

Cleaning and Disinfecting the Practice in the COVID-19 Era

WITH A FOCUS ON SAFETY, EFFICACY, AND EFFICIENCY

By Christian Berling

As eyecare practices reopen for non-emergent care, the stark reality of the “new normal” necessitated by the COVID-19 pandemic immediately becomes apparent. Chairs in reception are now 6 feet apart. Newly installed breath guards protect patients and medical professionals wherever close face-to-face interaction is required, and face coverings are mandatory.

Critically important are new cleaning and disinfecting guidelines. The novel coronavirus that causes COVID-19 is transmitted through droplets generated when an infected person coughs, sneezes, or speaks, and the virus may remain viable on some surfaces for hours to days.¹ Thus, even instruments and equipment classified by the Centers for Disease Control and Prevention (CDC) as noncritical relative to the risk for infection must now be disinfected between patients.

For guidance on disinfecting these items, your staff will rely on each manufacturer’s instructions for use (IFU). However, the processes recommended for disinfecting noncritical instruments and equipment were designed for occasional use in the event of contamination, not for frequent use throughout the day. Before incorporating these new protocols into their daily routines, staff members must understand not only how to use each disinfecting product but also the impact of these agents on the instrument components.

DISINFECTING AGENTS: PROS AND CONS

The most frequently used disinfectants in health care are 70% isopropyl alcohol, bleach, and quaternary ammonium compound. These products are effective against the novel coronavirus that causes COVID-19. However, some important properties differentiate them.

- **ISOPROPYL ALCOHOL.** This has countless applications, from hand sanitizer to hard-surface disinfectant, and it’s tempt-

ing to make it your go-to product for everything. However, alcohol is generally not permitted on optics, as it will break down coatings, and the CDC warns that prolonged and repeated use of alcohol will damage rubber and certain plastics.² In addition, because alcohol evaporates so quickly, proper disinfection requires oversaturation, but this can lead to excess liquid entering unsealed areas of an instrument where it will damage optics and corrode electronics.

In fact, some manufacturers warn that oversaturating their instruments will invalidate the company’s warranty. If this causes the instrument to malfunction, the practice must bear the cost of repair or replacement.

- **BLEACH.** Bleach is typically reserved for situations where blood or clostridioides difficile (*C. diff*) is present. It has a long activation time, an unpleasant odor, and, anecdotally, I understand hospitals in the United States are moving away from using bleach because it damages equipment.

- **QUATERNARY AMMONIUM COMPOUND.** Quaternary ammonium compound, which is available in a wipe, is compatible with most instrument materials and surfaces in the examination room, which minimizes the need for special instructions for sensitive equipment. The wipes are highly saturated, however, so products that have warnings against saturation will have warranty issues with these wipes. Quaternary ammonium is noncorrosive. It cleans and disinfects in 2 minutes, and it can be used on an instrument multiple times throughout the day without damaging it.

Quaternary ammonium is the disinfectant that we at HEINE recommend for our instruments. We tested our products with it, and confirmed that it is safe for use on every part of the instrument, including the optics, the headband, the padding, and all of the controls. Oversaturation is a non-

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issue because the optical assemblies on all of our products are sealed. In fact, our IFU encourages saturating the instrument, paying special attention to the high-touch areas. We believe that if you design a product properly, the IFU that accompanies it will be simple and effective, without caveats or warnings.

SAFETY, SIMPLICITY, CONFIDENCE

Reopening your practice for routine eye care involves numerous behind-the-scenes adaptations to ensure the safety and peace-of-mind of your patients, your staff, and yourself. New processes and procedures must be incorporated seamlessly to maintain the professionalism and efficiency your patients have come to expect. Your instrument manufacturer partners can help with best practices for the safe and effective disinfection of your products.



Christian Berling is the Vice President of Sales and Marketing for HEINE USA, Ltd., a global leader in primary diagnostic instruments. He has been published numerous times on the topics of IFU development, product design, and sterile processing.

References

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2. Spaulding EH. Alcohol as a surgical disinfectant: pros and cons of a much discussed topic. *AORN J.* 1964;2:67-71.