

## Effectiveness of Commonly Used Disinfectants on Bacteria Responsible for Hospital Acquired Infections at Sri Jayewardenepura General Hospital, Sri Lanka

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Hospital-acquired infections (HAIs) increase the morbidity and mortality of hospitalized patients. Nosocomial pathogens can be transmitted through contaminated instruments and surfaces. Disinfectants play a crucial role in preventing HAIs. Determination of the effectiveness of commonly used disinfectants on bacteria that cause HAIs is important for appropriate selection of disinfectants. This experimental study was carried out according to the quantitative carrier test referring to the European Standard EN 14561:2006 to assess the effectiveness of two high level disinfectants. Two types of disinfectants named as 'disinfectant-I' (peracetic acid) and 'disinfectant-II' (Didecyldimethylammonium Chloride) were tested at three different concentrations on glass, stainless steel and rexine surfaces against three most common bacteria (coliform, Acinetobacter species and Staphylococcus aureus) responsible for HAIs in Sri Jayewardenepura General Hospital, Sri Lanka. Both of the tested disinfectants achieved 'Microbicidal Effect value' of 5 at manufacturer's recommended dilutions and passed the test. Microbicidal Effect value of disinfectant-II was significantly higher ( $P \leq 0.05$ ) than that of disinfectant-I. On rexine surfaces, both disinfectants showed poor activity ( $ME=5.13$ ) on all three tested bacteria. The effect of the selected disinfectants is not significant ( $P > 0.05$ ) as a high level disinfectant on different organisms on different surfaces.

**Keywords:** Hospital-acquired infections, surfaces, disinfection, microbicidal effect