

Stowers Institute for Medical Research Rodent Facility Environmental Summary



Housing

- **System:** Innorack Mouse v3.5
- **Start date:** January 2008
- **System type:** Individually Ventilated Cages (IVC)
- **Racks:** Double & Single sided racks
- **Number of systems:** 105
- **System capacity:** Single sided - 77 cages, Double sided -154 cages

- **Manufacturer:** Innovive, Inc.

Nutrition

- **Feed Type:** Irradiated Soy Protein-Free Extruded Diet
- **Diet number:** 2920X
- **Manufacturer:** Invigo
- **Feeding Time:** Ad lib

Hydration

- **Type:** Pre-filled water bottles. Laboratory grade acidified water 2.5-3.0 pH
- **Container:** 300ml, 100% PET, plastic is recyclable
- **Water:** Ad lib

Caging

- **Type:** Individual Ventilated Cage
- **Bedding:** Pre-bedded with ¼" corn cob for single use
- **Nesting Material:** Pre-filled with 1-ply 100% Virgin Kraft nesting enrichment sheet
- **Cage size:**
 - Interior dimensions: 81 in² floor space, 345 in³ living space, 5" height.
 - Outside dimensions: 14.7" L x 9.2" W x 5.5"H (maximum)
- **Cage Top:** MVX6 IVC with large Reemay® and Uniblend filters for enhanced ventilation.
- **Feed tray:** 100% PET plastic, BPD free, and recyclable
- **Material:** 100% PET plastic, BPA-Free. Recyclable

Enrichments

- **Igloos and Fast-Trac Wheels** - can be used single or combined. Provides shelter, activities for exercise, and reduces aggression.
 - Made of high temp polycarbonate.
 - Washable and Autoclavable.
- **Mouse Tunnels**- a transparent tunnel, for reducing boredom and encourages exercise.
 - Washable and Autoclavable.
- **Mouse Ladders**-attachable ladder for climbing, 100% PET
- **Chew Blocks**- wood gnawing blocks, 100% natural wood provides natural form of gnawing enrichment.
- **Enrichment sheets**- Aids in foraging and nesting, reduces aggression and helps regulate body temperature.
 - 100% virgin kraft paper

Husbandry

- **Animal Health Observations:** once daily
- **Cage changing schedule:**
 - Cage bottom, bedding, and nesting material: every 14 days
 - Cage top and feed tray: every 28 days
- **Full accessory enrichment change:** every 28 days
- **Feed and water:** ad lib
 - Full water bottle rotation monthly
- **Rack sterilization:** every 6 months.
- **Exhaust and Supply Blower Filter Changes:**
 - HEPA filters: every 5 years
 - Pre-filters: every 6 months

Operations

Daily Tasks

Note: Daily tasks must be performed every day, 7 days a week, 365 days a year including weekends. Appropriate PPE required as described in SOP SIMR-LAS-HUS-01.

- Observe each animal and check for health concerns. Health checks are to be completed before noon each day except for quarantine and altered light cycle rooms.
- Provide nutritionally adequate feed ad libitum, unless otherwise approved in an IACUC animal care and use protocol. Food is irradiated, fresh, and topped off as needed.
 - Rodent chow must be used within 6 months of the manufacturer milling date (Guide, pg. 39) unless manufacturer guidelines document a shorter or longer expiration date.
- Provide sufficient potable water (AWA section 3.55).
- Record sick or dead animals in accordance with the department procedures. (Note standard SOPS-TEC-22, HUS-07,)
- Keep room clean and organized. Sweep floor.
- Temperature and humidity readings monitored and recorded by building systems services. Temperature set points are 72F with an acceptable range of 68-79F. Humidity levels are maintained between 30-70%. (Ideal room temperature range for rodents= 64-79° F and humidity is 30-70%, Guide, pg. 32).
- Record completion of daily room tasks. Initial and date completion on the Animal Room Monitoring Sheet. Record number of sick animals, dead animals, and all animal care tasks completed.

Weekly Procedures

- Top off food and water for cages.
- Provide clean water/bottles at least every month.
- Flush floor drains
- Mop floors
- Change heavily soiled or flooded cages when discovered.
- Clean animal cage changing station. (Laminar flow hood).
- Submit census report.

Biweekly Procedures

Note: Not to exceed 14 days

- Change cages.
 - Cage bottom, bedding, and nesting material
- Disinfect rack shelves.

Monthly Procedures

Note: At least once every 30 days

- Change cage lids and feeder trays.
- Dust and polish racks
- Empty room trash bins.
- Change food and water bins.
- Change water bottle recycling barrel.
- Sanitize walls, floors and ceilings.
- Sanitize room equipment.
- Hood filters checked/cleaned/changed as needed.

As Needed Procedures

- Change feed waste barrel.
- Stock supplies
- Refill disinfectant spray bottles

Quarterly Procedures

Note: At least once every 90 days

- Submit sentinels/samples for room pathogen testing.

Semi-Annually Procedures

Note: At least once every 180 days

- Rack rotation and cleaning
- Change and clean rack prefilters.

General Procedure Policy:

Note: Exceptions to this policy must be on file with the SIMR IACUC.

- **Facilities**

- Minimum of 10-15 fresh room air exchanges (Guide, pg. 32).
- Floors should be moisture-resistant, nonabsorbent, impact-resistant, and relatively smooth (Guide, pg. 74).

▪ **Caging**

- Cages must be in good condition and escape-proof.
- Cages with damage or issues which may cause injury to the animals must be discarded.
- Animals are to be housed in no more than 5 adult mice per cage.
- Recommended floor space per rodent (see chart below Guide, pg. 27).

Weight of Animal	Floor Area/Animal (inches squared)	Height (inches)
<10 grams	6	5
Up to 15 grams	8	5
Up to 25 grams	12	5
>25 grams	>15	5

▪ **Identification**

- Rodents can be individually identified in addition to having an appropriately labeled cage card. Appropriate identification for mice includes ear tag, ear notch, and tail/toe tattoo.

▪ **Environmental Enrichment**

- Refer to Environmental Enrichment policy. SOP-HUS-31
- Rodents that are singly housed must be within auditory, visual and/or olfactory contact with compatible individuals.
- Rodents that are singly housed mice must be provided at least two forms of species-appropriate enrichment.
- Examples of rodent enrichments that promote species-typical behaviors include pair or group housing, shelters (tubes, tunnels, igloos, and houses), nesting materials, gnawing, and foraging

materials, and running wheels, ladders or other structures to increase locomotion

- Devices used for environmental enrichment must be easily sanitized or disposed of when cages are changed.
- Devices must be checked regularly for wear and discarded if they pose a safety hazard.

▪ **Euthanasia**

- Refer SOP SIMR-LAS-TEC-01-Rodent Euthanasia