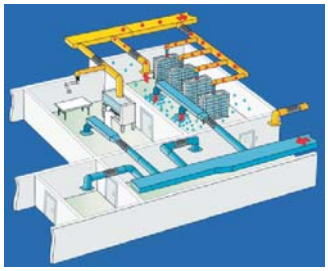
ANIMAL CARE SYSTEMS
OPTIMICE STANDARD OPERATING PROCEDURES/Updated November, 2005
Toll Free: 1-888-827-3861/Telephone: 720-283-0177/Fax: 720-283-0179
Additional instructions are downloadable at www.AnimalCareSystems.com

HOW OPTIMICE WORKS



Clean air is supplied by the buildings HVAC (heating, ventilation and air conditioning) system to each animal room. Typically, the air enters through supply vents and exits through exhaust vents in each room.

OptiMICE racks are connected by flexible hoses to the room's exhaust port or ports. Preferably there are specific thimble connectors dedicated for the OptiMICE exhaust hoses.

Conditioned room air is drawn sequentially through cage filters, rack exhaust plenum, and vent hoses in a controlled low-velocity, one-pass airflow. This air is at the same temperature and relative humidity as the room. Both cage and room air exhaust outside.

Air is not recirculated from the cages back into the room. This completely eliminates odors, allergens and contaminants from the room. The OptiMICE protects animals and personnel. It also provides flexibility, high-density, optimal conditions and a stable environment for the animals. This is accomplished without any consumption of electricity and without additional heat load in the room.

SET UP PROCEDURES

Identify a location in the room for unobstructed access from the top of the rack to the room HVAC exhaust. In most cases, there will be either ceiling penetrations or vents. There are several effective ways to make this connection. Please consult Animal Care Systems technical support if you are unsure how to do this. OptiMICE MUST BE CONNECTED TO NEGATIVE AIR PRESSURE.

Move OptiMICE into a position that has unobstructed access to the cages from one side, preferably the wide side (which has wider support pole spacing). Leave some clearance on all sides so the carousel of cages can be rotated without interference.

Connect both hoses to the exhaust system with a minimum airflow velocity per hose of 3.75 meters per second. Verify this with anemometer ACS #M79210. If it is not possible to have two hoses, cover one hose connection on the top of OptiMICE with cap ACS #M21080 and assure a minimum 7.5 meters per second airflow through the single hose. Optimal airflow is 5.6 meters per second for each of two hoses, or 11.2 meters per second for a single hose. We recommend using an air hose damper ACS # M79191 if airflow exceeds these optimal numbers.

- Be sure all cages have bedding, feed and water or water valve.
- Be sure all cages have properly installed cage tops.
- Be certain there is a filter in the front and in the rear of all cages.

Install cages in any order, horizontally, vertically or at random. Be sure they are firmly seated in the platter. Look at each row horizontally and each column vertically for any misalignment.

Turn the carousel with the staggered handles that protrude on opposite sides of each platter.

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RACK HANDLING PROCEDURES

Each rack consists of ten circular platters attached together to form a single carousel with a central exhaust air plenum. Each platter will accept ten cages. Each rack has two 3" quick-disconnect fittings on its center top for vent hoses, four casters of which two are lockable, and four structural posts. Posts are used as transport handles.

Rack WILL ventilate effectively with any number of cages installed.

Rack WILL NOT ventilate properly if:
- Both filters are missing from any cage
- Bottom drain valve is open
- Exhaust hoses are not connected to achieve air flow

Specific cages WILL NOT ventilate properly if:
- A filter is missing from that cage
- Cage top is missing from that cage
- A cage is not inserted fully into rack

Washing and Autoclaving Rack

1. Remove Cages
2. Disconnect both exhaust hoses from top of rack.
3. Be sure both openings on top of the rack are unobstructed.
4. OPEN THE DRAIN VALVE by pulling out on the wire handle that is located on the right side of the bottom platter near the one of the rotating handles. Pull outward on the wire handle completely and rotate 90 degrees upward (counterclockwise) to lock in place against the platter detent. Leave this open during washing or autoclave cycle.
5. Roll the rack into the wash or autoclave system
6. Allow to dry for at least one hour with the drain valve open

