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Title: Sanitation and Sterilization Quality Assurance and Monitoring

I. Purpose:

To provide standards for monitoring and quality assurance testing of equipment and methods used to clean, sanitize, disinfect, and sterilize animal caging and associated equipment and supplies. This policy also covers caging, equipment, and supplies maintained by laboratory staff.

II. Policy:

Equipment used for sanitization and sterilization must be monitored and maintained for adequate functionality as required by the Animal Welfare Act and the ILAR *Guide for the Care and Use of Laboratory Animals*.

Cage wash facilities shall use RODAC or ATP based testing to assess sanitation of caging and other reusable husbandry supplies/equipment that have been recently washed, sanitized and dried at least quarterly. Results must be logged.

For automatic cage and rack washers the temperature of the rinse water shall be logged at the beginning of each day prior to running the machine. (Machines with an interlock preventing operation until the appropriate temperature has been reached are exempt from daily logging). The preferred temperature and for wash and rinse water is 143-180^{o} F (*Guide* pp. 71). At least quarterly, a temperature indicators should be run through cage and rack washers. Results will be logged and kept with machine records.

Autoclaves or other sterilizers in regular use for primary sterilization shall be monitored using a spore ampule or other equivalent biologic indicator at least quarterly. For autoclaves or other sterilizers used infrequently (such as those used less than quarterly) the initial load shall be tested using a biologic indicator to ensure the autoclave is still working properly after downtime.

More frequent testing may be indicated by the Attending Veterinarian or designee during higher risk activities, or after unsatisfactory testing.

Glass bead sterilizers should be maintained and beads replaced per manufacturer's recommendations.

NOTE: Please see SafetyNet #26 for additional information on autoclaves and their safe and effective operation. Per SafetyNet #26 ***Autoclaves used for biologicals have increased testing and validation requirements, the Biosafety Office can offer guidance on autoclaves used for laboratory materials and biologicals. Please contact them at biosafety@ucdavis.edu***

High-risk activities such as feeding raw diets, unpasteurized food stuffs or other work involving known or suspected sources of potentially pathogenic bacteria or other organisms are subject to more stringent monitoring at the discretion of the AV. Raw food stuffs and unpasteurized products may be a hazard to personnel and a possible source of pathogens for animals. Extra precautions shall be taken to ensure equipment and materials are properly sanitized and disinfected. Increased frequency of biologic testing may be implemented during high-risk activities at the discretion of the AV or designee.

Non-movable or otherwise specialized caging in indoor facilities that cannot be sanitized by automatic cage or rack washers require hand-washing and are subject to RODAC or ATP testing at least annually. Examples include behavior testing chambers such as CLAMS units, metabolism cages, indoor kennels, etc.). Behavior testing equipment used in core facilities and PI laboratories must be tested annually using RODAC plates or ATP testers to validate that the sanitization methods are adequate and effective. Revalidation after a change of methods is recommended.

Infrequently used equipment (used less than annually), is recommended to be sanitized and tested prior to use to validate sanitization.

For aquatic species, testing of primary enclosures that are broken down for sanitation is recommended.

Results for all of the abovementioned testing modalities shall be available for review by the veterinarian and/or IACUC staff during visits and inspections.

III. Procedure:

Samples are collected at the intervals indicated above.

For samples submitted to laboratories other than the Comparative Pathology Laboratory (CPL) or done in-house, copies of testing results must be maintained by the animal facility, testing core or PI laboratory. Machines that are not functioning properly cannot be used until repaired and retested.

When submitting RODAC plates and spore ampules to CPL for analysis the following information must be included with the submission: **Date of test, location (building & room), type of test, and what was sampled.**

For RODAC plates indicate what equipment or locations were tested and **for autoclaves**

indicate cycle and location of ampule. For example, flash cycle on top of instrument or wet cycle inside bottle. The date of sampling should also be documented.

For ATP testing, indicate **what was sampled and date of sampling.**

For all testing methods it must be indicated if the test is routine or a resample for unsatisfactory results.

In the case of unsatisfactory results on RODAC or ATP testing, an immediate retesting can be done if there is question regarding testing method or contamination. Otherwise, equipment tested should be recleaned and resanitized in preparation for retesting. Retesting should occur within 30 days of the initial testing to verify effectiveness. For persistent failure results, a review of cleaning and sanitization methods should be performed.

For autoclaves that do not pass spore ampule testing, a retest can be done to verify the initial result. However, if the test fails again, the manufacturer or other service provider should be contacted.

For guidance or questions regarding this Standard of Care please contact Campus (CVS) Veterinary Services (530-752-0514) or your specific area Veterinarian.

The CPL submission sheet and more information can be obtained from CPL@ucdavis.edu or 530-752-2832 or cpl.ucdavis.edu