



Transportation of Laboratory Animals

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General considerations

Many laboratory animals undergo transportation at some point of their life to another:

- room for housing
- establishment for experimental purposes
- country for breeding

Transport can be a significant stressor, with an impact on animal welfare & research outcomes.

General considerations

Moving animals in a manner that:

- respects laboratory animal well-being
- ensures their safe arrival (good health & with minimal distress) &
- respects the public health.

General considerations

Many aspects of the animal transport process have a direct impact on welfare:

- route or journey planning,
- container design,
- vehicle design,
- the competence and attitude of drivers and others involved in the transportation,
- travel duration and
- the nature of food and water supplies.

The impact of transport on animal welfare

Competent person (lab animal veterinarian, technician or scientist) should try to reduce any potential for **stress** or **fear** to an absolute minimum, considering:

- Their nature and behavior
- Normal travelling posture
- If they would eat or drink while travelling
- Perception of their environment

The impact of transport on animal welfare

These factors should all be given due priority when making decisions on:

- the health and welfare of the animals, including their fitness to travel;
- the design and materials of the containers, including provision for loading and removing animals with the minimum discomfort, and inspection in transit;
- the number of animals in each container and the space given to each animal;
- the environmental conditions within the animal container;
- the quality and quantity of substrate, nesting material, food and water (or alternative supply of liquid);

The impact of transport on animal welfare

• the duration of the journey;

• the number of stops or changes between vehicles, especially if unloading and reloading is required;

- the type of vehicle(s) involved;
- the experience, attitude and training of personnel handling and transporting the animals;
- how animals will be helped to adapt and how their recovery from the journey will be monitored when they reach their destination
- an adequate adaptation period is required, following arrival.

Legislation

Legislation regulating animal transport varies between countries:

- USA: Animal Welfare Act,
- Europe: Convention ETS 193
- Globally: international agreements such as the IATA Live Animals Regulations

https://www.iata.org/en/programs/cargo/live-animals/

Legislation (Europe by Convention ETS 193)



European Treaty Series - No. 193

European Convention for the Protection of Animals during International Transport (Revised) *

Chişinau, 6.XI.2003

The member States of the Council of Europe, signatory hereto,

Considering that the aim of the Council of Europe is to achieve a greater unity between its members for the purpose of safeguarding and realising the ideals and principles which are their common heritage;

Aware that every person has a moral obligation to respect all animals and to have due consideration for their capacity for suffering;



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Live Animals



We focus on animal safety and welfare

e been transported by air since the early 1930's. In today's modern world,

Need Help?

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Animals have been transported by air since the early 1930's. In today's modern world, carriage of live animals by air is considered the most humane and expedient method of transportation over long distances.

Traveler's Pet Corner Detailed information on the transportation of your cat or dog by air is available on the Traveler's Pet Corner.

IATA Live Animals Regulations

The IATA Live Animals Regulations (LAR) are the worldwide standard for transporting live animals by commercial airlines. Whether it is a pet, an animal transported for zoological or agricultural purposes or for any other reason, the objective of the IATA LAR is to ensure that all animals are transported safely and humanely by air.

The next edition of the LAR will come into effect on 1 January 2025

What is new in the 2025 IATA Live Animals Regulations Manual (LAR...

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Institutional requirements

Institutional requirements of laboratory animal transport:

- Veterinary Certificate (provider)
- Health report (provider/FELASA guidelines)
- Acceptance letter (recipient)
- License to transport live animals (provider)
- MTA (material transfer agreement) between the "Recipient" & the "Provider"
- GA passport (provider)

All the required documentation must be prepared accurately and in good time before each journey.

Potential sources of stress for animals undergoing transport:

- Handling
- Separation from familiar conspecifics, possibly individual housing
- Confinement in an unfamiliar transport container
- Loading and unloading
- Movement and vibrations during the journey, including acceleration and deceleration
- Physical stress due to maintaining balance (especially larger animals)
- Unfamiliar sights, sounds and smells
- Fluctuations in temperature and humidity
- Withholding of food, or voluntary abstention from eating or drinking
- Disruption of light:dark regime
- New housing and care protocols at the end user establishment, including unfamiliar humans and possibly new social groups or hierarchies

Relevant legislation: ETS 193 Article 7: journey planning

CHOOSING A ROUTE:

- Identify more than one route
- Select direct flights, unbroken routes and just one carrier where possible
- Transport time and distance should be kept to a minimum
- An uninterrupted journey is preferable (loading and unloading)
- It is also important to consider the climate, season and time of day when animals will be travelling.
 - (Aegean heat embargo from 1 May to 31 October)

RESPONSIBILITIES, ROLES & COMMUNICATION:

Each individual involved in animal transportation should:

- know and understand their role and responsibilities.
- Have access to the entire route plan
- Have access to handling and feeding guide and
- A 24h contact phone number in case of an emergency.

