



## CM SOP #102 – Sanitizing in the Vivarium

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### I. Purpose & Scope

To establish standardized procedures, schedules, and documentation requirements for sanitizing vivaria, animal transport areas, and associated equipment in order to reduce microbial contamination, support biosecurity, and protect animal health. This SOP applies to all Comparative Medicine–managed vivaria, animal transport vehicles, elevators, and any areas where laboratory animals are housed or held temporarily, and to all Comparative Medicine personnel involved in sanitizing activities.

### II. Roles & Responsibilities

#### Comparative Medicine Staff

- Perform sanitizing activities in accordance with this SOP and applicable schedules.
- Use approved disinfectants, equipment, and contact times.
- Wear required personal protective equipment (PPE) and follow safety procedures.
- Document completion of sanitizing tasks, including checklists, logs, and hangtags, as required.
- Report sanitation deficiencies, equipment issues, or safety concerns to supervisory staff.

#### Research Staff, Students, Visitors

- Comply with all facility sanitation and biosecurity requirements while working in or visiting the vivarium.
- Maintain cleanliness of research equipment and work areas under their control, as applicable.
- Follow posted signage, PPE requirements, and instructions provided by CM staff.
- Promptly report spills, contamination, or sanitation concerns to CM staff.

#### CM Assistant and Associate Directors

- Ensure implementation of this SOP within areas of responsibility.
- Oversee training and competency of CM staff related to sanitizing procedures.
- Monitor compliance with sanitation schedules and documentation requirements.
- Address deviations from this SOP and implement corrective actions as needed.

#### CM Director and AV

- Provide overall oversight of vivarium sanitation practices and biosecurity.
- Ensure adequate resources, staffing, and training are available to support sanitizing activities.
- Review sanitation outcomes, including ATP and microbiological monitoring results, and direct corrective actions when indicated.
- Approve revisions to this SOP and ensure alignment with regulatory and accreditation standards.



### III. General Notes & Definitions

- Sanitizing is a core component of vivarium biosecurity and is performed to reduce microbial contamination and limit pathogen transmission.
- Sanitizing shall be performed in a manner that:
  - Maintains biosecurity
  - Minimizes animal stress
  - Prevents cross-contamination between rooms and areas
- Effective sanitizing requires removal of visible debris prior to application of disinfectants.
- Sanitizing frequency and scope may be increased in response to high-traffic areas, animal health concerns, construction or maintenance activities, or unsatisfactory sanitation outcomes.
- Sanitizing activities shall proceed from clean areas to dirty areas and from high to low surfaces, where applicable.
- Only approved disinfectants may be used, and manufacturer-specified contact times must be followed.
- Sanitation effectiveness is evaluated through outcome-based monitoring, including ATP testing and targeted microbiological assessment, as described in related SOPs.
- All sanitizing activities must be documented in accordance with Comparative Medicine requirements.
- **Sanitizing:** Reduction of microbial contamination on surfaces through approved cleaning and disinfection methods.
- **Disinfectant:** An approved chemical agent used to inactivate microorganisms when applied at the correct concentration and contact time.
- **Contact Time:** The minimum time a disinfectant must remain wet on a surface to be effective.
- **ATP (Adenosine Triphosphate) Testing:** A rapid method used to assess residual organic material following sanitizing.
- **Biosecurity:** Practices designed to prevent the introduction and spread of infectious agents within the vivarium.
- **Corrective Action:** Measures taken to address sanitation deficiencies, including re-sanitizing, retraining, or process modification.

### IV. Materials & Equipment

- Approved disinfectants and cleaning agents
- Measuring and dispensing devices for disinfectant preparation
- Cleaning tools (e.g., mops, buckets, wipes, brushes) designated for vivarium use
- Spray bottles or application equipment labeled with disinfectant name and concentration
- Personal protective equipment (PPE) as required (e.g., gloves, gowns, eye protection)
- Waste containers for disposal of used cleaning materials
- Sanitizing documentation tools (e.g., checklists, logs, hangtags)
- ATP testing supplies, when applicable, for verification of sanitation effectiveness

### V. Procedure

- A. **Daily Tasks** (minimum: once per weekday)



