

Prevention of Environmental Cross-Contamination with *Clostridium difficile* bacteria using *Opti-Cide*³® Disinfecting Cleaner

Clostridium difficile is an anaerobic, spore-forming, Gram-positive rod. Concerns relating to outbreaks and colonization with *C. difficile* have been reported from hospitals and long-term facilities for the past decade. Endemic infections due to *C. difficile* have identified that patient-to-patient transmission of this microorganism can occur via hands, contaminated patient-care equipment or environmental surfaces.

Recommendations for Control and Prevention:

- Facilities with endemic *C. difficile* should focus control efforts on intensive care units and other areas where the transmission rate is highest. Such units may serve as a reservoir of *C. difficile* enabling spread to other units when patients are transferred.
- In facilities with ongoing *C. difficile* transmission, assess the adequacy and frequency of cleaning procedures for disinfecting environmental surfaces such as bedrails, carts, doorknobs, faucet handles, toilet seats, computer terminals, knobs of electronic equipment such as patient-care monitors and bedside commodes and ensure procedure compliance. Surviving *C. difficile* exposed to the air on surfaces for periods exceeding 4- 6 hours will form spores rendering them impossible to kill on environmental surfaces. Frequent cleaning and disinfection will help to reduce transmission by killing *C. difficile* bacteria prior to its ability to form spores. CDC guidelines recommend the use of an EPA registered disinfectant for cleaning against *C. difficile*.
- If possible, dedicate the use of medical equipment and devices to a single patient or cohort. If such items are used between patients, clean and disinfect them thoroughly and frequently, at least every four (4) hours, using *Opti-Cide*³ cleaner disinfectant solution as per its labeled instructions.

Extensive environmental contamination with *C. difficile* has been noted in some studies. A recent laboratory study sponsored by Micro-Scientific Industries verified the ability of *Opti-Cide*³ brand cleaner disinfectant (EPA Registration Number 70144-1) to kill *C. difficile* within 3 minutes at 20°C/69°F. by methods of the AOAC Germicidal Spray Test.

References:

Lozniewski, A, Rabaud, Dotto, E, et al. *Laboratory diagnosis of Clostridium difficile associated diarrhea and colitis*. Journal of Clinical Microbiology, 2001; 39 (5): 996-998

Johnson, S, and Gerding, DN. *Clostridium difficile-associated diarrhea*. Clinical Infectious Diseases, 1998; 26 (5): 1027-1036

Massachusetts Department of Public Health, Division of Epidemiology and Immunization, *Clostridium difficile, Infection Control Guidelines for Long Term Care Facilities 2003*

McDonald, S, *Clostridium difficile-Associated Diarrhea Facts*. The Kinston General Hospital Infection Control Service, 2002

Centers for Disease Control and Prevention, CDS's Issue is Healthcare Settings, *Gastrointestinal Infections, Control of Clostridium difficile-Associated Disease (CDAD) 2003*