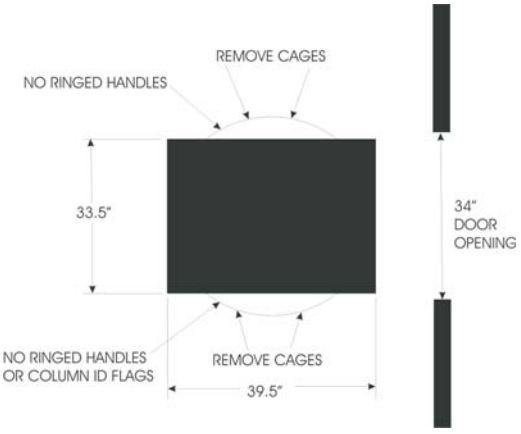
DO NOT AUTOCLAVE EXHAUST HOSES

KEEP DRAIN DOOR TIGHTLY CLOSED except when washing. To close drain door, pull wire handle slightly toward you, rotate 90 degrees downward (clockwise) and release. Be certain that the wire handle has moved completely toward the center of the rack. If it fails to completely seat by itself, push gently until resistance is felt.

The OptiMICE rack can fit through a door as small as 34" wide. For narrow doors follow these steps:
The rack measures (from red bumper to bumper) 33 ½" x 39 ½".

1. Rotate the rack so that the smaller dimension of the rack (33 ½") is aligned with the door.
2. Rotate the carousel so that none of the ringed handles will catch on the door frame. Remove any column/row ID flags if necessary.
3. Remove the two interfering columns of cages on each side of the rack.

The rack should now be able to fit through the door.



CAGE HANDLING PROCEDURES

Cages are available in Bayer Macrolon Polycarbonate (clear), Solvay Polysulfone (amber) or Solvay Polysulfone (smoke nearly clear). OptiMICE racks are available with or without automatic watering system installed.

Autoclave and Washing Cages

NOTE: ACS strongly recommends polysulfone for repeated autoclave use. Please refer to the following information for washing and autoclaving of cage parts.

Autoclave temperatures may vary widely during autoclave cycle. ACS cannot be responsible for damage due to improper settings or use of an autoclave system.

DO NOT STACK PARTS IN THE AUTOCLAVE
DO NOT STACK PARTS UNTIL THEY HAVE COOLED TO ROOM TEMPERATURE

- ***Polycarbonate cages, tops, bottles and caps may be autoclaved at a maximum of 250 degrees Fahrenheit (121 degrees Celsius) for up to 15 minutes.***
- ***Polysulfone cages, tops, bottles and caps may be autoclaved at a maximum of 270 degrees Fahrenheit (132 degrees Celsius) for up to 30 minutes.***
- ***For cage washing, set wash temperature to 180 degrees Fahrenheit (82 degrees Celsius). Use only non-alkaline detergent and rinse thoroughly with de-ionized water.***

There are four parts to each cage assembly: bottle assembly, feeder, cage base and cage top

Bottle assembly: Consists of bottle, seal, cap, and bottle hanger.
For wash or autoclave, place 15 bottles in basket ACS #C61011 with or without cap. Engage clasp on top of basket for secure handling. Some bottle caps have sipper tube.
Sipper tube must remain in cap. If damaged or loose, replace.
Seal and hanger should remain on bottle unless damaged. Replace if damaged.

Feeder: For wash or autoclave, stack together in groups of 10 to 15, place in a wire basket. Visually inspect for bent or broken wires and replace if damaged.

