



## Not Your Mother's Hand Sanitizer

From Volume 47, Issue 5 - May 2010

### Feature

Alcohol-free hand sanitizers are an emerging trend in the JanSan market.

*by: Jay Berkman*

For years, the health care industry — along with government, municipal and corporate professionals — has been indoctrinated with the notion that alcohol gels and rubs are the "recommended" hand sanitizing alternative when washing with soap and water is not readily convenient.

And, as anyone in the JanSan industry will appreciate, the 2009 pandemic influenza A (swine flu) virus inspired not only an unprecedented focus on hand hygiene, but a massive spike in hand sanitizer product sales.

According to a recent Nielsen Company report, retail market sales of hand sanitizer for the 52-week period ending in October 2009 generated as much as \$180 million — a staggering 70 percent increase from the prior year.

While Nielsen does not include sales figures from institutional markets, those sales are equivalent to, if not greater than, consumer-market figures.

This revitalized focus on hand hygiene and the related surge in hand sanitizer product sales included a game-changing headline: Non-alcohol hand sanitizer manufacturers reported as much as 10-fold sales increases from 2008.

Up until recently, alcohol-free alternatives have been considered a nascent and "still emerging" product category, and thanks to the U.S. Centers for Disease Control and Prevention's (CDC) long-standing position that benefited a select number of companies known for their alcohol-based sanitizers, the non-alcohol sector has, until recently, represented no more than 1 to 2 percent of the overall market.

### A Prohibition Of Sorts

But, the combination of a continuous stream of academic studies pointing to the "downside" of alcohol-based hand sanitizers, coupled with heightened awareness on equally effective, yet safer and more environmentally friendly — and arguably more cost-efficient — hand sanitizer products has resulted in a major shift away from flammable, alcohol-based products towards alcohol-free products, most of which utilize the organic compound benzalkonium chloride as the active ingredient.

A quaternary ammonium, benzalkonium chloride has long been recognized as an efficient antibacterial and antiseptic agent proven to be upwards of 99.99 percent effective against a broad spectrum of pathogens, including enveloped and non-enveloped viruses.

Unlike alcohol, these products do not cause the skin to become dry or irritated, they are not flammable and they provide extended persistency.

While the health care industry has remained reticent, at best, to adopt these new formulations, procurements of non-alcohol sanitizers on behalf of government, municipal, military, correctional, corporate, senior care and educational venues has, according to many, taken distributors by surprise.

In turn, they've been inspired to reach out with both hands to well-equipped manufacturers of alcohol-free products and dispensing systems.

According to Dr. Richard Tooker, chief medical officer for Kalamazoo County, Michigan, "I don't know why we always seem to stress alcohol-based hand sanitizers. It may be to keep public education easier and less complicated. I personally don't like them because I have eczema and it

really dries and inflames my skin, increasing my risk for infection."

This new movement comes despite the fact that the CDC has provided nominal guidance on alcohol-free hand sanitizer alternatives for many years.

And, while the CDC did update its position on alcohol-free alternatives in an August 2009 memo directed to K-12 educational systems, their long-standing endorsement of alcohol-based hand sanitizer has been heavily discounted by a continually growing audience representing a broad spectrum of facilities — all of whom have either restricted or banned alcohol-based hand sanitizer products from their venues.

Case in point: In January 2009, the U.S. Naval Submarine Command officially prohibited alcohol-based sanitizers onboard their fleet of submarines.

With hands in their faces, these decision-makers have inspected the irritated skin caused by repeated application of alcohol sanitizers and researched the connection between dry or irritated hands and increased risk of exposure to easily-transmitted pathogens.

Consequently, many facility managers have migrated to well-documented and well-researched non-alcohol hand sanitizer products, as these products have proven to be:

- Equally, if not more, effective insofar as killing pesky pathogens when compared to alcohol-based products
- Safer to the skin
- Non-flammable
- Non-destructive to materials such as industrial floor wax, paint or clothing
- More persistent
- Two to three times more cost efficient, as non-alcohol, foam-formatted products require less frequent application.

### **Take The Good With The Bad**

Before reviewing the comparisons of any particular alcohol-free brands to alcohol-based alternatives, it is critically important to put the topic of hand sanitizers into proper perspective.

The more informed are inclined to ask, "What are the negative 'features' of benzalkonium chloride?"

Or, the very informed reader might be familiar with a memorandum submitted in 2003 by GOJO Industries Inc. to the Federal Drug Administration (FDA), in which GOJO solicited the FDA to prohibit the registration of benzalkonium chloride-based hand sanitizer products.

This request, which was denied by the FDA, suggested, but failed to demonstrate, that benzalkonium chloride-based products were "ineffective and potentially dangerous."

The potentially negative effects of alcohol-free, benzalkonium chloride-based hand sanitizers include notions that:

- Certain studies have found that while benzalkonium chloride is one of the safest organic compounds, excessive inhalation can have a negative effective on those suffering from asthma — merely proving the common wisdom that too much of anything is not good.
- While benzalkonium chloride has been the active ingredient in contact lens solutions for some time, enough studies have found that excessive application within eye drops can have negative effects on the cornea. Most responsible manufacturers of benzalkonium chloride-based hand sanitizer products caution against their products coming into contact with eyes. One need not be a trained health care professional to opine on the impact of applying an alcohol gel to the eyes.
- Select independent laboratory studies have found that certain pathogens develop a resistance to benzalkonium chloride when applied in high doses and with excessive frequency. Again, it confirms that too much of anything is potentially harmful.

Washing with soap and water remains the most effective hand hygiene protocol.

However, when soap and water is not readily available, one need not be an epidemiologist to recognize that certain non-alcohol hand sanitizer formulas are more pragmatic than alcohol.

---

*Jay Berkman is a principal of JLC Group, a Westport, Connecticut-based consulting firm that advises manufacturers of consumer and institutional products, as well as professional service firms. Within the hand sanitizer market, JLC Group has provided guidance and market analysis to MGS Brands Inc., the makers of "Hy5<sup>®</sup>," DEB SBS, Soapopular Inc., Paragon Marketing and Woodward Labs. Berkman can be contacted at [jay@jlcgroup.net](mailto:jay@jlcgroup.net).*