

# OPT/IM 1 FAQ

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## What is a disinfectant?

A chemical agent used on inanimate objects (e.g., floors, walls, or sinks) to destroy virtually all recognized pathogenic microorganisms, but not necessarily all microbial forms (e.g., bacterial endospores). The U.S. Environmental Protection Agency (EPA) groups disinfectants on the basis of whether the product label claims limited, general, or hospital (intermediate) disinfectant capabilities.<sup>1</sup> Manufacturers that label products with disinfectant claims are responsible for having data to demonstrate that the product is efficacious when used as labeled.

OPT/IM 1 has been proven to be effective against **Tuberculosis**, **Viruses** (ex. Adenovirus, Poliovirus, Norovirus, Rotavirus, RSV, HIV, HBV, HCV, and Influenza A), **Bacteria** (ex. MRSA, VRE, E.Coli, and PSA), and **Fungicides** (ex. C. Albicans and Trichophyton Mentagrophytes).

## What is Accelerated Hydrogen Peroxide?

It is OPT/IM 1's active ingredient. Accelerated hydrogen peroxide is a synergistic blend of commonly used ingredients that are listed on the Environmental Protection Agency (EPA) *Inerts List*, the FDA *GRAS list* and Code of Federal Regulations (CFR) 21 *Food Additives List*, that when combined with low levels of hydrogen peroxide, dramatically increase its germicidal potency and cleaning performance.

## What is the difference between OPT/IM 1 and OPT/IM 33TB?

OPT/IM 1 and OPT/IM 33TB are based on the same basic ingredients. The main difference between the two is the organic acids used. OPT/IM 1 employs two different acids which replace the one used in OPT/IM 33TB. The different organic acid compounds act in synergy with peroxide to increase efficacy beyond that of the existing product. The PH of the two solutions is similar.

## Which surfaces can be cleaned and disinfected by OPT/IM 1?

OPT/IM 1 has been tested to be compatible with hard surfaces, including but not limited to dental chairs, stools, lights and counter tops if used according to our instructions for use on the label.

Surfaces that are composed of brass, copper, or other ferrous metals and soft plastic may show signs of discoloration or damage if not used as directed. Anodized aluminum (often used on

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<sup>1</sup> CDC, "Guideline for Disinfection and Sterilization in Healthcare Facilities" *CDC*. 2003, 4.

handpieces) and carbon tipped instruments should be avoided. Please refer to the product label or our *Instructions for Use*.

### **Can OPTIM 1 be used to disinfect my dental chairs?**

Yes, OPTIM 1 can be used to disinfect your dental chairs.<sup>2</sup> However, it is important to remember that it is best practice to rinse all surfaces weekly with water to prevent surfactant build.

### **What is OPTIM 1's shelf life?**

OPTIM 1 has a two year shelf life from date of manufacture. The expiration date is listed on each container.

### **How do I properly dispose of OPTIM 1?**

OPTIM 1 liquid can be poured directly down the drain, there is no need to dilute it with water since hydrogen peroxide breaks down into water and oxygen. Wipes should be disposed of in the trash after use; do not flush them down the toilet. The empty container should be recycled and if recycling is not available it can be discarded in the trash.

If the wipes have been used on surfaces where blood or body fluids were present, they should be disposed of according to federal, state and local regulations for infectious waste disposal.

### **Does OPTIM 1 have any special storage requirements?**

OPTIM 1 should be stored in a cool dry area, away from direct sunlight and heat, and inaccessible to small children.<sup>3</sup>

### **What is OPTIM 1's contact time, and what does that mean?**

OPTIM 1's contact time is one-minute. That means that the surface must remain wet for 1 minute in order for disinfection to occur.

### **Are any of the ingredients in OPTIM 1 carcinogenic?**

No, all of the ingredients in OPTIM 1 are on the Environmental Protection Agency (EPA) *Inerts List*, the FDA *GRAS list* and Code of Federal Regulations (CFR) 21 *Food Additives List*.

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<sup>2</sup> John Molinari, Ph.D., Peri Nelson, B.S. *Effect of Optim 1 on Tensile Properties of Dental Chair Fabrics*. Ann Arbor: Dental Advisor, 2016.

<sup>3</sup> OPTIM 1 Safety Data Sheet

## **Do I need to wear personal protective equipment when disinfecting clinical contact surfaces?**

Yes, you should always wear appropriate personal protective equipment such as utility gloves when cleaning and disinfecting contaminated surfaces to protect against pricks and pokes.<sup>4</sup> However, as stated in OPTIM 1's *Safety Data Sheet*, PPE is not required to handle the product, particularly in non-clinical settings, because it is not irritating to the skin.

## **Can OPTIM 1 be used to clean surfaces?**

Yes, OPTIM 1 has been tested as a one-step cleaner disinfectant, meaning it cleans your surfaces as it disinfects. Please refer to the product label or our *Instructions for Use* to learn how to use our product as a one-step cleaner disinfectant.

