

Standard operation procedure: Exportation of animals

SOP nbr: 11-01

Created: 09.03.2021

Revised: 21.09.2023

Valid to: 23.03.2026

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## EXPORTATION OF ANIMALS FROM MDU, KPME AND CONVETIONAL UNIT

### 1.0 PURPOSE

- 1.1 To ensure good communications between the involved parties when exporting animals.
- 1.2 To ensure that healthy animals of the correct type are sent to the recipient in such a way as to safeguard optimum animal welfare.
- 1.3 To ensure that the health status of the animals is maintained throughout the procedure.

### 2.0 DIVISION OF RESPONSIBILITY

- 2.1 The user contacts KPM when animals are to be exported. The user must communicate with the veterinary surgeon in charge/the recipient's PMSK and with KPM.
- 2.2 The PMSK consults the veterinary surgeon in charge, the user and the named recipient.
- 2.3 The PMSK is responsible for approving the exportation of animals from the Section of Comparative Medicine (KPM).
- 2.4 The PMSK prepares all the necessary documents for the despatch of the animals.
- 2.5 The user is responsible for organising transportation with an approved transport company. Transportation must be carried out in compliance with EU and Norwegian regulations (Export of animals/The Food Safety Authority).
- 2.6 The room manager, aided by the PMSK, is responsible for the preparation of the animals and the transportation crates. The room manager makes sure that the correct animals are sent.
- 2.7 The PMSK is responsible for the despatch of the prepared crates, communicates with the transport company and makes sure that all the necessary documents accompany the consignment.
- 2.8 All involved parties must at all times follow the currently valid export procedure.

### 3.0 PROCEDURE

- 3.1 The user contacts KPM when animals are to be exported. Prior to this, the user must have gathered information from the recipient and initiated communications between the involved parties: the user, KPM and the recipient. The recipient must have a named veterinary surgeon/PMSK.
- 3.2 The PMSK consults the veterinary surgeon in charge at KPM.
- 3.3 The PMSK sends the health certificates and health monitoring results pertaining to the relevant animals to the recipient. The exportation will be cancelled if the documentation does not meet the





recipient's required standards. The exportation procedure commences once written approval has been received from the recipient.

- 3.4 KPM, the user and the recipient agree on a date for exportation. The user enters the export request with the «Do date» in Science Linker (SL). If the time of despatch is known, this should be noted under «Description».
- 3.5 The PMSK prepares the necessary documents for the exportation of animals: a pro forma invoice, health certificates, health monitoring results and other documents, as agreed with the recipient.
- 3.6 On the day before exportation at the latest, the room manager inspects the animals and appraises their general condition (see attachment 1). Any deviations must be reported to the PMSK. Animals with shaved whiskers must not be sent, as absence of whiskers leads to impaired welfare during transport.
- 3.7 The PMSK evaluates the exportation with the help of the veterinary surgeon in charge. If they discover unacceptable deviations, the PMSK informs the room manager, the user and the recipient that exportation cannot take place.
- 3.8 The room manager prints out the export request from science linker and makes sure the earmarking matches the request. Inspects the animals 60 minutes before dispatch is due to commence using "checklist animal transport" (see attachment 3 on page 14). If their health condition is satisfactory the export procedure can start by packing the animals inside the animal rooms underneath the laf bench.
- 3.9 The room manager contacts the PMSK in order to plan the packing of the animals. If the animals' health condition is unsatisfactory, the room manager informs the PMSK and exportation is halted.
- 3.10 The room manager prepares the correct number and size of exportation crates. The animals are grouped according to the instructions on the transport cages from the supplier (see attachment 2 on page 12). The exportation crates are to be found inside DU-007 or inside MDU storage.
- 3.11 The gel packs are kept in a separate container inside the fridge in DU-023. The room manager must include food and enrichment from the animal housing room. The animals must have plenty of litter and enrichment (paper and tunnels/cardboard houses), food and gel packs. The gel packs must be disinfected with 70% ethanol, which must be left to work and then wiped off or allowed to evaporate. One 8oz pouch per 5 mice/2 rats up to 5 days, one 6oz pouch per 5 mice/2 rats up to 4 days, one 2oz pouch per 5 mice/2 rats up to 2 days. NB! The gel packs must be opened so that the animals can access the contents!
- 3.12 When necessary to do the packing inside room 007: the room manager stands on the clean side and handles the animals and clean equipment with clean, double gloves. A P2/ P3- mask is recommended. The person on dirty side must wear a mask (a P2/P3 mask is recommended), a hair net, clean lab coat and gloves. This person checks the condition of the animals once again, without handling them and confirms that exportation can go ahead. The room manager cleans the clean side of DU-007. The person on the dirty side cleans the dirty side of DU-007. Conventional animals are packed inside the conventional unit underneath the laf bench.
- 3.13 The room manager registers the exportation request in SL and prints out cards for the transportation crates. The room manager records any symptoms not affecting the exportation on the cage cards.
- 3.14 Room manager deliver the dirty cages to the laundry. The surfaces where the cages/boxes has been standing is wiped clean with soapy water and disinfected with 70% ethanol.

