

# The Dental Professional's Guide to Surface Management

Infection control and prevention practices are extremely important in any oral health care setting. Dental Health Care Personnel (DHCP) have a responsibility to keep themselves, as well as patients and other staff, safe from infection. To do this, minimum standards must be met in order to prevent the transmission of infectious agents. Many state boards of licensure have regulatory standards for infection control in dental settings, including clinical disinfection. As the requirements can differ greatly from state to state, it is always a good idea for DHCP to check with their licensing agency.

This guide includes information that all DHCP should know about proper surface disinfection. It should be used in conjunction with the always-evolving, evidence-based research literature, Centers for Disease Control and Prevention (CDC) guidelines for infection control, and advice from other infection control associations or reliable health care professionals.



## Common Infection Control Terms

---

**Bactericidal:** capable of killing bacteria

---

**Bioburden:** blood, saliva and other bodily fluids

---

**Clinical contact surface:** surfaces that can be directly contaminated by either direct spray from the patient's mouth and devices used during patient treatment, or by contact with gloved hands

---

**Fungicidal:** capable of killing fungi

---

**Housekeeping surfaces:** surfaces such as floors, walls and sinks that do not require the same rigorous decontamination procedures as clinical contact surfaces

---

**Intermediate-level disinfectant:** an EPA-registered hospital disinfectant with a tuberculocidal claim

---

**Kill time:** the amount of time a disinfectant must remain on a surface in order to inactivate the microorganisms its label claims to kill

---

**Low-level disinfectant:** an EPA-registered hospital disinfectant without a tuberculocidal claim

---

**Precleaning:** removal of bioburden before disinfectants

---

**Shelf life:** the amount of time a disinfectant can be left unopened before it expires

---

**Sporicidal:** capable of killing bacterial spores

---

**Sterilant/high-level disinfectant:** an EPA-registered hospital disinfectant with the ability to inactivate bacterial spores

---

**Tuberculocidal:** capable of killing tuberculosis (TB)

---

**Use life:** the amount of time you can use an opened and/or mixed disinfectant before it is no longer effective

---

**Virucidal:** capable of killing some viruses

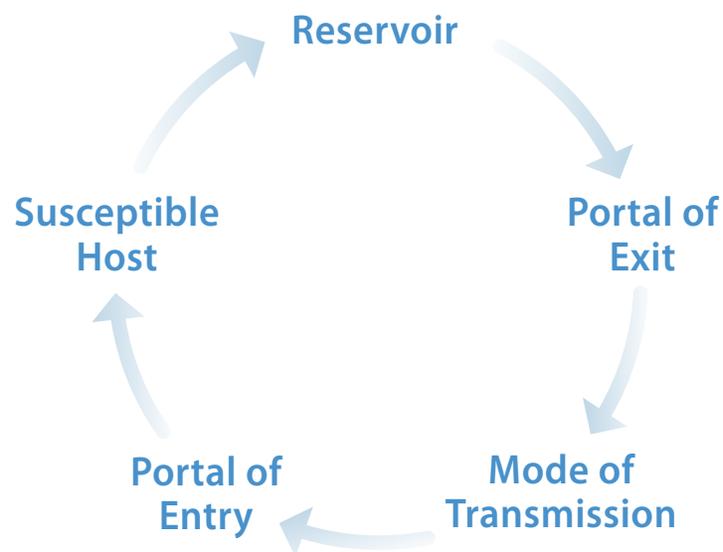
---

## Standards of Infection Control

The goal of infection control is to break the chain of disease transmission. DHCP must determine every possibility of disease transmission, including cross-contamination, and use methods and procedures that break the chain of transmission. Cross-contamination can occur from person to person, and can also occur from person to object or surface to person (see Figure 1). Standards of care provide guidelines for preventing the transmission of disease.

**Figure 1: Chain of Infection**

*Infections begin with a reservoir and, through a mode of transmission, enter a susceptible host.*



Source: Centers for Disease Control and Prevention

Standards are the minimum of what must be done to prevent the transmission of infectious agents. Infection control standards must be met in order to ensure a safe environment for DHCP, their patients and other staff. Never consider a patient “safe” because of his or her medical history, ethnicity, age or other personal factors. Consider every patient a potential risk for infection. Many people do not fully disclose their medical history and conditions on their medical history forms because they are either embarrassed or do not see the need to disclose them. One must also consider that some patients are unaware that they have a communicable disease. According to the CDC, more than 18% of individuals with HIV in the United States are unaware of their infection. Most people infected with hepatitis B are unaware of their infection because the virus may not present any symptoms. Therefore, DHCP must meet infection control standards with each and every patient.

