



Cleaning Products: Does it matter which one?

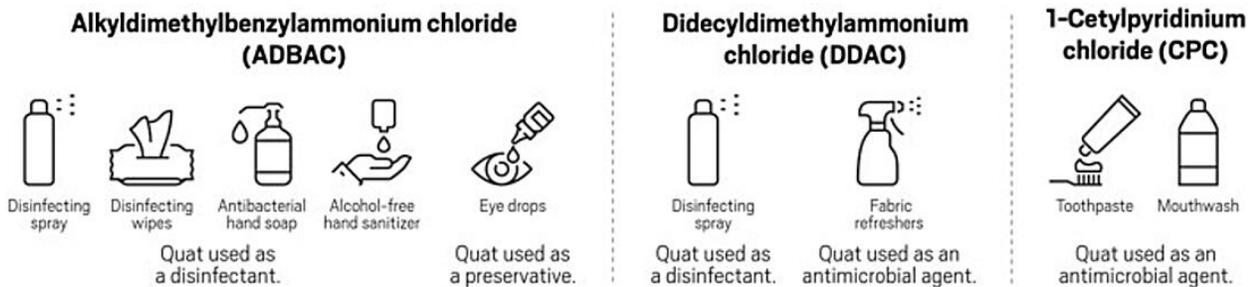
We clean to keep our families safe. But what cleaning products do you use? Many of us take "cleaning" products for granted. Maybe we buy whatever product is on sale or the one which had the catchiest messaging or the best cleaning power. But while you are trying to keep your family, friends, and staff safe from germs, have you ever asked yourself if those cleaning products are actually safe? We hope this research will arm you with salient information about safe, non-toxic solutions for cleaning and disinfecting versus the plethora of less safe products in the market.

Be Safe and Look at the Label.

If you choose cleaning products which contain quaternary ammonium compounds (known as Quats), then your cleaning products could pose serious health risks. Quats began appearing in American cleaning products in the early 20th century before the Environmental Protection Agency (EPA) began regulating the manufacture and sale of potentially harmful chemicals under the 1976 Toxic Substances Control Act. Quats were considered existing substances and allowed to continue being included in consumer products without being evaluated extensively for safety. Read more [here](#).

Quat Ingredient Names:

Quats are hiding in many household products - and go by many different names. Benzalkonium Chloride is one of the most widely used Quats and can be abbreviated in many ways (e.g., BZK, BKC, ADBAC, etc.). A few other forms are listed below. For a more comprehensive list of Quat names, visit this [link](#).



Quats: The Price is Low, but the Risks are High.

Over 5,000 household products contain Quats. Think about the exposure one person gets on a daily basis! **Quats are on our hands.** In one study, 50% of college students tested positive for residue of Quats on their hands ([source](#)). **Quats are in our blood.** In the same study, 80% of participants had detectable levels of Quat in samples of their blood ([source](#)).

Schools Are Taking Notice.

In 2019, the **New Jersey Education Association** advocated for the avoidance of cleaning products containing Quats ([source](#)). In August of 2020, the **California Department of Public Health** issued COVID-19 guidance for schools, which specified avoiding disinfectant products that contain quaternary ammonium and derivatives thereof ([source](#))

Look at the Science.

Quats Derail your Energy Power House! Remember in high school biology class, you may have learned about the parts of a cell. Do you remember the Mitochondria: "the power-house of the cell?" Quats have been shown to inhibit energy production by suppressing the natural processes of mitochondria ([source](#)).

Quats Interfere with Neural Development. It may sound funny, but our brains need a special type of cholesterol (produced inside the brain) to function correctly. Quats interfere with this natural process and may be linked to neurodevelopmental and neurodegenerative diseases, such as Autism, Parkinson's disease, and Alzheimer's disease ([source](#)).

Quats Increase Inflammation and Affect Hormones in Human Systems. Human studies show Quats change estrogen regulation. Mice studies regarding Quat exposure show decreased fertility ([source](#)).

How Do You Clean?

Do You Use a Rag While Cleaning? It's Probably NOT Disinfecting. Quats lose potency through a process called 'Quat Binding.' The science behind how this happens is simple: Quats are positively charged ions while cotton and other natural textiles are negatively charged; positive attracts negative. The result is that at least a portion of the Quat does not end up on the surface it is supposed to be cleaning.

In fact, one study found that the Quat level of a disinfectant remaining on a cotton cloth placed in a solution-filled pail was **decreased by 50 percent** after soaking for just 10 minutes. That means the solution applied to the surface would contain only half of the parts per million (ppm) listed on the label ([read more](#)).

Quats Become Food for Microbes. Many janitorial professionals know that before you sanitize a surface, you need to clean it. But did you know that you need to rinse the surface before you apply sanitizer? If a surface is not thoroughly rinsed free of detergent prior to the application of a Quat sanitizer, the positively charged Quat becomes electrically neutralized by the negatively charged detergent residue and its anti-microbial action can be *totally inactivated*. Even worse, the new compound formed by the combination of Quat + cleaner contains nutrient molecules that are an excellent growth medium for bacteria ([read more](#)).