- 3.15 The PMSK makes sure the packages is sealed properly and transport the package with animal from DU-007, or conventional, to the driver together with necessary documentation (“Health certificate for the import of animal products”, customs invoice, “checklist animal transport”).
- 3.16 The PMSK informs the user and the recipient that exportation is completed.
- 3.17 When animals from the Barrier are to be exported, the animals must be prepared for transport in the animal housing room in the Barrier. The equipment must be in place in good time before the time of exportation. All equipment must be imported into the Barrier according to current procedures.

#### 4.0 HEALTH, ENVIRONMENT AND SAFETY (HSE)

- 4.1 Everyone must have received adequate training in order to ensure the correct use of clothing and protective equipment.
- 4.2 Everyone must have received adequate training in order to ensure that the animals are handled in the proper way.
- 4.3 A P2/P3 mask is recommended in order to minimise exposure to allergens and microbiological agents.
- 4.4 Everyone handling chemicals must have undergone adequate training and have access to the proper protective equipment in order to ensure the safe use of the chemicals used.
- 4.5 Everyone must be familiar with Eco Archive and the data safety sheets for the chemicals they may be exposed to.

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

#### 5.0 EQUIPMENT AND MAINTENANCE

- 5.1 Clean/autoclaved despatch crates
- 5.2 Autoclaved litter and enrichments: paper and tunnels/cardboard houses
- 5.3 Autoclaved food
- 5.4 Gel packs: must be clean/sterile and stored in a cool place in their own container

5.5 Science Linker

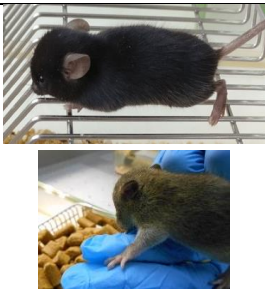
6.0 HISTORY AND EDITING



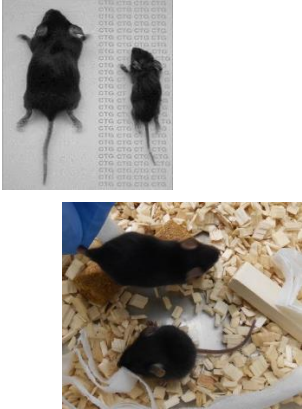
- 6.1. Written 09.03.2021 by Katarzyna Joanna Zelewska
- 6.2. Completed 16.03.2021 by Frøydis Kilmer
- 6.3. Added attachment 3 and 4 24.02.2022 (Helene Tandberg)
- 6.4. Revised 21.09.2023 (Katarzyna Zelewska and Helene Tandberg)

7.0 REFERENCES

- 7.1 Mähler M. et al. FELASA recommendations for health monitoring of mouse, rat, hamster, guinea pig and rabbit colonies in breeding and experimental units. Lab. Anim. Vol 48, 2014.