- 1) Sanitize cage changing station work trays and adjacent work surfaces to remove visible debris, stains, and particulate matter.
  - 2) Empty trash receptacles as needed.
  - 3) Remove floor debris and sweep as necessary.
  - 4) Mop TechTrak mats with approved disinfectant and remove excess solution using a squeegee.
  - 5) Clean procedure rooms between each scheduled surgery.
- B. Weekly Tasks** (minimum: once per week at least 5 days apart)
- 1) Disinfect conventional housing racks during scheduled cage changes, including upper shelving surfaces.
  - 2) Dust top surfaces of IVC racks and motors; disinfect empty cage slots during weekly housekeeping.
  - 3) Disassemble and sanitize work surfaces of cage changing stations and biosafety cabinets.
  - 4) Disinfect sinks, doors, backdraft tables, snorkels, and other non-lab-owned equipment surfaces.
    - a. Note: Laboratories are responsible for sanitizing their own equipment. CM will clean induction boxes if needed but will not handle other lab-owned equipment.
  - 5) Wipe all procedure room surfaces with approved disinfectant.
  - 6) Launder and replace mop heads.
  - 7) Launder reusable lab coats and discard disposable lab coats appropriately.
  - 8) Flush autowater racks per established procedure.
- C. Twice weekly tasks**
- 1) Sweep and mop all floors and anti-fatigue mats with approved disinfectant.
- D. Every other week** (1<sup>st</sup> and 3<sup>rd</sup> week)
- 1) Replace or wash (as applicable) Tecniplast WiFlow™, SkyFlow™, or SmartFlow™ pre-filters.
- E. Monthly** (minimum: once per month)
- 1) Wipe lateral and horizontal surfaces prone to dust accumulation (e.g., cabinet tops, shelving, autowater lines, wall-mounted equipment, guard rails).
  - 2) Inspect dump stations and cage changing station pre-filters; replace if soiled. Initial and date hangtags at each inspection.
  - 3) Sanitize trash receptacles and lids using approved disinfectant or process through rack washer.
  - 4) Sanitize cleaning utensils (brooms, mops, dustpans, brushes) using approved disinfectant or cage washer, as appropriate.
  - 5) Empty feed containers of debris and process through cage washer.
  - 6) Sanitize designated areas of animal transport vehicles (see *CM SOP 900: Care and Use of Transport Vehicles*).
- F. Irregular or As-needed Tasks**
- 1) Polish stainless steel surfaces as needed; confirm with laboratories performing behavioral studies prior to polishing.
  - 2) Replace disinfectant spray bottles in accordance with manufacturer recommendations.
  - 3) Process carts through cage washer or disinfect after each use.
  - 4) Process bedding containers and scoops through cage washer at least every three months.
  - 5) Machine wash cloth shelving covers at least every six months.



- 6) Foam walls, floors, and ceilings annually when rooms are empty prior to reoccupation (see Comparative Medicine Weekly Schedule and *CM SOP 909: Foamers Operation and Care*).
- 7) Disassemble IVC racks and process non-electronic components through cage washer at least annually (see *CM SOP 905: IVC Rack Operation and Care*).
- 8) Hand wash or foam walls when sanitation outcomes are insufficient as indicated by ATP or microbiological monitoring results.
- 9) Hand wash or foam ceilings, light fixtures, and exposed piping at least every three years or as needed.

#### G. Recordkeeping

- 1) Complete the *Daily Animal Room Check Sheet* as necessary, and only after completing the task.
- 2) Initial the hangtags for sanitation and filter checks as needed (IVC rack, cage changing station, dump station).
- 3) Label all food and bedding bin hangtags (or the bin itself) with sanitation date.

## VI. Health & Safety

- Personnel must wear appropriate personal protective equipment (PPE) when performing sanitizing activities, as specified by Comparative Medicine and Environmental Health & Safety (EH&S).
- Disinfectants must be prepared, handled, and applied in accordance with manufacturer instructions and institutional chemical safety requirements.
- Adequate ventilation must be maintained during sanitizing to minimize exposure to chemical vapors.
- Mixing of disinfectants or cleaning agents is prohibited unless explicitly approved.
- Spills, exposures, or injuries must be reported immediately and managed according to institutional safety procedures.
- Waste generated during sanitizing activities must be disposed of in accordance with institutional and regulatory requirements.

### Chemical-specific cautions

- Bleach (Sodium Hypochlorite):
  - Must not be mixed with acids, ammonia, or other disinfectants.
  - Prepare fresh solutions as required and avoid prolonged skin or eye contact.
- Accelerated Hydrogen Peroxide / Peracetic Acid Products:
  - Avoid contact with eyes and skin; use appropriate gloves and eye protection.
  - Ensure adequate ventilation due to potential respiratory irritation.
- Quaternary Ammonium Compounds:
  - May cause skin and respiratory irritation; avoid aerosolization and direct contact.
- Alcohol-Based Disinfectants:
  - Flammable; keep away from ignition sources and allow surfaces to dry completely before use.

## VII. References & Attachments

- *The Guide for the Care and Use of Laboratory Animals*
- Safety Data Sheets: MB10, Saniplex, and Bleach



CM SOP #102.5

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- SOP400: Cage Changing Rodents
- SOP 900: Care and Use of Animal Transport Vehicles
- SOP 905: IVC Racks Operation and Care
- SOP 906: Cage Changing Stations Operation and Care
- SOP 907: Bedding Disposal Stations Operation and Care
- SOP 908: Biosafety Cabinet Operation and Care
- SOP 909: Foamer Operation and Care
- SOP 910: Fogger Operation and Care

**VIII. Revision History**

Revision Date	Revision Number	Summary of Changes
03/27/2017	2	Addition of elevator, sanitation of entire room(s), IVC cleanliness checks
11/14/2017	3	Added hand wash walls once per year and ceilings, light fixtures, and pipes every three years.
02/18/2021	4	Changed frequency of running IVC racks through the cage washer from every 3 years to yearly
03/01/2026	5	Reformatted, made ADA compliant, removed references to elevators

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