

Cleaning and Disinfection Practices for Animal Facilities

Important Considerations:

Sanitation will only be effective if the correct steps are followed. A soap or detergent should be used to remove traces of dirt, feces, litter, grease, and other organic material prior to the application of disinfectant products that will kill harmful microorganisms (germs). Detergents are needed to help suspend dirt, feces and grease because disinfectants are inactivated by the presence of these organic materials. Although some disinfectants also contain detergents, many (such as bleach) do not. If the soap or detergent does not contain a degreasing agent, a separate degreaser may be required to remove greasy residue in animal contact areas.

Disinfectants

In order to be safe and effective, all disinfectants must be properly used as follows:

- Use only EPA approved disinfectants formulated for animal facilities.
- Always follow the label instructions and use at the correct concentration.
- Do not mix disinfectants and detergents, unless directed by the manufacturer.
- Apply disinfectants to clean, non-porous surfaces.
- Adequate contact time with surfaces, as directed by the manufacturer, is required for effective disinfection.

Using a Bleach Solution

1. Mix the bleach solution fresh at least every day and replace when visibly dirty.
2. Bleach is inactivated by sunlight and extended storage, and cannot be mixed with detergents.
3. Bleach must be applied to pre-cleaned surfaces.
4. For routine disinfection at an animal facility, dilute regular household bleach (6.0% sodium hypochlorite solution, containing approximately 5.7% available chlorine by weight) 1:32 with water (1/2 cup bleach per one gallon of water). Bleach solutions at concentrations less than this may not be effective and concentrations greater than this may cause corrosion and respiratory tract irritation.
4. Allow bleach solution to have at least 10 minutes of contact time with the surface, then rinse with water.
5. The following formula can be used to determine the proper dilution of bleach products containing more than 6% sodium hypochlorite:
$$21 \text{ divided by } \% \text{ of bleach} = \text{ounces of bleach per gallon of water.}$$
6. For the purpose of killing fungal spores (ringworm), bleach should be diluted with water at a concentration of 1:10 (1 ½ cups of bleach per gallon of water). Animals must be removed from the area and people should wear appropriate protective equipment when using 1:10 bleach solutions.

Recommended Cleaning Protocol

Clean all areas containing healthy animals first, then clean areas housing sick animals last. Use separate equipment, footwear, and garments for each area. Change the cleaning solution frequently.

1. **Mechanically remove** all organic material by scooping feces and sweeping or rinsing litter, food, urine and other organic matter.
2. **Clean surfaces using a soap or detergent** product, water, and mechanical scrubbing with a brush, rag, etc. Rinse surfaces thoroughly with hot water.
3. **Apply a disinfectant** appropriate for the facility and maintain the required contact time with surfaces, usually 10 minutes, before rinsing. Follow product label directions for animal facilities, which may differ from the general directions.
4. **Remove excess water** using a squeegee, fan or other means before returning animals to their enclosures.