

SOP for Animal Laboratory: Husbandry and Welfare for Rodents (Mice & Rats)

1. Purpose

To set up standard procedures for the feeding, hydration, and cage changes of laboratory rodents that ensure data integrity, animal welfare, and adherence to animal care guidelines.

2. Scope

Applicable to all individuals engaged in the daily care and maintenance of rodents (mice, rats) within the animal facility.

3. Responsibilities

- Animal Care Staff:** Perform daily feeding, cleaning, cage & water checks.
- Principal Investigator (PI):** Ensure that research-specific needs do not compromise the animal welfare.

4. Materials

- Water bottles or automatic watering devices.
- Standard rodent feed.
- Clean bedding materials.
- Personal protective equipment (PPE) (Gloves, lab coat, face mask, head and shoes cover)

5. Procedures / Guidelines

- Check all water bottles for sufficient supply and leakage.
- Refill water bottles if the water level is insufficient.

3. Sanitize the water bottles once a week.
4. Check feed containers; refill with standard rodent feed as required.
5. Feeding plates should be cleaned weekly.
6. Check the cages every day for the animals' condition. Any observations should be reported to PI
7. Cages should provide adequate ventilation and easy access to food and water.
8. Each cage must have an identification card with the following information: protocol number, investigator's name, date received, strain, sex, age, and number of animals per cage.
9. Bedding should be replaced periodically with fresh materials to keep the animals clean and dry.
10. All work surfaces must be wiped with an approved agent (e.g., 70% Ethanol) before and after each cage rack is processed.
11. All waste should be collected and disposed of regularly.
12. Only materials required for the animal care should be stored within the animal housing room.
13. The floor should be cleaned weekly or as needed.
14. Doors should be cleaned weekly.
15. Room should be sanitized regularly.
16. Newly acquired animals should undergo acclimation period prior to their utilization.
17. No eating, drinking or smoking in the animal room.

6. Safety & Hygiene

1. Wash hands before and after handling animals or cages.
2. Utilize Personal protective equipment (PPE) to avoid contamination.

7. Environmental Parameters

Environmental stability is critical for reducing experimental variables.

Parameter	Standard (Mice/Rats)
Temperature	20-26 °C
Humidity	30-70%
Light Cycle	12:12 or 14:10 (Species dependent)
Noise	<85 dB (Avoid ultrasonic noise)

8. Cage Density

- **Maximum Capacity for Mice**

Weight of Mouse	Required Area per Mouse	Standard Cage (480cm ²) Capacity
Juvenile (< 15g)	52cm ²	9 Mice
Young Adult (15–25g)	77cm ²	5–6 Mice
Large Adult (> 25g)	97cm ²	5 Mice
Breeding Pair + Litter	330 cm ²	1 Pair + Pups



▪ Maximum Capacity for Rats

Weight of Rat	Area per Rat	Standard Cage (900 cm ²)	Large Cage (1800 cm ²)
Juvenile (< 100g)	110 cm ²	8 Rats	16 Rats
Adult (200–300g)	187 cm ²	4 Rats	9 Rats
Large Adult (300–400g)	258 cm ²	3 Rats	7 Rats
Retired Breeder (> 500g)	450 cm ²	2 Rats	4 Rats

9. Warning Signs & Reporting

1. If an animal is found **moribund** (near death) or showing **self-mutilation**, it must be euthanized within 2 hours of discovery unless the PI provides a scientific justification previously approved by the IACUC.
2. IP injection of Pentobarbital (>150mg/kg) is considered the "kindest" method for sensitive studies.
3. You must perform a secondary physical method to ensure death (e.g., cervical dislocation, or decapitation) before disposing of the animal.