

SELECTING THE IDEAL DISINFECTANT

Editorial by William Rutala and David Weber (ICHE, 2014)

Summary:

This article reviews the 5 key criteria that should be used when evaluating disinfectant products today. Oxivir Tb meets those criteria.

Rutala is considered to be the world's best expert on Infection Prevention and Epidemiology. Weber is the Chairman of the CDC (Centers for Disease Control), which is the American bureaucracy that sets guidelines for Healthcare practice. Rutala and Weber state there are two essential components of effective disinfection: selecting the **right product**, and using the **right process**.

The right process, or practice, relates to the proper application of disinfectant onto surfaces, the proper training of users, and the adherence to manufacturer's label instructions. The combination of product and practice results in effective surface disinfection, which reduces patient risk and improves patient outcomes. The purpose of this article is to assist users in the selection of the optimal disinfectant for use with environmental surfaces and noncritical patient care items. .

5 Key Criteria:

1. Kill claims for the most prevalent healthcare pathogens

- a. Oxivir Tb is TGA registered with claims for the most common HAI-causing pathogens
- b. Oxivir Tb does not have a claim for C diff spores, but it is safe to use and PPE is not required.
- c. Sporicide Plus has a claim for C diff, but it is quite strong and PPE is recommended.
- d. Due to the constant evolution of pathogens, especially emerging pathogens, it is likely that a new or emerging pathogen may not be listed on manufacturers' labels. Until a TGA claim is available, users may refer to the hierarchy of microbial susceptibility (to disinfection) to select the appropriate disinfectant for the emerging pathogen.

- 2. Fast kill times and acceptable wet-contact time to ensure proper disinfection of noncritical surfaces and patient care equipment –**
 - a. Ideally contact times should be greater or equal to the kill time. If a product evaporates too quickly, it will not remain in contact with the micro-organism for the necessary kill/contact time. Fast kill times provide confidence that the pathogens are killed before the disinfectant dries. Oxivir acts before it dries.
 - b. The label of Oxivir states a 10 minute contact time. This is because the TGA test method measures product efficacy at the 10 minute mark. If it passes that test, it is approved by the TGA and the phrase “10 minute contact time” must appear on the label. This is Australian law and applies to all hospital grade disinfectants.
 - c. Be mindful that many of the micro-organisms that Oxivir kills are dead in seconds. There is a disconnect between the science and the legislated label statements.
 - d. We cannot seek claims for every known micro-organism. In the US, Oxivir has 81 claims! It is impractical to do that in Australia. If there are any questions about a disinfectant’s efficacy, refer to Rutala’s hierarchy of disinfection.
 - e. By law, all applicable label instructions on TGA-Registered products must be followed, or the user assumes liability. If challenged, the user needs to have referenced scientific evidence to support their respective practice.
- 3. Safety –**
 - a. The product should be nontoxic and should not cause any harm to users, patients and visitors. Oxivir biodegrades to oxygen & water and is safe on people, fabrics and surfaces.
- 4. Ease of Use –**
 - a. The easier a product is to use, the more likely the achievement of use compliance.
 - b. Oxivir has no odour, does not leave a residue, and does not require rinsing.
- 5. Other Factors**
 - a. Onsite support and training, consultative services and education to help with compliance are important. Diversey Care provides these services.

Labour and the cost of infection (or the avoidance) should be included in your total cost calculation. The authors conclude by acknowledging that to date, the perfect product for healthcare disinfection has not been introduced; however there is a wide array of disinfectants that offer a range of characteristics. By using the 5 criteria outlined you can evaluate and determine the best selection for your facility.