Why is alcohol no longer the top choice for hand sanitizers?
The Facts behind Alcohol and Hand Sanitizers

**Fact 1:** In addition to being highly flammable, alcohol-based hand sanitizers have been banned from many public school districts in the country, as they pose a significant danger to children who might accidentally or intentionally ingest the product. To put things in perspective, light beer is “6 Proof”; wine is “24 proof”; vodka is “80 Proof”; Purell is “124 Proof”! The risk of alcohol poisoning is quite real, and it is a danger to small children.

**The DermAphex Alternative:** DermAphex is made with food grade ingredients that do not cause the serious side effects of isopropyl or ethyl alcohol. The FDA approved biocide used in DermAphex is frequently used in mouthwashes and toothpastes. Odds are children have already been consuming it without harmful side effects.

**Fact 2:** Alcohol-based hand sanitizers do not work well against Rhinovirus, the cause of half of all common colds. According to Professor J. Owen Hendley, Division of Infectious Diseases: Pediatric, University of Virginia School of Medicine, “The hand sanitizers, the problem with them, is that rhinovirus, which is responsible for at least half of colds in adults and children - rhinovirus kind of likes alcohol, which is the active ingredient in all the hand sanitizers that are available.”

**The DermAphex Alternative:** DermAphex has been independently tested and shown to kill 99.993% of Rhinovirus (test dated April 28, 2009).

**Fact 3:** Alcohol-based hand sanitizers claim to kill 99.99% of bacteria, yet laboratory tests have a difficult time reproducing these results. According to Dr. George Lukasik of Biological Consulting Services in Florida, one of the problems is that without agitation, alcohol only kills the top layer of bacteria, and the dead cells then form a protective layer that keep the alcohol from killing the harmful bacteria underneath.

**The DermAphex Alternative:** DermAphex has a unique carrier biocide that penetrates the protein layers of the dead cells, as well as the walls of the bacteria, thus enabling our biocide to access the bacteria cytoplasm and garner much higher kill rates at a far more reasonable cost than straight biocides alone. Even hard to kill Gram negative bacteria and MRSA cannot withstand DermAphex’s formula. This factor alone results in biocide efficacy rates that far exceed even the best claims of alcohol-based hand sanitizers.

---

**How can DermAphex claim to kill “one hundred times the bacteria” of the alcohol based hand sanitizers?**

As noted above, alcohol-based hand sanitizers claim to kill 99.99% of germs. This number was arrived at by exposing a group of bacteria called CFUs (Colony Forming Units) to alcohol. The number of CFUs created at the beginning is approximately $1 \times 10^4$ power, or 10,000 colonies of bacteria. That is the claim made by alcohol-based sanitizers. They can kill 10,000 CFUs.

**The DermAphex Alternative:** DermAphex has been repeatedly tested against MUCH higher standards. DermAphex not only killed 99.99% of the hard to kill viruses, but the bacteria testing shows that DermAphex can reduce not just 10,000 CFUs of things like E.coli and Salmonella with an application, but over 1,000,000 CFUs.

That’s 100 times the efficacy of the Leading Brands of alcohol-based hand sanitizers.

One more important fact about DermAphex: Alcohol stops working as soon as it dries. DermAphex has been tested and shown to be effective against common bacteria hours after it has been dried at body temperature. It’s like wearing a protective glove even after you use it!

That’s never been a better time to switch from the old-fashioned alcohol-based sanitizers to the new hand sanitizer for the 21st Century: DermAphex.