RESPONSIBILITIES, ROLES & COMMUNICATION:

Animals imported into the EU must travel through a border inspection post (BIP)

- 5 h warning in advance of arrival of by air and
- 24 h warning for other modes of transport.

Veterinary checks at BIPs

Relevant legislation:

- ETS 193 Article 4: general principles for transport
- ETS 193 Article 8: animal attendants
- ETS 193 Article 29: road vehicles or rail wagons on roll-on/-off vessels
- ETS 193 Article 30: transport by air

CONTAINERS AND PROVISIONS:

Laboratory rodents should be transported under SPF conditions.

Sufficient disinfected and dry substrate should be provided inside the container

- (shaved, shredded or chipped wood products/paper products or corncob)
- to keep the container dry
- Extra nesting material should be provided to aid thermoregulation.
- (especially for small rodents and animals travelling individually)

CONTAINERS AND PROVISIONS:

Containers can be single-used or reusable

In divided containers, mice of different strains can be transported together.

The container design must allow the contents of the container to be viewed without opening it.

The total ventilation area should represent at least 14% of the total combined surface area of the sidewalls.

All filters in the container should be water-resistant & tear-resistant and protected from direct animal access by wire mesh or other coverings.

CONTAINERS AND PROVISIONS:

Each container must be clearly marked with:

- 'LIVE ANIMALS'
- 'THIS WAY UP', including 'orientation arrows'
- Instructions for handling the crate
- The type and number of animals in the container
- The consignor's name, address and a 24 h contact telephone number
- The consignee's name and address and 24 h contact telephone number
- Feeding and watering instructions, even if these read 'DO NOT FEED'

Containers and provisions





Containers and provisions





Containers and provisions



FEEDING AND WATERING GUIDE:

- Pellets soaked with water or
- Gelled water products with extra nutrients.

Animals must be provided with sufficient food and water for at least twice the expected duration of the journey.

Feeding & watering







EMERGENCIES:

The following should always be considered so that adequate contingency plans can be put in place.

- Delays to shipments
- Abandoning the chosen route
- Vehicle breakdown
- Paying any tax or duty required on arrival
- Death in transit including emergency euthanasia

ARRIVAL:

- Unload the animals from their containers without delay
- Inspected by a suitably trained and competent person
- Placed in their home cage, provide appropriate food, water and bedding.
- An acclimatization period is essential before laboratory animals are used in procedures
- as a general guide, at least 7 days' acclimatization is necessary following transport between sites and at least 3 days between buildings on the same site.

Special considerations

• Animals for dispatch should be in good health.

• The health of laboratory animals may sometimes be compromised for experimental purposes.

Some common examples are:

- Individuals that carry harmful genetic mutations or that may be otherwise genetically modified (GM)
 - transporting GM animals as fresh or cryopreserved embryos, or cryopreserved gametes
 - GM animal passport
 - obese mutants, should travel with additional ventilation or low stocking density
 - diabetic animals should be provided with adequate and appropriate sources of fluids
 - Small mice, hairless mice should be provided with additional nesting material
 - Immuno-compromised animals should be transported in filtered shipping crates

	GA passport	
Name of GA line		
General information		
Phenotypic abnormalities and		
observable traits with		
welfare implications		
Remedial actions		
Breeding		
Origin		
References/websites		
-		
PCR protocol		

Special considerations

Pregnant female mice and rats can be transferred up to day 17 of gestation.

• require extra room and low stocking density

Nursing mothers with newborn pups can travel 7 days post partum.

require extra bedding and nesting material

Transport on site

- From one building to another or to another room within the same building etc.
- Transport of short duration.
- Specifically designed transport boxes.
- Arranging the transport should be the responsibility of senior animal care staff.
- Animals in transit should not be left unattended.
- On arrival animal should be checked and placed inside the appropriate cages.
- Labeling stain, sex, number of animals, age, animal records ect.

Transport on site









