

Disinfection Chart *

This chart is not intended to be inclusive of all approved high, intermediate and low-level disinfectants.

Level of Disinfection	When to Use	Disinfectant Active Ingredients	Contact Times (Approximately)	Advantages	Disadvantages
HIGH Destroys or irreversibly inactivates all microbial pathogens (bacteria, fungi, and viruses) except bacterial spores	Use on semi-critical items and items that hold, manipulate, or contact critical items	1:10 chlorine bleach solution† (1 part bleach and 9 parts water) 5,000 ppm (parts per million)	10 minutes	Inexpensive, fast acting	Corrodes metal, may destroy adhesives with prolonged soaking
		≥6% hydrogen peroxide (enhanced action formulation)	20-30 minutes (follow manufacturer's instructions)	Environmentally friendly, no residue	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)	Environmentally friendly, non-toxic, fast-acting, inexpensive	May be destructive to some equipment (brass, copper, carbon-tipped devices, anodized aluminum)
		0.55% ortho-phthalaldehyde (OPA)	10 minutes (follow manufacturer's instructions)	Fast acting, no mixing needed	Stains proteins
INTERMEDIATE Destroys vegetative bacteria, mycobacteria, most fungi, and most viruses	Use on non-critical items that require intermediate-level disinfection	70-90% isopropyl or ethyl 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, non-toxic, available in a wipe	May be destructive to some equipment (copper, brass, carbon-tipped devices, anodized aluminum)
		1:50 chlorine bleach† (1 part bleach and 49 parts water) 1000ppm	10 minutes	Inexpensive, fast acting	Corrodes metal, may destroy adhesives with prolonged soaking
LOW Destroys vegetative bacteria, and some fungi and viruses, but not mycobacteria	Use on non-critical items that require low-level disinfection and environmental surfaces	Quaternary ammonium	Follow manufacturer's instructions	Good cleaning agent for environmental surfaces	Limited use as a disinfectant, not recommended as an antiseptic
		1:500 chlorine bleach† solution (1 part bleach and 499 parts water) 100 ppm	10 minutes	Inexpensive; fast acting	Corrodes metal; may destroy adhesives with prolonged soaking
		3% hydrogen peroxide	10 minutes	Inexpensive, fast-acting, environmentally safe	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, non-toxic, available in a wipe	May be destructive to some equipment (copper, brass, carbon-tipped devices, 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

* Please adhere to manufacturer's instructions for use; some disinfectants may require rinsing

† Based on regular household bleach solution of 5.25% sodium hypochlorite solution



Durham Health Connection Line
905-668-2020 or 1-800-841-2729
durham.ca/KnowBeforeYouGo



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If you require this information in an accessible format, contact 1-800-841-2729.

Source: Guide to Infection Prevention and Control in Personal Service Settings, Public Health Ontario, July 2019.