

## ***Persistence of the P<sup>3</sup>Shield Solution antimicrobial coating on a hard surface substrate.***

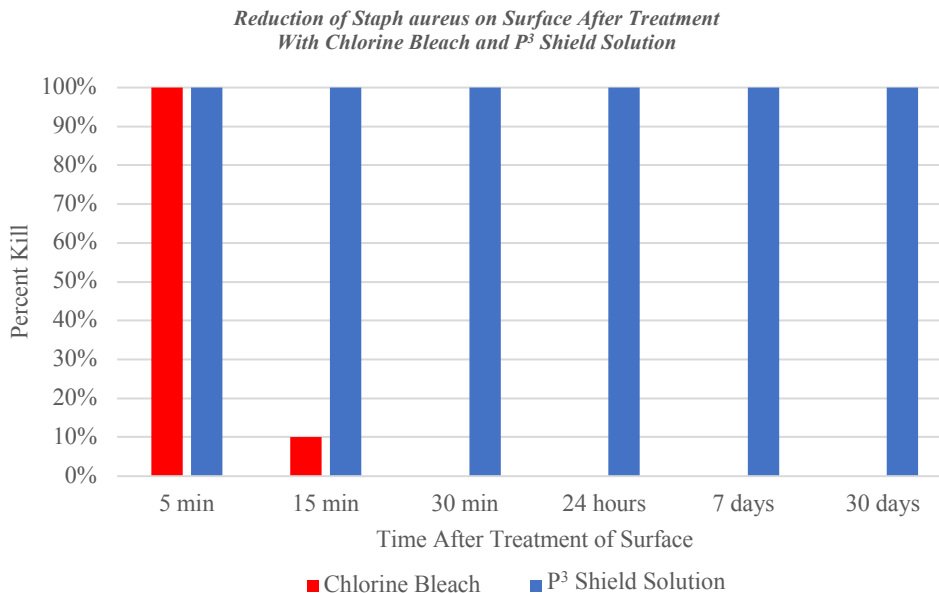
Authors: Jennifer Cadnum, MS and Curtis Donskey, MD\*

Department of Medicine, Veterans Administration Hospital and Case Western University Medical School, Cleveland, Ohio

The purpose of this study was to establish the antimicrobial efficacy and the persistence of efficacy of Medecide™-treated solid surfaces in comparison to the industry gold standard of 10% sodium hypochlorite (chlorine bleach @ 6000 ppm).

Medecide™ formulation and Cl bleach solutions were sprayed onto Formica solid surface areas and allowed to air dry. At intervals after the coatings were dry suspensions of Multiple Antibiotic Resistant *Staph aureus* (MRSA) bacteria were applied as challenge inocula. Untreated Formica was similarly challenged so as to measure the recovery of MRSA bacteria that could be expected from a normal (unmodified) Formica surface. After contact for 30 minutes the degree of killing of the microbes was measured by recovering them from test surfaces and comparing the recovered bacteria colonies to the numbers recovered from control (uncoated) surfaces and from surfaces exposed to chlorine bleach.

Medecide™ treatment of Formica surfaces provided high levels of germ kill not only at the earliest challenge time points, but also at all the other challenge time points through the following 28 days (the longest time tested in the study) (See figure below). Surfaces treated with 10% hypochlorite bleach showed high efficacy at the earliest time points of challenge, but the effectiveness then rapidly declined so that by 30 minutes post-drying it had disappeared completely. The stabilization of the active Cl atoms in the Medecide™ clearly allowed for high level persistence of efficacy on the coated surfaces for 30 days minimum without noticeable decline.



\*Dr. Donskey is a recognized authority on coronaviruses (e.g. Otter, JA, **Donskey, C**, Yezli, S, Douthwaite, S, Goldenberg, SD and Weber, DJ: Transmission of SARS and MERS Coronaviruses and influenza virus in healthcare settings; the possible role of dry surface contamination. J..Hospital Infection Control, 2016, vol 92, 235-250