Validation of Effectiveness of Manual Sanitation of PI Maintained Equipment

1.0 Policy Scope and Application

Federal regulations require routine sanitation of surfaces that animals directly contact. Furthermore, it is recommended that a program be in place to monitor the effectiveness of those sanitation practices that fit the process and materials being cleaned. The IACUC policy applies to primary enclosures, work surfaces, and animal use equipment that are being sanitized by manual/hand processes and maintained by the research community.

Background:

• **Primary enclosures** refers to all items that come in direct contact with the animal during housing, including but not limited to, the cage, wire feeder/food bowl, enrichment devices, and water bottle/bowl.

• **Surfaces and Equipment with Direct Animal Contact** for this policy refers to all surfaces the animal directly contacts when outside of the primary enclosure (micro-isolator, ventilated caging, etc.) that is shared between researchers/colonies or is an IACUC approved secondary enclosure. Items included in this definition include, but are not limited to, behavior equipment, metabolic equipment/caging, shared restraint devices, imaging equipment, and PI specific housing constructs. This definition is based on biosecurity to help prevent cross contamination as well as assure secondary housing is appropriately sanitized between uses.

• **Disinfectants** are products that are applied to non-living objects used to reduce or eliminate unacceptable concentration of microorganisms. Virucide disinfectants such as Virkon™ S or a 10% bleach solution should be used for all items described above, following manufacturer’s instructions. If other disinfectants not listed above are used, please consult with the Animal Care Unit (ACU) on the appropriateness of the product.

• **Sanitation** is the maintenance of environmental conditions conducive to health and well-being.

Policy:

• **Directly contacted surfaces/equipment/secondary enclosures:**
  o The disinfectant used, contact time and dilution must be included in the SOP for the housing area/equipment area and be maintained by the Principal Investigator (PI) or designee.
  o Biological measures of validation such as Biological swabs (CHARMS, Luminometers) must be monitored on a **minimum of an annual basis** and results maintained by the PI or designee to be available during IACUC semi-annual inspections or Post Approval Monitoring (PAM) visits.
    ▪ “CHARMS” can be used as a template for the establishment of a lab maintained SOP.
    ▪ Validation can be lab specific, i.e. the lab purchases products/equipment needed to validate disinfection and maintain records, or the lab may use the services of the ACU to assist in validation on a fee for service basis. If the ACU is engaged in validation services, the PI or designee is still required to maintain records as noted above.
    ▪ Batch testing (i.e. testing multiple pieces of equipment with one swab/plate can be
used. However, if the test results are above the threshold established for the equipment, all pieces will need to be re-sanitized prior to repeat testing.

- Thresholds for “passing” may vary for different facilities and/or species and should be developed in consultation with an ACU veterinarian and/or facility manager/supervisor.
  - Thresholds will need to be established for the equipment to be monitored after a thorough disinfection.
  - Surfaces that do not meet expectations following sanitation using threshold measures and/or biological methods must be re-sanitized until acceptable levels are reached.

References and additional resources:

2. USDA Animal Welfare Regulations