

November 14, 2007

**Educational Bulletin:**

**MRSA and Disinfectants  
Fact, Fallacy and New Technology**

**“Flesh Eating Bacteria! News at Eleven!”**

There is much hysteria surrounding the recent awareness of infections from bacteria known “MRSA”. Newscasters and headlines scream out the dangers, inciting fears. Some companies, looking to capitalize on those fears, are adding to the confusion and ignorance by claiming that they have the only product that will work on one type of MRSA called “CA-MRSA”.

The purpose of this bulletin is to calmly outline the facts about disinfectants and expose the fallacy, as supported by the “Guidelines for Infection Control” published by the Centers for Disease Control (CDC). We are also presenting a new breakthrough technology that offers a **proactive option** for preventing surface contamination, as supported by independent laboratory tests.

**Staphylococcus aureus:** Also known as “Staph”, this is the “SA” in MRSA. They are “gram-positive” bacteria and are easily killed by virtually all types of low level hospital grade disinfectants. Most, if not all, commercial disinfectants sold today are registered as effective against Staph. Staph infections can attack many parts of the body including organs, bones, skin, etc. For many years Staph has been successfully treated with antibiotics, mostly Methicillin.

**Methicillin resistant Staphylococcus aureus (MRSA):** Some strains of Staph have developed resistance to Methicillin, as well as other antibiotics. This has created a challenge for healthcare providers and has resulted in more severe outcomes in those infected, included a higher incidence of fatalities. However, it is important to know that, according to the CDC, *MRSA is not resistant to disinfectants*. It is still Staph and is still easily killed on surfaces. This is a direct quote from the CDC:

*“Additionally, both VRE and vancomycin-sensitive enterococci are equally sensitive to inactivation by chemical germicides, and similar observations have been made when comparing the germicidal resistance of MRSA to that of either methicillin-sensitive S. aureus (MSSA) or VISA. The use of stronger solutions of disinfectants for inactivation of either VRE, MRSA, or VISA is not recommended based on the organisms’ resistance to antibiotics.”*

***Community acquired Methicillin resistant Staphylococcus aureus (CA-MRSA):***

Until the late 1990's, MRSA was most often associated with hospital settings. Since then, MRSA has been reported in community settings, most notably in places where people come in close contact such as locker rooms of sports teams, health clubs, etc. The strain of MRSA that occurs in the community is different from the one that occurs in healthcare settings. Consequently, one is now referred to as "hospital acquired" (HA-MRSA), and the other is called "community acquired" (CA-MRSA). While both strains exhibit resistance to antibiotics, neither is resistant to disinfectants.

**Disinfectants and MRSA:** EPA registered disinfectants with label claims against Staph are effective against all Staph including both types of MRSA; hospital acquired (HA-MRSA) and community acquired (CA-MRSA). Those manufacturers that have gone to the time, effort and expense of getting those specific claims on their label have not brought new disinfectant technology to the industry. Those products are not significantly different formula than those with an overall Staph claim. So why do they do it? One reason is the "one-upmanship" contest that exists between manufacturers. The other reason is that they decided it is easier to go to the trouble of getting specific claims on a label than it is to train their sales force and educate customers on disinfectants and resistant bacteria. Unelko Corporation is committed to bringing well supported information to our customers that allows them to make informed decisions.

**Limitations of disinfectants:** the EPA requires that disinfectants are used according to label instructions. This refers to dilution rates, and most importantly, dwell time. This leads to the first major limitation of disinfectants. Most concentrated disinfectants require that they remain wet on the surface for five to ten minutes. *On vertical or uneven high-touch surfaces, such as hand rails, door knobs, handles, etc.* this is simply not possible. Even the best ready-to-use disinfectants will have dwell times that range from thirty seconds to ten minutes depending on the target organism. *Unfortunately, the most contaminated surfaces* are electronic devices such as telephones, computer keyboards, remote controls, slot machines, ATM and vending machine buttons, etc. Getting them wet with disinfectants for even a short time can severely damage them. That is why most of the time these surfaces are merely wiped down with a damp cloth or wiper. Without proper dwell time, they are not being disinfected, no matter what product is used.

The second major limitation to disinfectants is that none of them have residual activity. Once they are dry they stop killing germs. After that, every time someone or something touches the surface it is being contaminated with new germs that quickly multiply. Even dust settling on a surface will contaminate it. It is simply not possible to disinfect every surface before and after everyone touches it. That is why the CDC puts so much emphasis on washing or sanitizing hands. Unfortunately, very few people, even in healthcare settings, practice hand hygiene effectively.

**Microbial Shield – A new breakthrough technology:** At UNELKO CORPORATION, we have done extensive research and are now bringing to market a new line of products called SANI-SHIELD. These products are not registered disinfectants and are not intended to replace disinfectants.

**They perform three key functions:**

- 1. They deep clean the surface with hydrogen peroxide based cleaner.**
- 2. They protect the surface with a microscopic seal that reduces the adhesion and buildup of dirt, oils, scale, soap scum, etc.**
- 3. The microscopic seal is a barrier coating that prevents bacteria, mold or mildew from growing on it for at least five days in-between cleaning.**

**The antimicrobial shield claim is supported by independent testing conducted by Legend Technical Services, Inc.** After treating surfaces with **SANI-SHIELD**, they were inoculated with different types of bacteria including E. coli and Staph over the five days. The surfaces were tested 24 hours after each inoculation and the tests confirmed the **efficacy of SANI-SHIELD.**

For the first time, **UNELKO CORPORATION** now offers products that not only clean and protect; they also *prevent the growth of germs, including MRSA, between cleaning and disinfecting for at least five days!* Best of all, they work on all **high-touch surfaces** such as telephones, keyboards, etc. that are not currently being disinfected. Also, the **Material Safety Data Sheets** reveal that these products are completely non-toxic, environmentally friendly and safe on virtually all surfaces.

**SANI-SHIELD 3 in 1 Surface Care:** An all purpose ready to use liquid in quart bottles. It is safe and effective for all surfaces including glass, porcelain, ceramic, marble, granite, plastics, chrome, etc.

**SANI-SHIELD 3 in 1 Wipes:** The same as liquid Sani-Shield but in an individually packaged pre-moistened 9"x10" wipe.

**SANI-SCRUB 3 in 1 Surface Care:** This is a cream cleanser for heavily soiled surfaces such as sinks, tubs, showers, toilets and counters that require restorative cleaning. It provides the same protection against soil and germs as Sani-Shield.

**STAINLESS SHINE 3 in 1 Surface Care:** A water based stainless steel polish with all of the benefits of Sani-Shield.

**UNELKO CORPORATION**  
14641 N. 74<sup>th</sup> Street, Scottsdale, AZ 85260

**For more Information please contact your UNELKO Representative:**

**ED KERR, JR.**  
**S.W. BURR, INC.**  
**ARDMORE PA 19003**  
**1-800-331-6549**  
[Info@ProtectedSurfaces.com](mailto:Info@ProtectedSurfaces.com)  
**1-866-335-3771-Fax**

