What is the Difference between Clean, Sanitize and Disinfect?

How often do you clean your bathroom, kitchen or nursery and wonder whether you have performed it sufficiently? Should you use a cleaner or a disinfectant? What about superbugs and antimicrobial resistance? Will using a disinfectant contribute to the rise of superbugs?

These are all very good questions and fortunately, the EPA has published guidelines for many businesses that can be easily applied at home.

It is important to know what the differences are between the words clean, sanitize and disinfect. It may not change how you clean your home, or how often, but it may help you decide which products to use for the desired job. It may also help you understand the assistance of product labels included for certain applications.

Clean

Cleaning a surface refers to scrubbing it with water and a cleaning product. This does not kill germs but dirt, dust and some germs are washed away through the cleaning process.

Even if you plan on sanitizing or disinfecting surfaces, you should start with cleaning them first since a layer of dirt, dust, debris or grime can reduce the efficacy of chemical disinfectants and sanitizers.

Tips for cleaning safely and effectively

- Read the label of each product and gather any recommended safety equipment
- Make sure the cleaner product is safe on surface, some products like lemon juice will etch certain surfaces like marble and granite
- Use a cloth, sponge or scrub brush for hard to reach corners and crevices after applying the cleaning product
- Follow all directions and precautions on product labels
- Use water to rinse away product residue, dirt, germs and other impurities
- Dry the surface since moisture provides the perfect breeding ground for any germs left behind

Sanitize

Sanitizing a surface is accomplished with a chemical product or with heat or steam from a device like a steam cleaner or dishwasher. Sanitizing kills some germs but not all of them.

According to the EPA:

"Sanitizing does not necessarily clean dirty surfaces or remove germs. Most sanitizers, as well as disinfectants, require a clean surface in order to be effective at killing germs."

When looking for a sanitizer, pick one that is not considered a hazardous substance. It should not have words like "poison", "danger" or "warning" on the label. Like disinfectants, sanitizers should also have an EPA number on the label allowing you to verify that the product kills the germs that it claims to kill.

When using a sanitizer on a food prep surface, verify on the label that the product is safe to be used for that purpose. You should also check the dwell time to make sure you leave the product on the surface being sanitized for the appropriate amount of time. If a sanitizer or disinfectant has a dwell time of 12 minutes, it must remain wet while in contact with the surface being sanitized for the full 12 minutes. If the sanitizer dries out during this time, you will need to reapply to keep the surface wet for the entire dwell time.

Disinfect

A disinfectant is either a chemical product or a machine that produces steam or heat like a steam cleaner or dishwasher. Chemical products can be used to disinfect hard, non-porous surfaces and steam can be used on both hard surfaces and upholstered surfaces like rugs, furniture, or draperies.

The EPA definition states that disinfecting a surface requires using chemicals to kill 99.999% of germs on hard, non-porous surfaces." These chemicals kill germs on contact after a specific dwell time. The dwell time is the amount of time the disinfectant needs to remain on the surface in order to kill germs. Always check the labels of the disinfectants for dwell times, which may differ for certain bacteria and viruses. Consumers may be confused with the term "kills on contact" claim made by some companies. This does not necessarily mean that the product kills germs instantly.

When using a disinfectant, follow all directions on the label. Use all recommended safety equipment to protect your eyes, face, skin and clothing from dangerous chemicals. Like with sanitizers, check for the dwell time and plan accordingly. Also check dilution ratios for products that must be diluted with water. Remember, clean the area first if you are not using a one-step disinfectant. Cleaning may still be required for very dirty areas even with these all-in-one products.

This list from the EPA gives chemical ingredients to try to avoid in cleaners, sanitizers and disinfectants:

- 2-butoxyethanol (or ethylene glycol monobutyl ether) and other glycol ethers
- Alkylphenol ethoxylates (some common ones: nonylphenol and octylphenol ethoxylates, octoxynols)
- Bisphenol A
- d-Limonene
- Dyes (may be listed as FD&C or D&C)
- Ethanolamines (common ones to look out for: monoethanolamine [MEA], diethanolamine [DEA], triethanolamine [TEA])
- Fragrances
- Parabens
- Phthalates
- Pine or citrus oil
- Quaternary ammonium compounds Look out for these:
    - alkyl dimethyl benzyl ammonium chloride (ADBAC), benzalkonium chloride, dodecyl-dimethyl-benzyl ammonium chloride
    - lauryl dimethyl benzyl ammonium chloride
    - benzyl-C10-16-alkyldimethyl, chlorides
    - benzyl-C12-16-alkyldimethyl, chlorides
    - benzyl-C12-18-alkyldimethyl, chlorides
    - benzyl-C16-18-alkyldimethyl, chloride
    - didecyl and didecyl dimethyl benzyl ammonium chloride
- Triclocarban
- Triclosan

Anolyte is a non-toxic, non-corrosive, non-combustible, irritant-free household cleaner delivered with a fine mist spray onto hard-to-reach places and is safe for most surfaces. Anolyte is an EPA-registered hospital-grade disinfectant that is safe for home septic systems and does not have the “danger”, “warning” or “poison” signal words posted on the label. It does not require dilution and does not have to be rinsed from surfaces. Learn more about Anolyte on the EPA Claims sheet.

Disclaimer: Anolyte is an EPA-registered disinfectant and is the only Anolyte formula classified as an antimicrobial, antibacterial agent. The EPA does not assign safety claims to products classified as disinfectant agents; however, the EPA recognizes Anolyte as safe for septic and wastewater treatment systems. Use only as directed.