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Standard Operating Procedures for Monitoring Sanitation Practices

1.0 Purpose:

1.1 The Guide for the Care and Use of Laboratory Animals states, “*Monitoring of sanitation practices should fit the process and materials being cleaned and may include visual inspection and microbiologic and water temperature monitoring*” (Guide for the Care and Use of Laboratory Animals, 2011, p. 72). Additional information regarding sanitation expectations is available in [WSU IACUC Policy #1: Adequate Animal Care in Study Areas and Satellite Animal Housing Locations](#).

Described below are procedures employed in sanitizing caging and equipment used in animal care and the monitoring protocols. These are to be used to ensure adequate sanitation is being achieved in animal facilities at WSU.

2.0 Expectations


2.1 Commercial Washing Units: these units rely on water pressure and either high temperatures ($\geq 180^{\circ}$ F) OR disinfectant agents to achieve cleanliness and sanitation. Commercial washers are monitored on a regular basis to ensure units are working properly and that adequate sanitation is being accomplished.

2.1.1 Visual Monitoring: Items washed in a commercial washer are inspected after each load to ensure items appear clean. All visible dirt and scale should be removed by the washing process. If items do not appear clean, items are re-washed prior to use and unit should be evaluated by a qualified service technician.

2.1.2 Temperature Monitoring: If high temperature ($\geq 180^{\circ}$ F) is the mode of disinfection of the cage washing unit, an adhesive, heat monitoring device is run through the washing unit with cages/equipment at least once per week. The tape is dated and stored in a permanent record. If the tape indicates the washing unit did not reach sanitation temperature ($\geq 180^{\circ}$ F), the load is re-run, and additional monitoring is performed. If continued testing indicates unsatisfactory results, the unit is evaluated by a qualified service technician. The facility manager is to inform the Office of the Campus Veterinarian (OCV) of system failures and discuss a backup plan for effective sanitation.

2.1.3 Surface Monitoring: In order to ensure the cage washing is sanitizing all surfaces of the cages/equipment effectively, randomly selected washed items are monitored for the presence of bacteria quarterly.

2.2 Hand-Washed Equipment: Cleaning items by handwashing relies on physical removal of dirt, debris and scale and the use of an effective disinfectant agent to sanitize items. Items that are hand-washed on a regular basis are monitored at

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least annually to ensure sanitation is being achieved.


- 2.2.1 Visual Monitoring: Cages/runs/equipment that are hand-washed are inspected after each washing to ensure items appear clean. All visible dirt, debris and scale should be removed by the washing process. If items do not appear clean, items are re-washed prior to use.
- 2.2.2 Surface Monitoring: In order to ensure the hand-washing protocol is sanitizing all surfaces of the cages/equipment effectively, washed items are monitored for the presence of bacteria. Items used for feeding such as feed/water bowls, water bottles, and sipper tubes as well as small primary enclosures such as small rodent or bird cages, are monitored to verify that the cleaning procedures are effective. Once individualized cleaning procedures have been documented to be effective, surface monitoring will be performed at least annually and repeated if the cleaning procedure is modified.

2.3 Autoclave Units: Autoclave units used to sterilize caging and equipment used in animal care are monitored to ensure units are working properly and that sterilization is being achieved. Per [CDC](#), “The sterilization procedure should be monitored routinely by using a combination of mechanical, chemical, and biological indicators to evaluate the sterilizing conditions and indirectly the microbiologic status of the processed items.”

- 2.3.1 A steam sterilization integrator strip is run with each load processed in the autoclave unit. Color change indicates sterilization criteria were met. A minimum of Class 5 must be used. Strips are placed inside the item to be sterilized to ensure interior surfaces are adequately sterilized. If bulk supplies are being autoclaved (i.e. bedding, feed, wrapped packs, etc.), the strip is placed/buried within (wrapped packs) or between (bedding/feed) the material. If the integrator strip indicates sterilization criteria was not met, the load should be re-run. Further monitoring is performed. Equipment may need to be evaluated and serviced by a qualified service technician, and OCV is to be notified.
- 2.3.2 A biological indicator is used to test autoclave units. Weekly processing of biological indicators that follows the [CDC Guidelines for Biological Indicators](#) is recommended. Although, for autoclaves used less frequently a modified schedule (monthly or with each load) may be adequate. A record must be kept of the biological indicator test results. If biological indicator results indicate sterilization criteria was not met, the unit must be evaluated and serviced by a qualified service technician, and OCV is to be notified.

2.4 Methods for Quarterly Sanitation Monitoring

- 2.4.1 ATP swabs detect residual adenosine triphosphate (ATP). The presence

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of ATP indicates that the item or surface has not been adequately cleaned and is potentially harboring bacteria or other microorganisms.

- 2.4.2 RODAC agar plates detect the presence of microorganisms by the appearance of surface colonies. If results indicate poor or unsatisfactory sanitation then further monitoring should be performed, and the washing unit will need to be evaluated and/or serviced by a qualified service technician or handwashing procedures will be re-evaluated.

3.0 Contact information:

3.1 Sanitation monitoring for ATP and surface colony counts is available through the WSU Office of the Campus Veterinarian (OCV)

3.1.1 Phone: 509-335-6246

3.1.2 Email: or.ocv.alert@wsu.edu

3.2 Recommendations on types and sources of biological indicators (BIs) are available through the WSU Office of Research Assurances Research Safety Program.

3.2.1 Phone: 509-335-4462.

4.0 References:

4.1 *Guide for the Care and Use of Laboratory Animals*, 8th edition.

<https://grants.nih.gov/grants/olaw/guide-for-the-care-and-use-of-laboratory-animals.pdf>

4.2 *Center for Disease Control and Prevention (CDC): Sterilizing Practices*. September 18, 2016.

<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/sterilization/sterilizing-practices.html>