## Levels of Disinfection or Sterilization

The “CDC Guidelines for Infection Control in Dental Health-Care Settings—2003” explains that in the United States, liquid chemical germicides (disinfectants) are regulated by the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA). In health care settings, the EPA regulates disinfectants that are used on environmental surfaces (housekeeping and clinical contact surfaces). The EPA registers environmental surface disinfectants based on the manufacturer's microbiological activity claims. For the purpose of selecting an appropriate disinfectant for the type of contamination present on a surface, the CDC divides EPA-registered hospital disinfectants into two categories based on the product's ability to kill the resistant organism, *Mycobacterium tuberculosis*. Low-level disinfectants will kill lipid and nonlipid viruses and many vegetative bacteria and fungi, but are not tuberculocidal. These products are indicated for surfaces that are not contaminated with blood. Intermediate-level disinfectants will inactivate *M. tuberculosis* in addition to other less-resistant microorganisms (see Figure 2). Intermediate-level disinfectants are indicated for any blood-contaminated clinical surface. The CDC guidelines suggest that selecting one appropriate product with a higher degree of potency to cover all situations might be more convenient than using separate products for different levels of contamination. The more potent product would be the intermediate-level disinfectant with a tuberculocidal claim. The FDA regulates liquid chemical sterilants/high-level disinfectants (e.g., glutaraldehyde, hydrogen peroxide and peracetic acid) used on critical and semicritical patient-care devices. These products have limited use in dentistry and are not appropriate for use on clinical surfaces; they are used for immersion disinfection/sterilization only.

**Figure 2: Decreasing order of resistance of microorganisms to germicidal chemicals.**

Organism	Processing Level Required	
<b>Bacterial spores</b> Geobacillus stearothermophilus Bacillus atrophaeus	FDA sterilant/high-level disinfectant (=CDC sterilant/high-level disinfectant)	Sterilization
<b>Mycobacteria</b> Mycobacterium tuberculosis (TB)	EPA hospital disinfectant with tuberculocidal claim (=CDC intermediate-level disinfectant)	Inactivates
<b>Nonlipid or small viruses</b> Polio virus Coxsackie virus Rhinovirus		Inactivates
<b>Fungi</b> Aspergillus Candida		Inactivates
<b>Vegetative bacteria</b> Staphylococcus species Pseudomonas species Salmonella species	EPA hospital disinfectant (=CDC low-level disinfectant)	Inactivates
<b>Lipid or medium-sized viruses</b> Human immunodeficiency virus Herpes simplex virus Hepatitis B and hepatitis C Coronavirus		Inactivates

Source: Adapted from Bond WW, Ott BJ, Franke K, McCracken JE. Effective use of liquid chemical germicides on medical devices; instrument design problems. In: Block SS, ed. Disinfection, sterilization and preservation. 4th ed. Philadelphia, PA: Lea & Gebiger, 1991:1100.

## Main Factors to Consider When Choosing a Surface Disinfectant

### Kill Time

Kill time refers to the amount of time a surface disinfectant must stay wet on a surface in order to effectively inactivate an infectious agent. Always use the longest kill time that the surface disinfectant lists. For example, a surface disinfectant might have a 1-minute HIV kill time and a 10-minute TB kill time. Go by the 10-minute kill time in order to effectively kill all infectious agents that the product claims to kill. (See Section **G** on page 6.)

### Compatibility

Because a surface disinfectant is used between every patient, the surfaces in the operatory are exposed to it regularly. Therefore, it is important to choose a surface disinfectant that is compatible with all of the various surfaces you plan to use it on. A surface disinfectant should not dry out, discolor, corrode or leave a large amount of residue on your surfaces.

### Efficacy

A surface disinfectant should effectively inactivate any viruses, fungi or bacteria that may be present during a dental procedure. In most instances, an intermediate -level disinfectant that inactivates TB is recommended for use. There are certain microorganisms associated with particular claims on a product label. Microorganisms that are most difficult to inactivate are more commonly known as “benchmark microorganisms” because anything less aggressive is assumed to have been inactivated, as well. (See Figure 3.) (See Section **G** on page 6.)