## **Is OPTIM 1 an intermediate level disinfectant?**

Yes, OPTIM 1 has a one-minute efficacy claim against Tuberculosis. Any disinfectant that has an efficacy claim against Tuberculosis is an intermediate level disinfectant and can therefore be used to disinfect your clinical contact surfaces.<sup>5</sup>

## **Why doesn't OPTIM 1 have any of the new GHS hazard pictograms?**

You may have noticed many disinfectants having new labels that include hazard pictograms they didn't have before. This is because the revised hazard communication standard (HCS) of the new globally harmonized standard (GHS) has specific criteria for each health and physical hazard, and establishes both hazard classes and hazard categories. The previous HCS did not include categories for most of the health hazards covered by the GHS HCS, so this new approach provides the consumer with more information for awareness and that can be used to address the hazard.<sup>6</sup>

As with the old criteria, OPTIM 1 has been classified as non-hazardous in accordance with GHS HCS and therefore does not require any hazard pictograms, signal words or statements.<sup>7</sup>

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<sup>4</sup> CDC, "Guideline for Disinfection and Sterilization in Healthcare Facilities" *CDC*. 2003, 26.

<sup>5</sup> CDC, "Guideline for Disinfection and Sterilization in Healthcare Facilities" *CDC*. 2003, 61.

<sup>6</sup> OSHA, "Hazard Communication," OSHA. <https://www.osha.gov/dsg/hazcom/> (accessed December 2016).

<sup>7</sup> OPTIM 1 Safety Data Sheet

## **Is it OK to place disinfectant in a container with 4X4 gauze for use on dental equipment?**

It is not recommended because the bleach in the gauze may inactivate the disinfectants.<sup>8</sup> However, it is acceptable to spray OPT/IM 1 onto 2x2's or 4x4's or c-fold towels for immediate use. Please note that it is not recommended to spray any disinfectant directly onto any surface.

## **What is the difference between accelerated hydrogen peroxide and the hydrogen peroxide that can be purchased at a drug store?**

Hydrogen Peroxide purchased at a Drug Store is a 3% hydrogen peroxide mixed with water. Accelerated Hydrogen Peroxide, is a blend of 0.5% Hydrogen Peroxide, other inert ingredients/surfactants, and water. This blend results in a better cleaning capability and a faster contact time than the hydrogen peroxide you can buy at the drugstore.

## **Is the efficacy or stability of OPT/IM 1 affected if the product is frozen?**

Freeze–Thaw studies have been conducted on OPT/IM 1 to ensure that freezing will not have a negative effect on the stability & efficacy of AHP. If product is frozen, simply allow the product to thaw at room temperature. Once the product is completely thawed, shake to ensure the product has not separated into different phases prior to first use of the bottle.

## **Can OPT/IM 1 be mixed with other chemicals?**

It is never advisable to mix different chemical products. OPT/IM 1 should never be mixed with any other chemicals.

## **I recently switched to OPT/IM 1 after using a QUAT based product, what is causing the musty odor & film left on the surfaces?**

Quaternary Ammonium Compound (QUATs) based products leave residual chemistry on surfaces. OPT/IM 1 will remove the residual chemistry that has been left on the surface; however, there may be several layers of residual chemistry to remove. The odor and film you are experiencing is caused by the QUATs reacting to OPT/IM 1 removing it. It may take between 5 and 10 days of OPT/IM 1 use before the odor and film disappear.

To prevent this from happening we recommend cleaning your surfaces with soap and water before switching to a new disinfectant.

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<sup>8</sup> OSAP, "Frequently Asked Questions (FAQs) on Dental Infection Control | Instruments & Equipment Disinfection," OSAP. [http://www.osap.org/?FAQ\\_Instrum\\_Disinf1](http://www.osap.org/?FAQ_Instrum_Disinf1) (accessed December 2016).

## **Can OPT/IM 1 be used to sanitize and disinfect children's toys in dental clinics?**

Yes, OPT/IM 1 has been classified as non-hazardous by the GHS hazard communications standard, and is in the Environmental Protection Agency (EPA)'s lowest toxicity category, category 4. However, in accordance with EPA's label requirements for all registered disinfectants, food contact surfaces **must be rinsed with potable water**. As children's toys do have the possibility to come in contact with children's mouths, the toy must be rinsed with potable water once disinfected.

## **Can all disinfectants clean and disinfect in one-step?**

No. Organic matter (food, blood or body fluid) on the surface forms a barrier that can either increase the contact time required to reach and kill the germs, or prevent their contact entirely.

OPT/IM 1 is effective in the presence of organic matter, meaning it is a one-step cleaner. To ensure this, OPT/IM 1 has been tested in the presence of organic matter called serum. The serum test measures the product efficacy when organic soils are present. To check whether a disinfectant has been tested with serum, check the label to see if it says "tested in the presence of 5% serum load."

## **How do disinfectants perform against antibiotic resistant bacteria?**

Antibiotic resistance does not mean chemical resistance. These bacteria have developed resistance to antibiotics pertaining to human clinical situations. This does not mean that these strains are resistant to chemical disinfection. Most disinfectants, such as OPT/IM 1, are tested against antibiotic resistant strains such as VRE, MRSA etc. These are shown on the label claims.