Cage base: Consists of cage bottom and two filter assemblies.
Visually inspect each cage for cracks or warping. Replace if damaged.
DO NOT REMOVE FILTERS unless damaged or clogged. Replace damaged filters with ACS#C79070
For Wash or Autoclave, place on a tunnel washer belt with the opening facing the direction of water jets. DO NOT STACK CAGES IN WASH OR AUTOCLAVE. For storage at room temperature, stack as high as is practical.
Inspect all cages before and after washing or autoclaving for cracks or warping.

Cage top: For Wash or Autoclave, place on edge in wire basket ACS#C61020.
DO NOT STACK TOPS IN WASH OR AUTOCLAVE. For storage at room temperature, stack as high as is practical. Inspect all cage tops before and after washing of autoclaving. Replace if damaged

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REMOVING CAGES

1. Remove cage from rack, preferable by using both hands at opposite sides of the cage. If you need to move the cage with one hand, grasp the tab at the bottom of the front filter or use your thumb and fingers to grasp the lower right corner of the cage. Pull up slightly and straight back to remove.
2. Rest cage on a clean flat surface such as an animal transfer station or changing station.
3. Remove top from cage using appropriate precautions for bio-safety.

CAGE CHANGING AT CHANGING STATION

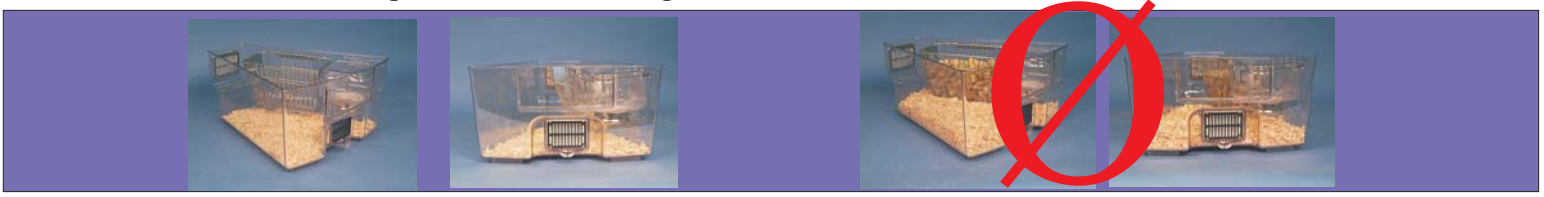
1. Clean the work surface area with sterilizer.
2. Keep sterilizer at changing station.
3. Place clean cage bottom assembly with bedding, fresh feed and water on the changing station.
4. Remove top for direct access to mice.
5. Take a mouse by the base of the tail, lift, and transfer it from soiled to clean cage.

BOTTLE CHANGING

1. Pull up on bottle to remove from cage.
2. Replace bottle by engaging wire hook on the side of bottle with the cavity on the right front side of the cage wall.
3. To remove cap, bottle cap tool around bottle neck with prongs down, grasp cap firmly and pry away from bottle in an angular motion OR secure tool on work bench (see instructions), insert bottle neck into tool and pry upward. *Note: tool must be positioned with prongs facing downward. Use rubber handle cover for hand use, remove for use with work bench.

CAGE BEDDING

Drop a handful (equivalent volume of 1.5 cup, 12 oz., 250 grams, or 350 ml) of Aspen shaving or similar type of bedding per cage. We recommend big, non-absorbent particles for high rate of desiccation. Too much, too small, or too absorbent bedding keeps moisture inside cages.



FEED

Fill feeder with appropriate amount of dry feed. Do not overfill the feeder as this will interfere with proper seating of the cage top.

REPLACE CAGE ON RACK

Be sure it is firmly seated on the platter and fully inserted into the rack. Look at each row horizontally and each column vertically to identify any cage misalignment.

NOTE: Place only complete cage assemblies on rack with mice, feed, bedding and water or valve. Do not place cage on rack without filters and a properly fitted cage top. Cages may be placed on the rack in any order.
DO NOT USE RACK TO STORE EMPTY CAGES.