Attachment 1: Acute clinical conditions in mice


Kliniske symptomer	Beskrivelse	Handlinger	Bilder
<b>Medfødte misdannelser</b>			
<b>Hydrocephalus</b>	Det klassiske tegnet er et forstørret, kuplet hode, ataksi og depresjon.	Avliving	


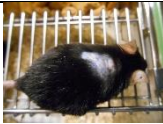
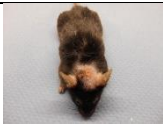

<b>Malokklusjon</b>	En feiljustering av tennene eller feil forhold mellom tennene i de to tannbuer. På grunn av tannmisdannelse har et dyr problemer med å spise med ubehag for å tygge maten.	Avliving	
<b>Vaginal septum eller imperforate vagina</b>	Akkumulering av sekreter forårsaker betydelig distensjon av skjede, livmorhals og livmor og manglende evne til å reprodusere. Hvis musen parres, kan det føre til vanskeligheter under fødselen (dystoki).	Avliving	
<b>Dårlig utviklede avkom</b>	Avkom er svake, dårlig utviklede, med fenotypiske endringer som utilstrekkelig kroppsvekt, mangel på lemmer etc.	Avliving  (undersøk avlsplanen med FOTS-prosjekt/bruker eller leverandør)	



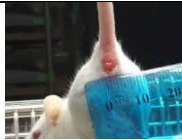



### Akutte kliniske tilstander - MUS

*Alltid sjekk tilstanden i samsvar med FOTS*







Kliniske symptomer	Beskrivelse	Handlinger	Bilder



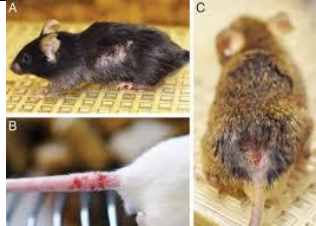

<b>Vekttap/vektøkning</b>	< 5 % vekttap	Sjekk tenner, se etter andre kliniske tegn.	
	5- 10 % vekttap	Sjekk tenner, se etter andre kliniske tegn, legg mat i bunnen av buret, gi oppbløtt mat, vei dyr to ganger per uke.	
	10- 20 % vekttap	Sjekk/korriger årsakene, bruk oppbløtt mat eller gelekapsel, vei dyr daglig, informer veterinær.	
	15- 20 % vektøkning med bevegelsesvansker	Umiddelbar avliving (OBS! Undersøk FOTS!)	
<b>Generell oppførsel (mobilitet, merkelig/</b>	Mindre reduksjon i aktivitetsnivå, sakte bevegelse, tregere til å svare på stimuli, litt markert/ skyter rygg, mindre interaksjon med andre dyr i buret, noe forsømmelse av redebygging	Øk hyppigheten av tilsyn, undersøk mulige årsaker og handle deretter, f.eks. ved artritt- gi mykere og dypere strø; gi ekstra varme (papir), smertestillende bør vurderes.	
	Mer åpenbart motvilje mot å bevege seg (når lokket er fjernet), mindre våken enn normalt, stereotypi, halte, skyter rygg, piloereksjon, merkbar isolering, aggressivitet	Som ovenfor, hyppig bytting av berikelse til dyr med stereotypisk atferd, daglig tilsyn, gi smertestillende midler (per os administrering kan vurderes), avliving bør vurderes.	



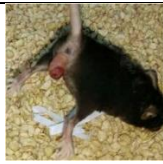
<p><b>unormal bevegelse, skyter rygg, interaksjon i buret</b></p>	<p>Lite frivillig aktivitet, isolert fra andre, piloereksjon i stor grad, parese, ataksi, forverring av noen tidligere tegn, anfall</p>	<p>Umiddelbar avliving</p>	
<p><b>Ulcerøs dermatitt (DU)</b>  (bruk eget score skjema for UD ved behov)</p>	<p>Mild form: Alopesi (hårløshet), kløe og rødfarge i huden, lesjoner mindre enn 1 cm i diameter</p>	<p>Behandling vurderes med Klorhexidin- preparater, negler på bakbeina klippes hver 10-14 dager.</p>	
	<p>Moderat form: Intens kløe, rødhet, skorper 1-2 cm</p>	<p>Som ovenfor; ingen forbedring etter to behandlinger er indikasjon på avliving.</p>	
	<p>Alvorlig form: Insisterende kløe, ulcerøse lesjoner, åpne sår mer enn 2 cm, sekundære bakterieinfeksjoner</p>	<p>Umiddelbar avliving</p>	
	<p>Moderat form: Svak hudblekhet eller gulfarging i føtter, hale og øyne</p>	<p>Undersøk mulige årsaker, se etter andre kliniske tegn, hvis noen- gi ekstra papir.</p>	