**Figure 3: Benchmark Microorganisms**

Label Claim	Classification of Organism	Microorganism
Tuberculocidal	Mycobacteria	Mycobacterium tuberculosis
Bactericidal	Gram-Positive Bacteria	staphylococcus
Bactericidal	Gram-Negative Bacteria	pseudomonas
Fungicidal	Fungus	trichophyton mentagrophytes
Virucidal	Enveloped Virus	herpes simplex
Virucidal	Nonenveloped Virus	rotavirus

## Environment

Many dental practices search for products with a low environmental impact. When considering “green” products, it is important to select those that are equally effective. Always read the manufacturer’s product label to ensure you are using an EPA-registered, hospital-level disinfectant. A few key words manufacturers use to market their products as “green” are listed in Figure 4.

**Figure 4: Environmental Terminology**

Term	Definition
Biodegradable	Able to be broken down to more basic components (carbon, hydrogen and oxygen) by bacteria, fungi and other simple organisms
Carbon Footprint	The amount of carbon (CO <sub>2</sub> ) gas, which is primarily responsible for global warming and climate changes, emitted in a year
Eco-Friendly – “Green”	Refers to low toxicity, ability to be recycled and no VOC emission
VOC – Volatile Organic Compound	Gases emitted from certain solids or liquids

These key words not only refer to chemical compositions, but also to product packaging options. Cleaners and disinfectants are available in ready-to-use or concentrate form. Both pose different benefits, but concentrate products have less packaging, which reduces shipping weight and costs, ultimately leaving less of a carbon footprint than ready-to-use products on the market.

### Cleaning Ability

Cleaning removes debris that may harbor infectious agents from an area, while the disinfection step inactivates them. If a surface is not pre-cleaned, it reduces the effectiveness of the disinfection process. Many, but not all, surface disinfectants are cleaners as well as disinfectants and may be used for both such steps.

### Other Factors to Consider

- Odor: It is important to choose a surface disinfectant that is free of any fragrance, which may help reduce the risk of airway irritants.
- Shelf life: Disinfectants usually carry shelf lives, or dates by which the product must be used, that can vary between active ingredients.
- Toxicity: The toxicity category indicates how harmful the product may be to its user or patient. (See Section **C** on page 6.)

## Reading Product Labels

The following information is required to be placed on all disinfectant labels, but individual layouts may change.

**A** **Virucidal<sup>†</sup>**  
**Bactericidal**  
**Tuberculocidal**  
**Surface Wipes**

**Hospital & Dental Cleaner / Disinfectant**  
Ready to Use - Contains Biodegradable Detergent

**B** **KEEP OUT OF REACH OF CHILDREN**

**C** **CAUTION**  
See side panel for additional Precautionary Statements.

**D** **ACTIVE INGREDIENTS:**  
n-Alkyl (60% C<sub>14</sub>, 30% C<sub>16</sub>, 5% C<sub>12</sub>, 5% C<sub>18</sub>)  
dimethyl benzyl ammonium chloride ..... 0.154%  
n-Alkyl (68% C<sub>12</sub>, 32% C<sub>14</sub>)  
dimethyl ethylbenzyl ammonium chloride..... 0.154%  
**OTHER INGREDIENTS** ..... 99.692%  
**TOTAL** ..... 100.000%  
**EPA REG. NO 70144-2-51003**      **EPA EST. 1130-IL-1**

**E** Made in the U.S.A.  
Manufactured for: **BIOTROL™**      Net Weight: 1 lb. 8 oz. (680.4 g)  
Net Contents: 100 Wipes  
Order No. DOCW06-100

**F**

Front Panel

- A** **Restricted Use Pesticide Statement**
- B** **Child Hazard Warning Statement**
- C** **Signal Word** - Signifies the toxicity of a product in relationship to five types of exposures. The most severe finding must be the signal word reported on the product label.
  - Toxicity Category I - DANGER
  - Toxicity Category II - WARNING
  - Toxicity Category III - CAUTION
  - Toxicity Category IV - None Required
- D** **Ingredient Statement** - The primary active ingredients listed by weight percentage. Inert ingredients are typically not listed and rather lumped together for a weight percentage.
- E** **Net Contents/Net Weight**
- F** **Product Name, Brand or Trademark**