## **Do some disinfectants continue to sanitize for up to 24 hours, even after the surface is dry?**

No. Products that make this claim leave behind active residues, however the surface needs to be wet for those active residues to continue to disinfect. These products leave behind residues because they don't readily degrade, but rather build up in the environment. OPT/IM 1 does not leave behind any active residues.

## **Is the use of disinfectants contributing to antimicrobial resistance?**

Yes, studies show that disinfectants that leave an active residue behind on surfaces contribute to the development of antimicrobial resistance, a major global health crisis we are facing.

It is best practice to look for disinfectants with active ingredients that readily degrade into the environment such as hydrogen peroxide, such as OPT/IM 1. Accelerated hydrogen peroxide breaks down into water and oxygen leaving no active residues behind, ensuring that it won't contribute to antimicrobial resistance.<sup>9</sup>

## Does it matter which pathogens (viruses, bacteria, etc.) an intermediate level disinfectant can kill?

Yes. Disinfectant product labels often include a long list of pathogens that it can kill, but which ones are the most important? Pathogens are divided into classes, and each class has a surrogate organism that is the gold standard or more difficult to kill pathogen in that class, for example:

<i>Class</i>	<i>Surrogate Organism</i>
Vegetative Bacteria	Pseudomonas aeruginosa and Staphylococcus aureus
Viruses	Poliovirus
Mycobacteria	Mycobacterium bovis (Tuberculosis)
Fungi	Trichophyton mentagrophytes
Bacterial Spores	Bacillus subtilis and Clostridium sporogenes

When choosing a disinfectant, it is important to make sure that it can inactivate the more difficult pathogens so that you can feel confident that you are killing virtually everything.

## What color and scent does OPT/IM 1 have?

For environmental and health reasons there are no dyes or fragrances added to OPT/IM 1. Most fragrances used are classified as volatile organic compounds (VOCs) which are known as one of the leading causes of fragrance sensitivity and negative affects to indoor air quality.

<sup>9</sup> Ulas Tezel, Spyros G. Pavlostathis, "Role of Quaternary Ammonium Compounds on Antimicrobial Resistance in the Environment," in *Antimicrobial Resistance in the Environment, First Edition* ed. Patricia L. Keen et al. (Toronto: John Wiley & Sons, Inc, 2011), 349-387.

[https://www.researchgate.net/publication/230547727\\_Role\\_of\\_Quaternary\\_Ammonium\\_Compounds\\_on\\_Antimicrobial\\_Resistance\\_in\\_the\\_Environment](https://www.researchgate.net/publication/230547727_Role_of_Quaternary_Ammonium_Compounds_on_Antimicrobial_Resistance_in_the_Environment)

**I understand that the pH of accelerated hydrogen peroxide is acidic. Will this cause irritation or serious damage to unprotected skin?**

No. Accelerated hydrogen peroxide is acidic because it contains small amounts of food acids. Food acids are not toxic and found naturally in food, such as vinegar (acetic acid), citrus fruits (citric acid), Vitamin C (ascorbic acid), and Coca-Cola™ (phosphoric acid). If food acids are carefully formulated, like they are in OPTIM 1, they do not cause irritation.<sup>10</sup>

**Is OPTIM 1 safe for disinfecting VPS impressions?**

Yes. A study was done to test the effects of OPTIM on VPS impression materials' surface detail and dimensional stability. The study found that when used in accordance with our instructions for use there was no damage done to the impression.<sup>11</sup>

**Is OPTIM 1 (or any intermediate level disinfectant) effective against C. difficile?**

No, no intermediate level disinfectants can kill C. difficile. However, accelerated hydrogen peroxide based products like OPTIM 1 can be used as a preventative method against C. difficile outbreaks and related Hospital Acquired Infections (HAI). A study done by the *American Journal of Infection Control (AJIC)* concluded that daily use of accelerated hydrogen peroxide disinfectant was superior to using a cleaner alone because it resulted in significantly reduced rates of HAIs caused by C. difficile.<sup>12</sup>

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<sup>10</sup> VIROX, "Disinfection Digest: pH: Is it an appropriate indicator of product safety?," VIROX. [https://cdn2.hubspot.net/hubfs/241248/ph\\_is\\_it\\_an\\_appropriate\\_indicator\\_of\\_product\\_safety\\_HH.pdf](https://cdn2.hubspot.net/hubfs/241248/ph_is_it_an_appropriate_indicator_of_product_safety_HH.pdf) (accessed December 2016).

<sup>11</sup> Dr. Raghunath Puttaiah, "Compatibility of Hydrogen Peroxide-Based Surface and Immersion Disinfectants with Elastomeric Impression Materials." Toronto: Spectrum Dialogue Volume 12, Issue 2 (2013), 66.

<sup>12</sup> M.J. Alfa et al., "Use of a daily disinfectant cleaner instead of a daily cleaner reduced hospital-acquired infection rates," *AJIC* Volume 43 (2015), 141-6.