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**Cleaning and COVID-19: Read the Label**

Understanding ‘Danger’, ‘Caution’, ‘Warning’

If empty store shelves have you looking under your sink and wondering if the [cleaning products](https://agrilifetoday.tamu.edu/2020/03/25/texas-am-experts-offer-covid-19-cleaning-disinfection-guidelines/) you already own can kill the new coronavirus, you’re not alone. What you may not realize is many of your cleaning products are classified as pesticides — and reading and understanding the label is key to safe and effective use.

“In the eyes of the law, sanitizer and disinfectant products are considered pesticides,” said Mike Merchant, Ph.D., [Texas A&M AgriLife Extension Service](https://agrilifeextension.tamu.edu/) urban entomologist, Dallas. “And if you’re a little wary of using pesticides, you should exercise the same caution when choosing and using a disinfectant.”

Merchant explained the term ‘pesticide’ refers to any substance or mixture of substances used to prevent, destroy, repel or mitigate a pest. All pesticides are regulated by the U.S. Environmental Protection Agency, EPA, which gets to decide if, how and where they can be used.

“Pesticides that fight microbes are called antimicrobials,” Merchant said. “Antimicrobials that fight germs affecting human health can be further classified as sanitizers, disinfectants, virucides and sterilants.” Sanitizers kill bacteria; disinfectants kill fungi, bacteria and viruses. Virucides kill or inactivate viruses. Sterilants are the strongest and typically used in medical settings and will get rid of all fungi, bacteria, viruses and spores.

“About [275 active ingredients can be found in antimicrobials](https://www.epa.gov/pesticide-registration/what-are-antimicrobial-pesticides), most of which are considered [pesticides](http://npic.orst.edu/ingred/ptype/amicrob/index.html) and must have an EPA-approved label,” he said. “Most of the effective products that fight the SARS-CoV-2 virus, which causes COVID-19, are considered disinfectants or virucides.”

Here are the guidelines he suggests:

**The disinfectant label is the law**

Unlike instructions on a box of mac and cheese, instructions on a disinfectant label are the law, not suggestions. Using even a little more disinfectant than the label allows in a cleaning solution or failing to wear the proper safety gear specified on the label is a violation of state and federal pesticide laws.

**Understand signal words**

When deciding on a safe disinfectant to use in your home or workplace, consider the signal word. The signal word provides a quick reference to the relative hazard associated with using a product. One of three signal words – DANGER, WARNING or CAUTION must be on the front panel of any disinfectant product.

DANGER signals the highest warning. Such products may be highly toxic when ingested or may induce irreversible eye or skin damage if used without proper protective gear.

WARNING labeled products are moderately toxic if ingested or may cause reversible skin or eye irritation.

CAUTION labeled products will be the least hazardous, and would be best for home environments, especially where children are present.

**Read the precautionary statements**

Precautionary statements include specific requirements on what you must wear when applying the product. If you’re an employer or supervisor, it’s critical you provide training to ensure employees know disinfectant instructions and have the proper safety equipment.

**Pay attention to contact times on the label**

Many disinfectants must remain wet on surfaces for an extended time, usually 1 to 10 minutes, to effectively kill viruses and bacteria. Don’t assume you can immediately wipe down a surface that you treat with a disinfectant.

**Application methods and appropriate surfaces**

Pay attention to what surfaces the disinfectant is designed to be used on, and what kind of application methods are allowed by the label. If a product is labeled for use on hard, non-porous environmental surfaces, it shouldn’t be used on carpet or furniture.

**Look for an EPA registration number.**

This is a unique number that tells you the product has been reviewed by the EPA and allows you to reference it.  If you want to know whether your disinfectant is likely to be effective against coronavirus, you can look it up on a table by its registration number on the EPA’s website.

**Be careful with containers**

Safety shouldn’t stop after you’ve chosen and appropriately applied the product either. Disinfectants need to be safely stored and disposed of properly. The labels of products will tell you what you need to know, but you must read them. “Not reading and following label instructions puts you at risk of breaking federal and state pesticide regulations, not to mention putting your health at risk.”