6

**G** **DIRECTIONS FOR USE**  
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. **This product effectively kills the following microorganisms at room temperature with a 3-minute contact time:** *Acinetobacter baumannii*, Hepatitis B Virus\* (HBV), Hepatitis C Virus\* (HCV), Herpes Simplex II Virus\* (HSV 2) G Strain, Human Immunodeficiency Virus\* (HIV-1) (associated with AIDS), Influenza Virus\* Strain A2/Hong Kong, Methicillin Resistant *Staphylococcus aureus* (MRSA), *Mycobacterium bovis* BCG (tuberculosis) (TB), Polio I Virus\*, *Pseudomonas aeruginosa*, Rhinovirus\*, Rotavirus\* Strain WA, *Salmonella enterica*, *Staphylococcus aureus* and Vancomycin-Resistant *Enterococcus faecium* (VRE). This product has demonstrated effectiveness against Influenza A Virus\* and is expected to inactivate all Influenza A Viruses including Pandemic 2009 H1N1 Influenza virus\*.

**DO NOT USE THIS PRODUCT AS A BABY OR SKIN WIPE, OR ON CONTACT LENSES!**  
Opti-Cide 3 Surface Wipes are disposable, single-use wipes pre-saturated with Opti-Cide 3 disinfectant solution. When used as directed Opti-Cide 3 Surface Wipes clean and disinfect surfaces found in areas/facilities concerned with hazards of cross-contamination from infectious microorganisms: dental facilities, schools, laboratories, clinical areas, patient care areas, dental offices, hospitals, surgical centers and operating rooms. May be used on devices/surfaces potentially contaminated with disease-causing microorganisms: dental equipment/surfaces/devices, counters, curing lights, finished surfaces, office fixtures, eye protection devices, computer keyboards, telephones, X-ray equipment/surfaces and use sites made of Plexiglas®, plastics (i.e. polycarbonate, polypropylene, polyvinylchloride and polystyrene), baked-on painted surfaces, stainless steel and non-porous vinyl.

**DISPENSING DIRECTIONS**  
To start feed, remove cover and discard seal. From the center of the wipe roll, pull up a wipe corner, twist it into a point and thread it through the hole located on the container cover. Pull through about one inch. Replace cover. Pull out first wipe and tear off at an angle. Remaining wipes feed automatically, ready for the next use. When not in use, keep center cap closed to prevent evaporation.

**CLEANING AND DISINFECTING INSTRUCTIONS**  
Use a fresh Opti-Cide 3 Surface Wipe to pre-clean surfaces of all gross filth and heavy soil. Repeat as necessary until surfaces are visibly clean. To effectively disinfect the pre-cleaned surfaces, use a new Opti-Cide 3 Surface Wipe to thoroughly wet the surfaces and allow surfaces to remain wet for 3 minutes at room temperature. Use enough wipes to ensure that the surface remains wet for the three-minute contact time. Allow surfaces to air dry before use, or if desired, rinse surface after 3 minutes using potable water and wipe or air dry.

*This product is not to be used as a terminal sterilant or high-level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes, but which does not ordinarily penetrate the blood barrier or otherwise enter sterile areas of the body. This product may be used to pre-clean or decontaminate critical and semi-critical medical devices prior to sterilization or high-level disinfection.*

Back Panel

- G** **Directions for Use:**
  - Intended use of the product
  - Identifies microorganism the product is effective against
  - Application sites
  - Personal protective equipment required
  - Kill times and shelf life
- H** **Storage and Disposal Instructions**
- I** **First Aid Statement** - Accidental exposure instructions for the end user and physician
- J** **The Four Most Common Types of Precautionary Statements:**
  - Hazards to humans and domestic animals statement
  - First aid statement
  - Environmental hazards statement
  - Physical or chemical hazards statement

7

**HBV, HCV & HIV-1 PRECAUTIONS**  
Opti-Cide 3 Surface Wipes effectively inactivates HBV, HCV and HIV-1 on pre-cleaned environmental surfaces/objects previously soiled with blood/body fluids in health care or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood/body fluids and in which the surfaces/objects can be associated with the potential for transmission of HBV, HCV and/or the human immunodeficiency virus Type 1 (HIV-1) associated with AIDS. **Special instructions for cleaning and decontamination against HBV, HCV and HIV-1 of surfaces/objects soiled with blood/body fluids:** **Personal Protection:** Wear appropriate barrier protection such as gloves, gowns, masks, or eye coverings. **Cleaning Procedure:** Blood and other body fluids must be thoroughly cleaned from surfaces/objects before disinfection. **Contact Time:** Allow the surface to remain wet for 3 minutes prior to wiping. **Infectious Materials Disposal:** Cleaning materials used that may contain blood/body fluids must be autoclaved and/or disposed of in accordance with local regulations for infectious materials disposal.

