When to Use a Cleaner, Sanitizer or Disinfectant

Picking the right product for the job

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Introduction

Cleaning is not sanitizing. Sanitizing is not disinfecting. Although the terms are often used synonymously, there is a significant difference among the three.

General cleaners remove dirt and debris from a surface and make things look shiny and clean. But they are not designed to remove the pathogens that can cause an illness. Sanitizers and disinfectants both reduce or remove the bacteria count on a surface, yet it is equally important to understand their differences as well.

Clean, Disinfect, Sanitize

Cleaning professionals must fully understand the differences among cleaning, disinfecting and sanitizing to know which products to choose for which job. Bruce Heller, president of Cavalier Inc., Norfolk, Virginia, keeps this simple by referring to the dictionary, which he says offers easy-to-understand definitions for each:

• Cleaning removes a soil from a substrate. Thus, he says, a cleaner will mix with soil allowing it to be removed.

• Sanitizing is to have a substrate deemed hygienic (from a public health perspective), thus sanitizers reduce, not eliminate, the growth of bacteria.

• Disinfecting is killing germs and bacteria.

In all cases, a janitor should first apply a general-purpose cleaner.

“The proper process is clean first, disinfect later,” says Bill Griffin, president of Cleaning Consultant Services in Seattle.

These products, though they cannot make a kill claim, have an important role to play, because a surface should be clear of dirt and debris before disinfectant is applied, he says.

“It’s not that [a general-purpose cleaner] won’t remove bacteria or viruses, but it won’t by itself kill bacteria or viruses,” says Griffin.

After the surface is properly cleaned, cleaning professionals must then decide whether to sanitize or disinfect. Once again, the distinction is important.

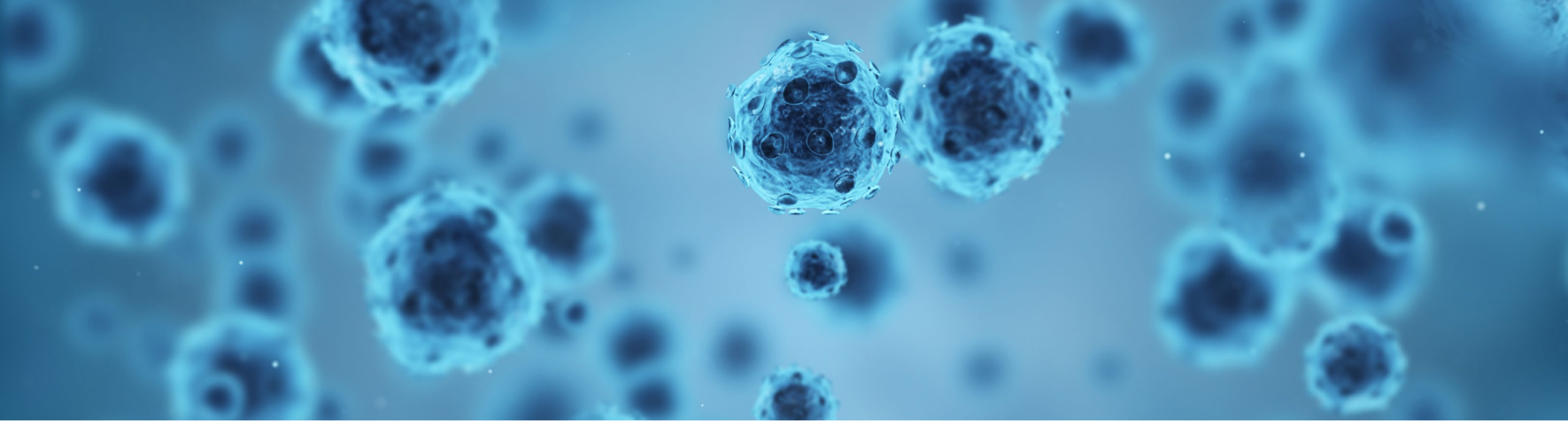
Sanitizers reduce microorganisms on a surface to a level considered safe by public health standards. A disinfectant, on the other hand, kills nearly 100 percent of bacteria viruses and fungi on a surface.

The standard is lower for sanitizers, which must reduce microorganisms on a surface by 99.9 percent within 30 seconds. To qualify as a disinfectant, the U.S. Environmental Protection Agency (EPA) requires that the solution reduces the levels of pathogens by 99.999 percent in five to 10 minutes.

That difference may seem small, but remember that surfaces contain millions of pathogens, and, depending on the germ, only a few particles may be necessary to spread infection.

Darrel Hicks, an infection prevention consultant in St. Louis and author of “Infection Prevention for Dummies” likes to use this example:

“On any given day, there are 102,465 commercial flights in the world,” he says. “If 99.9 percent of those flights arrived safely to their destination, then that means 1,025 airplanes would crash every day. At 99.999 percent, only 10 would crash every day.”



The other important thing to consider is which particular viruses, molds, bacteria or fungi a disinfectant is effective against.

