethanol:** 70% ethanol should only be used when this has been approved by KPM because it lacks the ability to kill certain microorganisms.
- 3.12 Users can use the hatch by the reception area or DU-007 to import equipment. All imported items must then be disinfected with Prochlor or Virkon.
- 3.13 Crushed ice can be found in the MDU. Users are not allowed to bring crushed ice in a Styrofoam container into the facility. A clean Styrofoam container must be kept inside the facility. Disinfected items can be transferred to the clean container in DU-007. Make sure to change gloves after handling the external container so as not to contaminate other equipment. The content can be transferred back to the external container upon exiting the facility. Make sure to clean and disinfect the clean container after use.
- 3.14 KPM does not provide dry ice or liquid nitrogen. Dry ice is provided by the Institute of Basic Medical Sciences (IMB) and can be found in a large container immediately outside the entrance to KPM. IMB


does not provide liquid nitrogen - users must acquire their own supplies of this. Users are not allowed to bring external containers with dry ice and liquid nitrogen into the facility. Containers for dry ice and liquid nitrogen can be found on the clean side in DU-007. Disinfected items can be transferred to the clean container in DU-007. Use proper PPE when handling liquid nitrogen and dry ice: a visor, cold tolerant gloves, apron and sturdy shoes. Make sure to change gloves after handling a container on the external side. The contents can be transferred back to the container on the dirty side of DU-007 upon exiting the facility. Make sure to clean and disinfect the clean container after use.

- 3.15 All equipment not locked away must be carefully marked with the name of the group. No personal equipment is to be stored on any work surface, unless this has been approved in advance by KPM. Equipment whose owner cannot be identified will be removed. KPM is not responsible for equipment that is unlabelled or placed outside an appropriate cabinet.
- 3.16 For the import of biological materials, see additional information in SOP 7-04 "Import and use of biological materials" on our [homepage](#).
- 3.17 All equipment must be handled according to the appropriate instruction manuals, SDSs and other guidelines and regulations.


4.0 HEALTH, SAFETY AND ENVIRONMENT (HSE)


- 4.1 Everyone must be properly trained before attempting to sterilize/disinfect equipment.
- 4.2 Everyone is responsible for using the proper PPE when sterilizing/disinfecting equipment: chemical resistant gloves covering sleeves, safety glasses, a facemask with a proper filter and a lab coat.
- 4.3 Rinse eyes thoroughly if disinfectant gets into the eyes. Remove clothes and shoes if you spill disinfectants. Rinse the skin thoroughly with water. Contact a doctor.
- 4.4 Evacuate yourself and others from the room if larger spills occur. If proper protective equipment is worn, soak up spills with paper and place in a dual bag. Close with a knot and discard as hazardous waste.
- 4.5 Call 113 in case of an emergency.
- 4.6 An HSE declaration and risk assessment for animal experiments must be submitted to KPM, when requested.
- 4.7 All chemicals and pharmaceuticals must be registered in Eco Online.
- 4.8 All chemicals must be stored and disposed of according to regulations.



Rely+ On Virkon	CAS no	Pictogram	Hazard statements	Precautionary statements
Pentapotassium bis(peroxymonosulphate) bis (sulphate)	70693-62-8		H315 Causes skin irritation H318 Causes serious eye damage.	P102 Keep out of the reach of children. P261 Avoid inhaling dust/fume/gas/mist/vapours /spray. P262 Must not come into contact with the eyes, skin or clothing.
Malic acid	6915-15-7			
	5329-14-6			

Sulphamidic acid			H335 May cause respiratory irritation	P280 Wear protective gloves/protective clothing/eye protection/face protection.
Sodium dodecylbenzenesulfonate	25155-30-0		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	7727-21-1		EUH208 Contains dipotassium peroxodisulphate. May trigger 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.

Contec 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(s) 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 (CO ₂), foam, powder or water.
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Hydrogen peroxide 35%	CAS no	Pictogram	Hazard statements	Precautionary statements
	7722-84-1	 	H271 May cause fire or explosion, strong oxidizer. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H332 Harmful if inhaled. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.	P280 Wear eye protection. P302 + P352 IF ON SKIN: wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: rinse carefully with water for several minutes. Remove contact lenses if used and easy to do. Continue rinsing. P313 Seek medical advice/ attention.

5.0 EQUIPMENT AND MAINTENANCE

- 5.1 PPE: Mask with a proper filter, safety glasses, chemical resistant gloves, laboratory coat, visor, apron, cold tolerant gloves, sturdy shoes
- 5.2 Styrofoam container
- 5.3 Container for dry ice and liquid nitrogen
- 5.4 Autoclave
- 5.5 Sterilization chamber and H₂O₂
- 5.6 Virkon
- 5.7 Prochlor
- 5.8 70% ethanol

6.0 HISTORY OF EDITING

- 6.1 This SOP was originally created in Norwegian 25.09.2012 by Katja E. Isaksen
- 6.2 05.10.2020 (Jorge Rodas Foeller, Frøydis Kilmer major updates).
- 6.3 August 2022 translated in Norwegian, and language wash of English version by Deborah Arnfinson
- 6.4 03.11.2022: adjusted the time for virkon to be able to work from 10 to 20 minutes.
- 6.5 Revised by Jorge Alberto Rodas Foeller 02.06.2023

7.0 REFERENCES

- 7.1 [Hazardous waste management - Institute of Basic Medical Sciences \(uio.no\)](https://uio.no)

Appendix 1: Flow charts

