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Choosing a Hard Surface Disinfectant

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Disinfectants are the first line of defence against pathogens wanting to wage war on your dental facility. Is your disinfectant really providing you, your clients, and your staff with the protection that they deserve?

Deciding on which hard surface disinfectant to use in your practice does not have to be a complicated, drawn-out process. It should be a decision free from any biased, external influences and based on supporting facts and information.

The best advice anyone can offer on how to choose which hard surface disinfectant to use is to simply read the label and the Safety Data Sheet (SDS) of the product being considered. Other available material should be read but most of the important information needed to make an informed decision can be garnered from the product label and SDS.

When reading the label and the SDS, you should consider the following important factors:

- cleaning efficacy
- disinfection efficacy
- health and safety profile
- environmental responsibility
- cost in use

Manufacturers of surface disinfectants perform a balancing act to produce a product that is efficacious, environmentally responsible, and safe to use. Competing disinfectants often sacrifice one of these criteria for another. When you read many product labels and SDSs you clearly see that some sacrifice health and safety and environmental factors in order to achieve quicker contact times. Finding a surface disinfectant that balances these five key factors equally should be the real objective in the decision-making process. Let's now take a closer look at each of these factors.

CLEANING EFFICACY



Why is the cleaning efficacy of a disinfectant important? Cleaning physically removes rather than kills microorganisms. Meticulously cleaning environmental surfaces can remove up to 99.9% of foreign materials (e.g., dust, soil, and organic matter) which may act as a repository for potentially pathogenic microorganisms. Further, because organic and inorganic soil can act as a barrier to certain disinfectant chemistries (e.g., chlorine, alcohol, iodophors), surfaces must be precleaned prior to disinfection.^{1,2}



DISINFECTION EFFICACY

Disinfection is widely regarded as a two-step process. Many disinfectants on the market are poor cleaners or make no cleaning claims and, therefore, require surfaces to be precleaned prior to disinfection in order to meet their germicidal claims. Consequently, using a product that offers excellent cleaning efficacy in addition to broad-spectrum germicidal activity (tested in soiled loads) will give you added confidence that the environmental surface will be sufficiently decontaminated.¹ Product labels will tell you if the product claims to be a cleaner and disinfectant or just a disinfectant.

In addition, it is important to consider not only whether the contact times that are required to achieve disinfection can be achieved realistically in practice, but also against which micro-organisms the product is effective.

First, broad-spectrum germicidal action within short contact times instills confidence that the disinfectant is being properly used and that desired results are attained. Germicides that have long contact times are rarely complied with in practice. Many dental staff are unaware of the longer contact time required for germicidal activity, as stipulated on the label, and do not adhere to the instructions, reducing the likelihood of achieving disinfection.

Second, viruses are divided into two types: enveloped and non-enveloped. Non-enveloped viruses (e.g., Poliovirus, Norovirus, Rotavirus, Rhinovirus) are far less susceptible to disinfectants (harder to deactivate) than enveloped viruses (e.g., Influenza A, HIV, Herpes Simplex). Many outbreaks associated with viruses are caused by cold or flu viruses. Non-enveloped viruses can be easily transmitted by touching contaminated surfaces.²⁻⁴ Choosing a disinfectant that claims to be effective not just against easy-to-kill bacteria and enveloped viruses but also against common, hard to deactivate non-enveloped viruses within a realistic contact time is very important.ⁱⁱ

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FEATURE

HEALTH AND SAFETY PROFILE



When considering health and safety aspects of a disinfectant, one should read its 16-point SDS. All manufacturers of surface disinfectants must provide a SDS for their products. When reviewing the SDS for health and safety considerations, remember

to read the entire sheet, paying particular attention to Section 2 (Hazard Identification), Section 7 (Handling and Storage), Section 8 (Exposure Controls/Personal Protection), and Section 11 (Toxicological Information). These sections clearly outline the hazards, health risks, exposure conditions, and toxicity of the product. You need to know the risks to which you, your staff, and your clients will be exposed when using a particular surface disinfectant. You should also read the label for any cautionary, warning, danger, personal protection, exposure, transportation, and storage statements. When you choose chemicals that are safer for users and others who may come in contact with them, you help to create a healthier indoor environment.ⁱⁱⁱ

