



What Chemical Disinfectant Should I Use for the Study?

Disinfection describes a process that eliminates microorganisms, except bacterial spores, from inanimate objects or surfaces.

A Disinfectant is a chemical substance or compound used to inactivate or destroy microorganisms on inert surfaces.

Factors that affect disinfectant effectiveness



Nature of microorganisms
(agent properties including innate resistance, number of organisms)



Disinfectant properties
(formulation mode of action, concentration, contact time)



Physical and chemical factors
(temp, pH, relative humidity, water hardness, surface topography)



Presence of exogenous materials
i.e. organic and inorganic materials



Presence of biofilms

Source: <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/efficacy.html>

Certain groups of microorganisms present varying degrees of resistance to chemical disinfectants. To select an effective disinfectant for the healthcare work environment, consider the following:



- 1 What are the common human pathogens that will be encountered while providing patient care?
- 2 What is the most resistant microorganism that may be encountered when surfaces are disinfected during daily cleanings and patient care room turnovers?

The following table provides a list of disinfectants that are effective against several commonly used study agents in gene therapy studies in clinical settings. Please ensure that the surfaces and items are treated with the disinfectant for the contact time recommended by the manufacturer.



Disinfectant Info for Sites



Study Agent Basis

Examples of Effective Disinfectants for All Listed Study Agents



Note: If the proposed disinfectant is not on the list, please reach out to your CBS Associate Partner to verify the effectiveness of the chemical disinfectant against the study agent.

Least
Resistant

Human cells, genetic materials
(e.g., mRNA, plasmids)

Bacteria

- *Lactococcus lactis*
- *Listeria monocytogenes*

Enveloped viruses

- Human immunodeficiency virus (HIV)
- Hepatitis B virus (HBV)
- Respiratory syncytial virus (RSV)
- Vaccinia virus
- Influenza A/B virus
- Measles virus
- SARS-CoV-2

Nonenveloped viruses

- Adenoviruses
- Adeno-associated viruses (AAV)

Mycobacteria spp.

- *M. tuberculosis*
- *M. leprae*
- *M. avium*

Most
Resistant

Super Sani-Cloth[®]
Germicidal Disposable Wipe
(2 minutes)

PDI Sani-Cloth[®] Bleach Disposable Wipe
(2 minutes)

PDI AF3 Sani-Cloth[®] Disposable Wipe
(3 minutes)

CaviWipes[™] 2.0
(2 minutes)

CaviWipes[™] Bleach
(3 minutes)

Clorox[™] Disinfecting Wipes
(4 minutes)

**Clorox[™] Healthcare Bleach
Germicidal Cleaner**
(1 minute)

PeridoxRTU[™] Sporicide Disinfectant
(2 minutes)

Oxivir[™] Tb Wipes
(1 minute)

**McKesson Disposable Germicidal
Surface Wipes**
(2 minutes)

**Freshly prepared 1:10 dilution of
5.25% sodium hypochlorite (bleach)**
(10 minutes)