<p><b>Hudblekhet eller gulfarging</b></p>	<p>Alvorlig form: hudblekhet eller gulfarging i føtter, hale og øyne</p>	<p>Som ovenfor, blodprøver anbefales for å finne ut av årsaken. Avliving bør vurderes.</p>	 
<p><b>Prolaps (rektal, vaginal)</b></p>	<p>Mild form: diameter på 1-2 mm, vevet er fuktig og rosa</p>	<p>Smertestillende behandling vurderes, øk hyppigheten av tilsyn, vaselin lokalt, mykt strø, myk mat eller gelekapsel.</p>	
	<p>Moderat form: diameter på 3 -7 mm, vaginal/rektal område er hovent, vevet er fuktig og rosa, ingen blødning, nedsatt allmenntilstanden</p>	<p>Som ovenfor, smertestillende behandling, rens vevet med saltvann, smør med vaselin, antibiotikasalve. Avliving bør vurderes</p>	
	<p>Alvorlig form: mer enn 7 mm, vaginal/rektal området er hovent, vevet er mørkt rosa/rødt eller svart, tørt og nekrotisk, blødning, dårlig allmenntilstanden</p>	<p>Umiddelbar avliving</p>	 
<p><b>Penisprolaps</b></p>	<p>Alltid alvorlig form</p>	<p>Umiddelbar avliving</p>	



<b>Ytre klumper/svulster</b>	Små klumper	Ingen behandling hvis det ikke påvirker normale kroppsfunksjoner, øke hyppigheten av tilsyn.	
	Medium klumper (0,5-0,8mm), ingen sår dannelse eller bevegelsesvansker	Som ovenfor; sjekk eventuelle andre symptomer (lymfeknuter utvidelse), inspiseres minst to ganger per uken	
	Store klumper (> 0,8 mm) bevegelsesvansker og/eller ulcerøse sår	Umiddelbar avliving	
<b>Øyeproblemer</b>	Defekter som ikke påvirker dyrets helse: <ul style="list-style-type: none"> <li>- opakt hornhinne eller katarakt: hvit flekk på øyet (opakt hornhinne) eller i øyet (opakt linse/katarakt) Overflaten er glatt uten utflod.</li> <li>- microphthalmia anophthalmia</li> </ul>	Må skilles fra keratitt ved bruk av forstørrelsesglass. Ingen behandling	    
	<u>Konjunktivitt</u> rødfarget/hevelse i	Øk frekvensen av tilsyn, klipp negler på fram- og bakbeina en gang per uke, bruk salve	

	<p>øyelokkene uten/med utflod.</p>	<p>med antibiotika, gi smertestillende behandling, hvis hornhinnensår er til stede anbefales avliving.</p> <p>Medisiner: Natriumklorid til skylling, Tobrex</p>	
	<p><u>Keratitt</u> – overflaten av øyet er uregelmessig, med/uten sårdannelse, med/uten utflod.</p> <p><u>Keratitt med konjunktivitt</u> - overflaten av øyet er uregelmessig, med/uten sårdannelse, med utflod.</p>	<p>Umiddelbar avliving</p>	
<b>Bittskader</b>	<p>Mindre alvorlige skader: mindre sår, hyppigst på halen og baken, sår ser tørre ut.</p>	<p>Sjekk for skader ved genitalier og anus, øk hyppigheten av tilsyn, gi ekstra berikelse eller separer aggressive mus, smertestilene behandling (Temgesic), Natriumklorid 9mg til skylling, salve med antibiotika (Fucidin), følg reglene for flytting av hanner under burskift.</p>	
	<p>Alvorlige skader: avrevet hud, penisskader, større blødende sår, apati</p>	<p>Umiddelbar avliving</p>	

			
<b>Oppblåsthet i magen</b>	Magen er større enn hos dyr med normalt hold /ikke-gravide dyr. Huden på magen er stram med rufsete pels.	Sjekk om graviditet/ overvekt.  Må skilles fra ascites, hydronephrosis, hydrometra/mucometra. Ved nedsatt bevegelighet- umiddelbar avliving.	
<b>Dystocia</b>	Unger sitter fast i fødselskanalen, eksponert livmor, skyter rygg, svakhet, tung pust	Umiddelbar avliving eller keisersnitt og flytting av unger til en annen ammende hunn.	
<b>Neurologiske tilstander</b>	Variierende intensitet: ataksi, hodehelling (head tilt), spiner når løftes etter halen, går i sirkler, har kramper	Støttende pleie: mat i bunnen av buret, gi oppbløtt mat, ekstra papir.  Vedlikehold av slike mus bør vurderes i samsvar med FOTS eller skal avlives.	