**H** **STORAGE AND DISPOSAL**  
Do not contaminate food or feed by storage or disposal.  
**Storage:** Store in a cool, well-ventilated area. **Product and Container Disposal:** Dispose of wipe in trash after use. Do not flush. Tightly close lid between uses to retain moisture. **Nonrefillable Container:** Do not reuse or refill this empty container. Offer empty container for recycling. If recycling is not available, discard container in trash.

**I** **FIRST AID**  
**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. **If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. **If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-255-3924 for emergency medical treatment information.

**J** **PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**  
**CAUTION:** Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapors and contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**PHYSICAL OR CHEMICAL HAZARDS**  
Do not use or store near heat or open flame.

Biotrol  
13705 Shoreline Court East  
Earth City, MO 63045  
(800) 822-8550

12002829B  
DOCW06100-81486B-0911

7 39470190002 1

Side Panel

## Surfaces in the Dental Care Environment

Surfaces in the dental operatory can be divided into two categories: clinical and housekeeping.

Clinical contact surfaces are those that can be directly contaminated by either direct spray from the patient's mouth and devices used during patient treatment, or by contact with gloved hands. Clinical contact surfaces may serve as a source of cross-contamination to other instruments, devices, hands and gloves. Some examples of clinical contact surfaces include dental radiographic equipment, countertops, chairside computer components, light handles and switches, and controls on dental units and chairs.

Housekeeping surfaces, such as floors, walls and sinks, do not require the same rigorous decontamination procedures as clinical contact surfaces. The majority of housekeeping surfaces need only be routinely cleaned with a detergent and water. An EPA-registered hospital disinfectant may be used if it is reasonable to suspect that it may contain blood or bodily fluids. Mops and cloths should be cleaned, rinsed and allowed to dry between uses. If there is visible blood contamination, the housekeeping surface should be carefully cleaned, followed by application of an EPA-registered hospital disinfectant.

### Clinical Contact Surfaces



Housekeeping Surfaces

## Sprays vs. Wipes

Surface disinfectants are available in spray and wipe form. Both are effective in disinfecting clinical contact surfaces. Whether sprays or wipes are used in the practice depends on the practice's preference. Keeping both options on hand is wise, as there may be certain instances where one may be more appropriate than the other.

It is important to note that proper disinfection occurs in two parts: cleaning followed by disinfection, regardless of whether the practice is using a spray, or a wipe. To find out if a product is both a cleaner and disinfectant, refer to the front of the product label. Two approaches can be taken to achieve proper disinfection: the "spray-wipe-spray" or "wipe-discard-wipe" method (see "Proper Application of a Surface Disinfectant" on page 11).

### Sprays:

- Less expensive
- Able to reach areas wipes cannot access
- Better for disinfecting objects, such as impressions

### Wipes:

- More convenient
- Perceived as less noxious to sensitive individuals because they limit the potential for aerosols.

In many cases, disinfection occurs using sprays or wipes (or both) in conjunction with the use of barriers. The most common surfaces within a dental practice that benefit from barriers are those that are shaped unusually or endure a lot of wear. Examples of these surfaces include handles, headrests, light handles and evacuation handles. Barriers are applied to cleaned and disinfected surfaces prior to a procedure, and are then removed and replaced prior to the next patient. For this reason, using barriers tends to be a more expensive and wasteful option than traditional disinfection, though many find it to be a time-saving convenience.



## Personal Protective Equipment (PPE)

PPE refers to attire worn by DHCP to prevent direct contact with bodily fluids, such as blood and saliva. PPE should be used any time there is potential for splash, spray or spatter that may contain patient body fluids. It should also be worn while disinfecting the work area or exam room.

**Eye and Face:** Goggles, glasses or face shields prevent spray or aerosol from entering the eyes. Protective eyewear must meet the American National Standards Institute (ANSI) standards for spatter and impact protection.

