



Best Practice: Cleaning and Sanitising Animal Care Facilities

Our aim is to provide you with valid information to enable you to make informed decisions about the products and methods you choose to clean and sanitise your animal care facilities.

In this report you will learn:

- The most common mistake made when cleaning kennels and catteries;
- The effect organic soils and faeces have on disinfectant;
- How mops can reduce a product's efficacy to eliminate bacteria and viruses;
- What every operator should know about bleach.

The most common mistake made when cleaning kennels and catteries

You would be forgiven for thinking that a supermarket grade disinfectant would adequately clean and sanitise your facility. Unfortunately this is not the case.

Supermarket Grade Disinfectants: These disinfectants rely on one ingredient to provide their sanitising capability - Alkyl Dimethyl Benzyl Ammonium Chloride (ADBAC) also known as benzalkonium chloride.

ADBAC is a single chain quaternary ammonium compound used in disinfectants since the early 1930s, and was once thought to be the solution to man's virus and bacteria problems. It has subsequently been proven that products containing ADBAC as the sole active ingredient are ineffective on a range of viruses and bacteria including non-enveloped viruses and protozan parasites. For this reason ADBAC based products, in our opinion, are unsuitable for animal care facilities and vet practices, or anywhere highly resilient viruses and bacteria are present, as they don't kill all the bacteria and viruses relative to the animal care industry.

As a best practice standard, we would highly recommend the use of professional animal care products that have been efficacy tested against the viruses and bacteria that are harmful to our domestic pet population, as the use of these cleaners and sanitisers will ensure your facility is safe for the animals under your care.

The effect organic soils and faeces have on disinfectant

Generally, when manufacturers of disinfectants test the efficacy of their products the conditions are sterile. In this sterile environment, the products are subjected to organic soils to determine at what stage they become ineffective. Soil tolerances vary between products so it can be confusing to staff and owners when evaluating what rating the products have. Some products have good organic soil tolerance and some rate very poorly. Regardless of what soil tolerance your product has, it is best practice to remove soiling **before** cleaning is undertaken and by doing so, any doubt surrounding a product's efficacy on the organic soiling will be removed.

Depending on how a product was tested, the effective contact time for disinfectants ranges between 3 to 10 minutes. Further complicating the issue, this contact time can vary between viruses and bacteria.

A best practice standard contact time of 10 minutes should be established. This means leaving the product **wet** on the surface for at least 10 minutes.

If you are using your disinfectant diluted as an antibacterial spray on a clean surface, a contact time of 1 minute is generally all that is required. Always check the manufacturer's recommendations first as products will vary particularly when used as antibacterial sprays.

Foot baths should be changed regularly ensuring fresh reactive chemical is available.

How mops can reduce a product's efficacy to eliminate bacteria and viruses

The use of a mop and bucket is the most common method of applying cleaners and sanitisers in large areas.

Unfortunately a damp mop is the perfect breeding ground for bacteria and viruses. Mops have the potential to be hazardous to a facility if they are not cleaned correctly after use, however it is not practical to replace mop heads every time a facility is cleaned.

A best practice standard to improve sanitising efficacy and reduce cross contamination of surfaces is to clean your mops as follows:

When the daily cleaning of a facility is finished, thoroughly rinse the mop head in fresh water. Then place the mop head in a new solution of disinfectant or diluted bleach for 5 minutes. Rinse the mop again in fresh water and leave to dry thoroughly.

This process will ensure you have a relatively sterile mop to clean with the next day.

What every operator should know about bleach

Bleach (liquid sodium hypochlorite) and bleach powders (calcium chloride) have the benefit of being cheap and highly effective at killing viruses and bacteria. This is due to their corrosive oxidising properties. There are however some critical points to consider that impact on how these chemicals perform in animal care facilities.

What Dilution Rate?: The dilution rate for bleach that is guaranteed to kill a range of viruses and bacteria is not widely known. This is due to the cost associated with the testing of the product and the low return rate for the company paying for the tests. From our experiences either too much or too little gets used. Both approaches are harmful to a facility. Too little is not effective and too much is dangerous to animals and workers.

Organic Soiling: Bleach is not effective on organic matter such as soil or faeces and is not an efficient cleaner having poor soil lifting properties. Consequently dirt and general soiling builds up on floors and other surfaces, reducing the efficacy of a diluted bleach solution. Bleach is not residual and breaks down very quickly. It will quickly kill viruses and bacteria on a **clean** surface and then deactivates.

Efficacy: It is not clear if sodium hypochlorite is effective against protozan parasites such as coccidia and giardia. Tests performed by Department of Environmental Biology, University of Guelph in Canada showed a 6% solution of sodium hypochlorite ineffective on the *Cryptosporidium parvum* oocysts after 30 minutes of exposure.

Health and Safety: Sodium hypochlorite needs to be used with care. Staff generally do not like using bleach, as it gives off fumes that can affect breathing or cause irritation to the skin and eyes. It also has a corrosive and "bleaching" effect when it comes into contact with clothing. Bleach is often used incorrectly in "hard to get at" places with the resultant problem being that bacteria and viruses are left untreated.

Toxicity: Bleach produces chlorine gas when mixed with substances such as heavy acids. This can also happen with strong urine. Appropriate ventilation is necessary when using bleach products in confined spaces or where urine is present.

Instability: Sodium hypochlorite has a short shelf life. It deteriorates in the storage drum; when mixed with water in a spray bottle; or when exposed to heat or heavy metals. This means that as the chemical ages, its efficiency to kill viruses and bacteria becomes compromised.

Dangerous Good: Bleach stored inappropriately is dangerous. It should never be decanted into new containers unless they are vented properly. It should be locked away from staff and animals. I have witnessed unvented drums of chemical being stored in a warm area around animals and were so swollen they were close to exploding!

I welcome any queries you may have with regard to this report or any further advice or assistance you require regarding sanitising and maintaining your quality animal care facilities.

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