

Disinfection Chart

*These concentrations of bleach solution are based on using a 5.25% sodium hypochlorite solution (see mixing of Bleach Solution for Disinfecting). All items must be cleaned and dried with a clean towel prior to disinfection. All disinfectant solutions must be made fresh daily, or according to the manufacturers' specifications. Follow manufacturer's safety instructions and directions for use. This chart is not intended to be inclusive of all approved disinfectants.

LEVEL OF DISINFECTION	WHEN TO USE	DISINFECTANT ACTIVE INGREDIENT(S)	IMMERSION CONTACT TIMES (APPROXIMATE)	ADVANTAGES	DISADVANTAGES
High Level Kills all bacteria, fungi & viruses. Does not kill bacterial spores.	Use on semi-critical items. Items that come into contact with non-intact skin or mucous membranes but do not penetrate skin.	1:10 chlorine bleach solution‡ (1 part bleach and 9 parts water); 5,000 parts per million	10 minutes	Inexpensive, fast acting	Extremely corrosive to metal; may destroy adhesives with prolonged soaking; solution is to be made daily; inactivated by organic material
		≥6% hydrogen peroxide (enhanced action formulation)	20 – 30 minutes (follow manufacturer's instructions)	Inexpensive, fast acting, environmentally friendly, no residue	Is to be stored in a cool place; protect from light; oxidizing properties may be destructive to some equipment (brass, zinc, copper, and nickel/silver)
		2% hydrogen peroxide (enhanced action formulation)	5 – 8 minutes (follow manufacturer's instructions)	Inexpensive, fast acting, environmentally friendly, non-toxic, active in the presence of organic materials	May be destructive to some equipment (copper, brass, carbon tipped devices, anodized aluminum)
		0.55% orthophthalaldehyde	10 minutes (follow manufacturer's instructions)	Fast-acting, no mixing needed, active in the presence of organic materials	Stains proteins
Intermediate Level Destroys vegetative bacteria, mycobacteria, most viruses, and most fungi but not bacterial spores.	Use on non-critical items that require intermediate-level disinfection.	1:50 chlorine bleach solution‡ (1 part bleach and 49 parts water); 1,000 parts per million	10 minutes	Inexpensive; fast acting	Corrodes metal; may destroy adhesives with prolonged soaking; solution is to be made daily; inactivated by organic material
		70 – 90% ethyl or isopropyl alcohol	10 minutes	Fast-acting; leaves no residue	Can damage rubber and plastics; flammable; evaporates quickly
		0.5% hydrogen peroxide (enhanced action formulation) with efficacy claims against tuberculosis (TB) or mycobacteria	3 – 5 minutes (follow manufacturer's instructions)	Inexpensive; fast acting; environmentally friendly; non-toxic; active in the presence of organic materials; available in a wipe; cleans and disinfects	May be destructive to some equipment (copper, brass, carbon tipped devices, anodized aluminum)
Low Level Destroys vegetative bacteria and some fungi and viruses but not mycobacteria or spores.	Use on non-critical items that require low-level disinfection and environmental surfaces.	1:500 chlorine bleach solution‡ (1 part bleach and 499 parts water); 100 parts per million	10 minutes	Inexpensive; fast acting	Corrodes metal; may destroy adhesives with prolonged soaking; solution is to be made daily
		Quaternary ammonium	10 minutes (follow manufacturer's instructions)	Good cleaning agent for environmental surfaces	Limited use as disinfectant because of narrow microbicidal spectrum; not recommended as an antiseptic
		3% hydrogen peroxide	10 minutes	Inexpensive; fast acting; environmentally friendly	Oxidizing properties may be destructive to some equipment (brass, zinc, copper, and nickel/silver)
		0.5% hydrogen peroxide (enhanced action formulation)	Follow manufacturer's instructions	Inexpensive; fast acting; environmentally friendly; non-toxic; active in the presence of organic materials; available in a wipe; cleans and disinfects	May be destructive to some equipment (copper, brass, carbon tipped devices and anodized aluminum)
		Phenols	Follow manufacturer's instructions	Easy to obtain; cleans and disinfects	Residual phenols on porous materials may cause tissue irritation even when thoroughly rinsed; for environmental surfaces only