# technical sheet



## Transportation Crates

Charles River offers several different crate options. Each of our crates take into account the species transported as well as their health status. All of our crates are designed to maintain health status and ensure animal welfare. Each is equipped with observation windows, which permit inside inspection throughout transportation. Through our delivery plan, we offer fast services with vehicles adapted and fitted with automatic climate control system.

CRATES	NOVOPACK	SAFEBOX SINGLE (SBS)	SAFEBOX LARGE (SBL)	DUOPACK	ICO METAL III
Health Status	SPF	SPF	SPF, SOPF	SPF	Axenic
Models	Mice, rats, guinea pigs	Mice, transgenics, females with litters	Mice, transgenics mice and rats, operated animals	Rabbits	Mice, rats
					
Dimensions (mm)	630 L x 430 W x 170 H	380 L x 210 W x 145 H	515 L x 295 W x 195 H	630 L x 430 W x 330 H	Ø 220 x 225 H
Processing	UV	Irradiation 25KGy	Irradiation à 25KGy	UV	Autoclaving
Return Kit	These crates are available in free <b>RETURNS KITS</b> containing litter and food for the shipment of animals to our diagnostic laboratory. The set is conditioned in a protective overpack and sterilized by UV or irradiation at 25 KGy.				
Air Shipment	Our crates exist in these same features in version <b>AEROPLANE</b> , in compliance with the IATA guidelines.(172 <sup>nd</sup> edition – 2011)				

# Density/packaging<sup>1</sup>

As of January 1<sup>st</sup>, 2012, Charles River France adjusted the animal densities for each crate. The adjustments were made to make shipment conditions consistent with the other Charles River production sites in Europe. The density changes also align with recommendations made by the Transport Working Group of LASA – UK in 2005.

Below are the densities for each crate supplied by Charles River.

MICE	SPF		SOPF
	Novopack	SBS	SBL
Female + Litter	1 (> 13j)	1 (<13j)	1
< 20g	35	4	20
20-30g	30	3	17
>30g + aged animals	25	2	17

GUINEA PIGS	Novopack
< 200g	10
200-300g	7
300-350g	6
350-400g	5
400-500g	4
500-600g	3
> 600g	2

RATS	Novopack
Female + Litter	1
< 50	20
50 - 75	15
75 - 100	13
100 - 125	10
125 - 150	9
150 - 175	8
175 -200	7
200 - 225	6
225 - 250	5
250 - 300	4
300 - 400	3
400 - 500	2
Pregnant Females	5

MICE	Novopack aeroplane
<15g	30
16-18g	27
19-21g	24
22-24g	21
25-27g	18
>27g	12

RABBITS	Duopack
< 1kg	2
> 1 kg	1

<sup>1</sup>Maximum number of models by crate. Only for standard production

This information is provided as a reference and may differ according to the strains and the physiological needs of animals

**Checklist animal transport**

Strain:.....

Sex:.....

Shipping date:.....

Clinical signs	Remarks
Hydrocephalus	
Malocclusion	
Vaginal septum or imperforate vagina	
Blind	
Poorly developed pups	
Stereotypic behavior	
Socially isolated	
Limping/paresis	
Arched back	
Whiskers missing/biting	
Bent/shortened tail	
Alopecia	
Biting wounds	
Ulcerative dermatitis	
Prolapse (rectal, vaginal)	
Penis prolapse	
Exterior lumps/tumors	
Diarrhea	
Dirty/glazy eyes	

No change (n.c.) /not applicable (n.a.)

**UiO : Universitetet i Oslo**

Institutt for medisinske basalfag, Avdeling for komparativ medisin

Additional (as requested in animal export list)	
Sex	
Identification number of animals	
Project number	
Place of destination/researcher/exact address	

Correct (c)/incorrect (inc)

**The animals are fit for travelling**

Date		
Name	Animal caretaker .....	Veterinarian .....
Signature		

