



Disinfection

DISINFECTION AND STERILIZATION GUIDELINE
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Guideline for Disinfection and Sterilization in Healthcare Facilities (2008)

AT A GLANCE

Disinfection from the Guideline for Disinfection and Sterilization in Healthcare Facilities (2008).

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Overview

Many disinfectants are used alone or in combinations (e.g., hydrogen peroxide and peracetic acid) in the health-care setting. These include alcohols, chlorine and chlorine compounds, formaldehyde, glutaraldehyde, *ortho*-phthalaldehyde, hydrogen peroxide, iodophors, peracetic acid, phenolics, and quaternary ammonium compounds. Commercial formulations based on these chemicals are considered unique products and must be registered with EPA or cleared by FDA. In most instances, a given product is designed for a specific purpose and is to be used in a certain manner. Therefore, users should read labels carefully to ensure the correct product is selected for the intended use and applied efficiently.

Disinfectants are not interchangeable, and incorrect concentrations and inappropriate disinfectants can result in excessive costs. Because occupational diseases among cleaning personnel have been associated with use of several disinfectants (e.g., formaldehyde, glutaraldehyde, and chlorine), precautions (e.g., gloves and proper ventilation) should be used to minimize exposure^{318, 480, 481}. Asthma and reactive airway disease can occur in sensitized persons exposed to any airborne chemical, including germicides. Clinically important asthma can occur at levels below ceiling levels regulated by OSHA or recommended by NIOSH. The preferred method of control is elimination of the chemical (through engineering controls or substitution) or relocation of the worker.

The following overview of the performance characteristics of each provides users with sufficient information to select an appropriate disinfectant for any item and use it in the most efficient way.

Methods of Disinfection

[Chemical Disinfectants](#)

- Alcohol
- Chlorine and chlorine compounds
- Formaldehyde
- Glutaraldehyde
- Hydrogen peroxide
- Iodophors
- Ortho-phthalaldehyde (OPA)
- Peracetic acid

- Peracetic acid and hydrogen peroxide
- Phenolics
- Quaternary ammonium compounds

[Miscellaneous Inactivating Agents](#)

- Other germicides
- Metals as microbicides
- Ultraviolet radiation
- Pasteurization
- Flushing- and washer-disinfectors

[Regulatory Framework for Disinfectants and Sterilants](#)

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Chemical Disinfectants



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[National Center for Emerging and Zoonotic Infectious Diseases \(NCEZID\)](#)

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