SAN DIEGO STATE UNIVERSITY

Office of Laboratory Animal Care
Standard Operating Procedures

Title: Cagewasher Operation & Maintenance

Date(s) Revised: 10/02/2019 RS

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1. BACKGROUND

A functional and properly operating cagewasher is essential to the daily operation of the animal facilities to ensure sanitization of soiled cages as a component of biosecurity and good husbandry. OLAC maintains open purchase orders for preventative maintenance, repairs and replacement parts with a cagewasher maintenance contractor to ensure ongoing operation of this critical equipment. Support from SDSU or SDSURF Facilities Services may also be required for minor repairs and utility connections for the cagewashers.

2. RESPONSIBLE INDIVIDUALS

OLAC Manager

OLAC Technicians

Equipment Maintenance Contractor

Facilities Services

3. DEFINITIONS

Sanitization- the process whereby pathogenic organisms are reduced to safe levels on inanimate objects, thereby reducing the likelihood of cross-contamination.

Rack washer-cagewasher large enough to accommodate a universal rack, shelf rack and ventilated rack in the chamber.

Cabinet washer-cagewasher with cabinet size chamber for washing cages and accessories.

Universal rack-large rack made to accommodate different types and sizes of cages and accessories.

Dump station-laminar flow unit for removal of soiled bedding from cages through a hole in work surface into trash barrel, minimizes occupational exposure to allergens.

4. MATERIALS:

Trash barrels, dumptruck

Scraper

Alkaline detergent

Acid detergent

Temperature tapes

Paperchip or hardwood bedding, nesting materials

Rodent cages and accessories

5. DOCUMENTATION AND COMMUNICATION

The rackwasher for processing caging at NLS and BSC will not complete cycle unless it reaches the sanitizing temperature of 180F for 2 minutes during the final rinse. This is also reflected in the ticker tape record during each cagewash cycle. A temperature tape that will not turn black unless it is exposed to 180F for 2 minutes during the final rinse is also placed on a wash load once each day to verify that the machine is reaching the required sanitization temperature. The cabinet washer at Alvarado requires placement of a temperature tape on each wash load to verify attainment of the 180F 2 minute exposure during the final rinse.

Both cagewashers receive preventative maintenance on a quarterly basis and the contractor issues a report for each PM inspection.

6. PROCEDURE

All soiled cages and accessories are taken from animal housing rooms by cart to the cagewash locations. The soiled cagewash in BSC 21 houses a dump station. Soiled bedding from cages is removed by scraper with gloved hands under the dump station sash into the trash barrel below. Soiled bedding from cages at Alvarado is scraped into a trash a barrel in the cagewash room. Heavily soiled cages may also require a rinse in the sink before placement into the cagewasher. Emptied cages and accessories are placed on the universal rack in BSC or directly into the chamber rack at Alvarado for washing. Shelf racks, carts, and ventilated racks emptied of cages with supply and exhaust blowers removed are placed directly into the rack cagewasher in BSC after removal of any gross debris with a hose. Each cagewasher has an approximately 20 minute alkaline wash cycle for each load. SDSU does not presently house species that excrete heavily alkaline urine deposits onto caging so an acid wash cycle is not required for routine washing. When alkaline deposit is present on cage washer, a phosphoric or citric acid detergent in the amount of a gallon may be added to the

cagewasher tank manually before the start of a cycle to remove hard water deposits from washer arms and jets.

After completion of the cycle, the door to the cagewasher on the clean side in BSC 20 Is opened for removal of the universal rack, shelf rack or vent rack and the door to the cabinet washer at Alvarado is opened for removal of caging and accessories. The rack and items that have not cooled to room temperature are handled with heavy rubber gloves but it is preferable to wait until they are cooled before handling.

Washed cages and accessories are removed from the rack for processing. If items are not free of debris, they are returned to the rack or cabinet washer for rewashing. Cages are filled with bedding and accessories are sorted for distribution to sanitized caging animal housing rooms or are prepared for autoclaving for autoclaved caging animal housing rooms.

Emergency Egress from Rack Cagewasher in BSC

Walk-in type cage/rack washers pose the possibility of entrapment which is eliminated by formal safety training and appropriate signage.

Personnel working in the cagewash area should never be inside the washer with both doors closed. The washer will not begin cycle unless both doors are closed and cannot be turned on to begin cycle from inside the washer chamber. Any person performing cagewash duties must verify that no one is inside the chamber before beginning the cycle. In the event a person is inside the washer chamber when a cycle begins, the cycle can be stopped and the doors may be opened from the inside on both clean and soiled side by pulling on the emergency cable located on both sides of the chamber. Pulling the cable will immediately stop the cycle. The doors can be opened by pushing the doors from the inside following pulling on either cables.

New employees are trained in the emergency egress procedures above. Records of training are kept in the OLAC training binder.