



# Infection Control Questions Initiated by COVID-19... and Beyond

Dr. Rella Christensen answers some of the most common questions on infection control

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## **Surface Disinfection: Optim 1**

Optim 1 is a hydrogen peroxide-based hard surface disinfectant sold by SciCan. They claim a very short contact time and make it look great. **The game changer in this equation is the human proteins that the disinfectant must overcome in order to achieve kill of the microbes wrapped within—such as blood, saliva, pus, nasal secretions, crevicular fluid, etc.** Unfortunately, hydrogen peroxide does not perform well in the presence of these types of proteins. Instead, it is quickly neutralized. Notably many bacteria and red blood cells all have a specific enzyme called catalase, which specifically neutralizes hydrogen peroxide to preserve their life. If you have ever placed hydrogen peroxide onto a bloody surface or lesion, you will notice an immediate furious bubbling, which indicates the reaction taking place between catalase and the hydrogen peroxide. Many people see this bubbling as “hydrogen peroxide cleansing action” and do not actually realize it is a chemical reaction indicating the neutralization of the hydrogen peroxide.

## **Rella P. Christensen, RDH, PhD**

Dr. Rella Christensen co-founded CR Foundation and directed this well-known dental products testing institute for 27 years. Subsequently she served as Chairman of the Board of Directors. Currently she is the team leader of a non-profit institute dedicated to in-depth and long-term clinical studies of restorative materials, preventive dentistry, and dental caries, known as Technologies in Restoratives and Caries Research (TRAC Research) which is the human studies section of CR. Her studies follow treatments within dental practices.

Rella received her BS in Dental Hygiene from the University of Southern California, and practiced dental hygiene for 25 years. She earned a PhD in physiology with an emphasis in microbiology from Brigham Young University, and completed a post-graduate course in anaerobic microbiology at Virginia Polytechnic State University. In 2002, she received an honorary doctorate from Utah Valley University. In 2012, Rella received a Congressional Record Tribute for her life-long contributions to the profession of dentistry.

She is a member of International College of Dentists, American Academy of Esthetic Dentistry, Academy of General Dentistry, and International Association for Dental Research.