“[The EPA requires] manufacturers of disinfectants to list everything that they are claiming it kills on the label,” says Charles Moody, president of Solutex Inc. of Sterling, Virginia.

These kill claims are also put on separate efficacy sheets that Moody says distributors should share and discuss with customers so they are fully aware of how the product may be used.

He cautions, however, that these products are only effective if the instructions on the bottle are followed to the letter. A disinfectant may say it’s effective against Methicillin-resistant Staphylococcus aureus (MRSA), for example, but only on a precleaned surface and after a five-minute dwell time.

“You can’t just spray a disinfectant on a dirty surface, wipe it off a second later and think you’ve fully disinfected a surface,” says Moody. “You have to follow what the disinfectant label says to do to have true disinfection.”

Get Away From Overuse

The cleaning industry is beginning to move away from products that kill germs when it might not be necessary, such as antibacterial soaps. Although sanitizers and disinfectants are still industry staples, their heavy use is also being questioned.

“It’s my opinion, and the opinion of many others, that as a culture we are using way too many disinfectants and sanitizers,” Griffin says.

Moody agrees, adding that microorganisms can become stronger when regularly exposed to disinfectants.

“It’s very much like how antibiotics became less effective against superbugs,” he says. “It was because we were using them too much.”

This phenomenon has required many operations to change the way they are cleaning, says Heller, noting the industry is starting to move away from disinfecting as matter of course.

“If a surface is truly clean, you then only need to disinfect high-touch or high-germ exposure areas,” he says.

Years ago, many hospitals would clean a surface then disinfect it automatically, says Griffin. Today, cleaning operations only disinfect in critical areas where there are bodily fluids or blood present, or in areas where certain medical procedures can lead to a higher risk of infection.

As a general rule, says Moody, janitors can apply a general-purpose cleaner 95 percent of the time, and then use a disinfectant on high-touch surfaces and restroom floors.

“They don’t need to mop a lobby floor with a disinfectant; a neutral cleaner would be fine there,” he says. “But when cleaning bathrooms, where there can be E. coli, excrement or urine on the floor, a disinfectant should be used. In those areas, a general all-purpose cleaner is not going to give any confidence that the organisms were killed.”

But remember, says Heller, that even in those cases, a general-purpose cleaner must still be used first to remove dirt and debris. Disinfecting sprays are not meant to be used for that initial cleaning.

“They are bug killers,” he says. “Effective cleaning will rarely be reached with a bug killer.”

Continuing Education

Distributors can bring their customers the most value when they understand the specific vertical markets their customers are cleaning.

Most industry experts today say there are some markets where using a sanitizer to kill the majority of germs, but not all, is adequate. For instance, in the foodservice industry, sanitizers are sufficient to clean dishes and utensils, as well as tables and surfaces in the front of the restaurant. The sanitizer kills germs effectively and quickly so that surfaces and tableware are ready for use again sooner.

Similarly, a daycare center might use a sanitizer to clean toys, counters or dishes, but it may need a disinfectant to tackle germs on things like changing tables and toilets.

On the flip side, there will be a greater need for disinfecting in healthcare or education settings, where building occupants are more vulnerable to germs, compared to an office building.

That said, cleaning professionals servicing office buildings will still find it useful to disinfect high-touch surfaces, such as elevator buttons, door handles and toilet flush handles, says Moody. He also recommends using disinfectants in areas where occupants come in direct contact with a surface, such as a shower floor in a gym, where athlete's foot might be a concern.

Initially, it might be wise to employ a broad-spectrum disinfectant, which has kill claims against many things and isn't quite as strong, says Moody. Later, if there is an outbreak, the cleaning staff can upgrade to a product with a specific kill claim. For instance, if there is a Norovirus outbreak in a daycare, the cleaning manager can add a disinfectant designed to kill that virus.

Cleaning professionals may need to switch products regularly to ensure that harmful bacteria don't develop a resistance to the product, says Griffin. An ATP meter can help determine whether a disinfectant is still successful at killing germs.

"Some places will switch every six months or so automatically, so bacteria don't have time to develop resistance," he says. "They might go from a quaternary ammonium to a phenolic or an iodoform to prevent this."

The best way to ensure end users are still utilizing effective cleaning and disinfecting methods is proper training.

"People get a false sense of security if disinfectants are not being used the way that the instructions state," says Moody. "A quick spray and wipe of the surfaces isn't going to get them clean."

In addition to adhere to the instructions on the bottle, proper personal protective equipment should be used to prevent potentially dangerous chemicals from entering the eyes of janitors or being absorbed through skin.

“Workers need to be equipped with safety gear and goggles, which is often not the case if they are using a disinfectant wipe,” says Moody.

What’s more, training is not a one-time endeavor, says Griffin. It should be ongoing.

“People need to understand the value and the benefit, and the reasons why they do these things, and how serious it can be if they don’t,” he says. “They need to know if the products aren’t mixed properly, they don’t kill properly. They need to know this can impact health, and that people can die from infections. They need to know they can get sick from using the products improperly as well.”