Dear Dental Professional:

With regard to your comment and question:  *I have been reading about MRSA. Many believe that Purell Instant Hand Sanitizer kills MRSA. My understanding is that it doesn’t. What products are you familiar with that will kill MRSA?*

OSAP doesn’t test, evaluate, endorse, nor recommend products. We can however provide you with general information.

Only the manufacturer of the product can provide efficacy data concerning the antimicrobial activity claims. To obtain efficacy data you may contact the manufacturer directly.

Keeping in mind that not all hand sanitizers are alike and some do not contain alcohol, it is important to follow the Centers for Disease Control and Prevention's (CDC) 2002 hand hygiene guidelines. With regard to alcohol hand sanitizers, the CDC recommends choosing products that contain at least 60 percent alcohol. Further, detailed information may be obtained directly from the CDC hand hygiene guidelines.

With recent media attention to MRSA infections in the United States, the CDC is re-emphasizing the need for, and importance of, proper hand hygiene. It light of this new development they have posted new information for the public and healthcare facilities. This information may be obtain at:  
http://www.cdc.gov

Because of the importance of these guidelines, we would like to refer you directly to them. The hand hygiene guidelines include an appendix that includes the antimicrobial spectrum and characteristics of hand hygiene antiseptic agents that should be useful to you in selecting the product that would be appropriate for your use.

The hand hygiene guidelines may be viewed at:  
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5116a1.htm

The appendix to the guidelines may be viewed at:  
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5116a2.htm

We would also like to refer you to the CDC Guidelines for Infection Control in Dental Health-Care Settings: 2003. It should be noted that the guidelines also refer to the 2002 hand hygiene guidelines for further details. In part, the guidelines state the following concerning hand hygiene:

**Hand Hygiene**

Hand hygiene (e.g., handwashing, hand antisepsis, or surgical hand antisepsis) substantially reduces potential pathogens on the hands and is considered the single most critical measure for reducing the risk of transmitting organisms to patients and HCP. Hospital-based studies have demonstrated that noncompliance with hand hygiene practices is associated with health-care--associated infections and the spread of multi-resistant organisms. Noncompliance also has been a
major contributor to outbreaks. The prevalence of health-care--associated infections decreases as adherence of HCP to recommended hand hygiene measures improves. (1)

The microbial flora of the skin, first described in 1938, consist of transient and resident microorganisms. Transient flora, which colonize the superficial layers of the skin, are easier to remove by routine handwashing. They are often acquired by HCP during direct contact with patients or contaminated environmental surfaces; these organisms are most frequently associated with health-care--associated infections. Resident flora attached to deeper layers of the skin are more resistant to removal and less likely to be associated with such infections. (1)

The preferred method for hand hygiene depends on the type of procedure, the degree of contamination, and the desired persistence of antimicrobial action on the skin (Table 2). For routine dental examinations and non-surgical procedures, handwashing and hand antisepsis is achieved by using either a plain or antimicrobial soap and water. If the hands are not visibly soiled, an alcohol-based hand rub is adequate. (1)

The purpose of surgical hand antisepsis is to eliminate transient flora and reduce resident flora for the duration of a procedure to prevent introduction of organisms in the operative wound, if gloves become punctured or torn. Skin bacteria can rapidly multiply under surgical gloves if hands are washed with soap that is not antimicrobial. Thus, an antimicrobial soap or alcohol hand rub with persistent activity should be used before surgical procedures. (1)

Agents used for surgical hand antisepsis should substantially reduce microorganisms on intact skin, contain a nonirritating antimicrobial preparation, have a broad spectrum of activity, be fast-acting, and have a persistent effect. Persistence (i.e., extended antimicrobial activity that prevents or inhibits survival of microorganisms after the product is applied) is critical because microorganisms can colonize on hands in the moist environment underneath gloves. (1)

Alcohol hand rubs are rapidly germicidal when applied to the skin but should include such antiseptics as chlorhexidine, quaternary ammonium compounds, octenidine, or triclosan to achieve persistent activity. Factors that can influence the effectiveness of the surgical hand antisepsis in addition to the choice of antiseptic agent include duration and technique of scrubbing, as well as condition of the hands, and techniques used for drying and gloving. CDC's 2002 guideline on hand hygiene in health-care settings provides more complete information. (1)

Selection of Antiseptic Agents

Selecting the most appropriate antiseptic agent for hand hygiene requires consideration of multiple factors. Essential performance characteristics of a product (e.g., the spectrum and persistence of activity and whether or not the agent is fast-acting) should be determined before selecting a product. Delivery system, cost per use, reliable vendor support and supply are also considerations. Because HCP acceptance is a major factor regarding compliance with recommended hand hygiene protocols, considering DHCP needs is critical and should include possible chemical allergies, skin integrity after repeated use, compatibility with lotions used, and offensive agent ingredients (e.g., scent). Discussing specific preparations or ingredients used for hand antisepsis is beyond the scope of this report. DHCP should choose from commercially available HCP handwashes when selecting agents for hand antisepsis or surgical hand antisepsis. (1)
Additionally, most hand sanitizers only state that the product will kill 99-99.99% of common germs. Pfizer, Inc. is the manufacturer Purell and they do currently have a FAQ website with the following question/response:

*What germs does Purell Instant hand sanitizer kill?* Pfizer’s response: *Purell Instant Hand Sanitizer is effective against a wide variety of organisms including E. coli, Staphylococcus sp., Streptococcus sp., Salmonella sp. At > 99.99%.* (2)

*We can also provide you with two examples of products that the manufacturers state their product kills MRSA (in vitro). The first one is mentioned in the 2/24/06 (on-line) Infection Control Today Magazine that does state Hibiclens has been proven to kill MRSA (in vitro).* (3)

The second example is a product called Clinell wipes (can be used as a hand sanitizer). The manufacturer claims this product kills MRSA. This product is available through Order Healthcare and efficacy data would have to be obtained through this company. (4)

**Resources:**

1) CDC Guidelines for Infection Control in Dental Healthcare Settings: [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm)

2) Pfizerch, Inc.: [http://www.pfizerch.com/purell/content/faq.htm#q10](http://www.pfizerch.com/purell/content/faq.htm#q10)


4) Order Healthcare antimicrobial activity claims: [http://www.orderhealthcare.com/site/storyid/antimicrobial.html](http://www.orderhealthcare.com/site/storyid/antimicrobial.html)

**Additional Resources:**


Thank you for your support of OSAP!

OSAP has further information on infection control issues on its website at: [http://www.osap.org](http://www.osap.org) and additional resources at: [http://www.osap.org/displaycommon.cfm?an=7](http://www.osap.org/displaycommon.cfm?an=7). For the most current information on infection control issues, please join us in Palm Springs, CA., June 12-15, 2008, for the OSAP Annual Infection Control and Safety Symposium.

*Check out the new “I See IC Contest” at http://www.osap.org
You can win big and increase compliance in your facility!*

OSAP Members may ask OSAP questions at no charge. Non-members pay a modest fee. Everyone is encouraged to search OSAP’s “Ask OSAP” database for commonly-asked questions.