**Mask:** A surgical mask should properly cover the nose and mouth in order to prevent the inhalation of spray particles or aerosols in the air.

**Clothing:** Protective clothing, such as a knee-length lab coat or clinical gown, should cover intact and non-intact skin from spray. Gowns must be adequate to prevent spray or spatter of bodily fluids from contacting skin or clothing. The CDC and the Occupational Safety and Health Administration (OSHA) have stated that in most situations, DHCP should wear long sleeves.

**Heavy-Duty Utility Gloves:** Utility gloves prevent the surface disinfectant from coming into contact with hands. Wearing gloves limits the risk of any skin reaction or irritation that its ingredients may cause. Utility gloves also help protect the DHCP from accidental puncture injury when handling used, sharp items during the clean-up process.



## Proper Application of a Surface Disinfectant



1

PPE

Apply proper PPE.



2

CLEAN

Apply cleaning spray or wipe to remove any visual debris (i.e. bioburden).



3

DISCARD

Dispose of the wipe/paper towel/gauze that was used to clean the surfaces.



4

DISINFECT

Apply the disinfectant—often times the same product as used in step 2—and leave it wet for the entire kill time indicated by the manufacturer.

## References

Bond WW, Ott BJ, Franke K, McCracken JE. Effective use of liquid chemical germicides on medical devices; instrument design problems. In: Block SS, ed. Disinfection, sterilization and preservation. 4th ed. Philadelphia, PA: Lea & Gebiger, 1991:1100.

Centers for Disease Control and Prevention. "Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008." Web. 24 April 2013.

[http://www.cdc.gov/hicpac/Disinfection\\_Sterilization/5\\_0cleaning.html](http://www.cdc.gov/hicpac/Disinfection_Sterilization/5_0cleaning.html)

Centers for Disease Control and Prevention. Principles of epidemiology, 2nd ed. Atlanta: U.S. Department of Health and Human Services; 1992.

Darby M, Walsh MM. Dental Hygiene Theory and Practice. 3rd ed. St. Louis: Saunders, 2010: 79-99.

Govoni, M. "Eco-Friendly Surface Disinfectants." The Richmond Institute for Continuing Dental Education. Web. 24 April 2013. <http://www.richmondinstitute.com/article/infection-control/eco-friendly-surface-disinfectants>

Miller CH, Palenik CJ (Eds) (2010). Infection Control and Management of Hazardous Materials for the Dental Team, 4th ed. St. Louis MO. Mosby Elsevier.

Molinari JA, Harte JA (Eds) (2010). Practical Infection Control in Dentistry 3rd ed. Philadelphia PA. Lippincott Williams & Wilkins.

United States Environmental Protection Agency. "Pesticide Label Review Training, Module 2: Parts of the Label." Web. 24 April 2013.

Wilkins E. Clinical Practice of the Dental Hygienist. 10th ed. Baltimore: Lippincott Williams & Wilkins, 2009: 69-83.

## References for Test Organisms

CDC. Guidelines for Infection Control in Dental Health-Care Settings—2003. MMWR 2003;52(RR17):Appendix A: Regulatory Framework for Disinfectants and Sterilants. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a2.htm>

## Infection Control Resources



American Dental Association  
[ada.org](http://ada.org)



American Dental Assistants Association  
[dentalassistant.org](http://dentalassistant.org)



American National Standards Institute  
[ansi.org](http://ansi.org)



Centers for Disease Control and Prevention  
[cdc.gov](http://cdc.gov)



Occupational Safety and Health Administration  
[osha.gov](http://osha.gov)



Organization for Safety, Asepsis and Prevention  
[osap.org](http://osap.org)



United States Environmental Protection Agency  
[epa.gov](http://epa.gov)

**This guide was reviewed and edited by Evelyn Cuny, MS, BA, and Molly Newlon, DDS, MA.**

Evelyn Cuny, MS, BA, is the Director of Environmental Health and Safety and Assistant Professor in the department of Dental Practice at Pacific Dugoni School of Dentistry. Ms. Cuny is also a consultant to the ADA Council on Scientific Affairs and the FDI Education Committee.

Molly Newlon, DDS, MA, is the Director of Health and Safety at the University of California, San Francisco School of Dentistry.

© 03/2014 Biotrol.



**BIOTROL™**

Infection Control Down to a Science

866.753.4431