ENVIRONMENTAL RESPONSIBILITY



Caring for the environment is increasingly important for consumers and practitioners alike. As a result, impact on the environment is a major decision-making criterion when evaluating chemical products. It is important to know if disinfectant

chemistry is readily biodegradable, leaves no active residue, is fragrance free, maintains good air quality, and contains no volatile organic compounds (VOCs). Information on all of these important environmental factors can be obtained from the product label and the SDS, specifically in Section 7 (Handling and Storage), Section 10 (Stability and Reactivity), Section 12 (Ecological Information), and Section 13 (Disposal Considerations).^{iv}

COST IN USE



The true cost of a cleaner disinfectant is not the retail price that you pay but the actual cost in use. Calculating the true cost requires consideration of whether or not the product cleans as well as disinfects. If it does not

clean, you need to add the price of a pre-cleaner prior to disinfection into the cost. You also need to consider whether the disinfectant allows the surface to remain wet for the stated contact time in order to achieve disinfection.^v If the surface dries before the contact time is reached, more disinfectant must be applied.⁵ All of these considerations will add to the true cost of use.

Choosing a Hard Surface Disinfectant... cont'd

In summary, it is important to read the disinfectant product labels and SDSs in order to properly evaluate how the product performs relative to the five major factors discussed above. When you base your decision on these factors you will be certain to choose a surface disinfectant that will be the best for you, your clients, and your staff. Do not let anyone “sell” you on which disinfectant you should use. You be the judge!

NOTES

- i. 0.5% H₂O₂ - Accelerated Hydrogen Peroxide disinfectant (AHP) – OPTIM 33TB – was tested under soiled conditions and approved as a one-step cleaner and disinfectant.
- ii. 0.5% H₂O₂ - AHP disinfectant – OPTIM 33TB – has realistic 1-min virucidal (incl. Norovirus, Parvovirus, Poliovirus), bactericidal, tuberculocidal and 3-min fungicidal contact time claims.
- iii. 0.5% H₂O₂ - AHP disinfectant – OPTIM 33TB – under GHS and US Environmental Protection Agency (EPA) classification rules, does not require any cautionary, warning, and/or danger statements on the label. OPTIM 33TB has a Hazardous Materials Identification System (HMIS) rating of 0 (health), 0 (flammability), 0 (physical hazard). It is also classified under the US EPA as a Toxicity Category IV, the lowest level EPA toxicity category. OPTIM 33TB is a safe disinfectant to use. The SDS for OPTIM 33TB can be found on the SCICAN web site at www.scican.com.
- iv. 0.5% H₂O₂ - AHP disinfectant – OPTIM 33TB – The active ingredient breaks down to water and oxygen, has no VOCs, and leaves no active ingredient residuals on surfaces. AHP ingredients are on the US EPA inert list and/or the US FDA GRAS (Generally Regarded as Safe) list, and are not listed on the Health Canada Dangerous Chemicals list. Additionally, where possible, the chemicals used to manufacture AHP have 21 CFR (US Code of Federal Regulations Title 21) clearance as a direct or indirect food additive. In short, OPTIM 33TB is friendly to the environment.
- v. 0.5% H₂O₂ - AHP disinfectant – OPTIM 33TB – is a one-step cleaner disinfectant that will maintain the surface wet for the contact time stated with fewer wipes.⁵

References

1. Rochon M, Sullivan N. Products based on accelerated and stabilized hydrogen peroxide: Evidence of cleaning and sanitizing efficiency, environmental and human safety and non-corrosiveness. *Can J Infect Control*. 1999;14:51–55.
2. Rutala WA, Weber DJ. Selection of the ideal disinfectant. *Infect Control Hosp Epidemiol*. 2014;35(7):855–65.
3. Omidbakhsh N. Theoretical and experimental aspects of microbicidal activities of hard surface disinfectants: Are their label claims based on testing under field conditions? *J AOAC Int*. 2010;93(6):1944–51.
4. Omidbakhsh N, Sattar SA. Broad-spectrum microbicidal activity, toxicologic assessment, and materials compatibility of a new generation of accelerated hydrogen peroxide-based environmental surface disinfectant. *Am J Infect Control*. 2006;34(5):251–57.
5. Molinari JA, Nelson P, Molinari A. Environmental surface wetness test: comparison of disinfectant wipes. *Dental Advisor Research Report*. 2015, Number 73a.

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