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General Guidelines for Bleach as a Disinfectant

Sodium Hypochlorite Bleach as A Disinfectant

The following published sources provide documentation regarding the efficacy of sodium hypochlorite (5.25% household bleach) as a broad spectrum disinfectant:

http://www.cdc.gov/od/ohs/biosfty/bleachiv.htm

Studies have shown that HIV is inactivated rapidly after being exposed to commonly used germicides at concentrations that are much lower than used in practice. In addition to commercially available chemical germicides, a solution of sodium hypochlorite (household bleach) prepared daily is an inexpensive and effective germicide. Concentrations ranging from approximately 500 ppm (1:100 dilution of household bleach) sodium hypochlorite to 5,000 ppm (1:10 dilution of household bleach) are effective depending on the amount of organic material (e.g., Blood, mucus) present on the surface to be cleaned and disinfected. **(Citation: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Biosafety Branch, *Recommendations for Prevention of HIV Transmission in Health-care Settings*, MMWR 1987;36(2S): p10S)**

www.research.**northwestern**.edu/**ors**/**lab**safe/index.htm

In its Laboratory Safety Manual, Northwestern University indicates the efficacy of diluted bleach as a broad-spectrum disinfectant. ***Chlorine compounds are probably the most widely used disinfectants in the laboratory. You can easily prepare an inexpensive, broad-spectrum disinfectant by diluting common household bleach… In the case of large or concentrated spills of infectious agents, a higher level of chlorine is needed to be effective in destroying microorganisms. Use a 10:1 dilution (5,00o ppm of free chlorine) and flood the contaminated area with the solution. Alternatively, you can mix the disinfectant with the spilled material. This higher concentration is more suitable for porous surfaces that may harbor organisms in tiny cracks or pits. Make the solution fresh each day.*** (See Page 9, Section 7.5.1: Sterilization, Disinfection, and Decontamination).

www.cdc.gov/ncidod/dhqp/pdf/guidelines/isolation2007.pdf

CDC acknowledges the sporicidal properties of bleach in its *Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007*. ***Certain pathogens (e.g., rotavirus, noroviruses, C. difficile) may be resistant to some routinely used hospital disinfectants 275, 292, 842-847.The role of specific disinfectants in limiting transmission of rotavirus has been demonstrated experimentally 842. Also, since C. difficile may display increased levels of spore production when exposed to non-chlorine-based cleaning agents, and the spores are more resistant than vegetative cells to commonly used surface disinfectants, some investigators have ecommended the use of a 1:10 dilution of 5.25% sodium hypochlorite (household bleach) and water for routine environmental disinfection of rooms of patients with C. difficile when there is continued transmission 844, 848. In one study, the use of a hypochlorite solution was associated with a decrease in rates of C. difficile infections 847***. (See Pages 60-61: Section II.I Environmental Measures)

http://www.nursesleadership.org/who_we_are/disinfecting.html

The Nurses Leadership Council has published an article pointing out the advantages of bleach as a broad spectrum hospital disinfectant. ***Chlorine bleach is registered by the EPA for use as a hospital disinfectant. The Centers for Disease Control and Prevention (CDC) has established guidelines for chlorine bleach use in healthcare facilities.[2] The CDC specifies concentrations of chlorine bleach required to disinfect countertops, floors, tonometer heads, needles, syringes, laundry, dental appliances, hydrotherapy tanks, water distribution systems in hemodialysis instruments, and regulated medical waste prior to disposal. Visiting nurses and home healthcare providers should be aware of the broad disinfection capabilities of this readily available, inexpensive disinfectant.***