

Chlorine (Bleach) Solutions for Disinfecting

Steps for Cleaning and Disinfection

1. Gather equipment, perform hand hygiene and don appropriate PPE.
2. Clean the surface or object, using warm water, soap, and friction. Cleaning removes dirt and debris.
3. Rinse the surface or object, using clean, warm water. Rinsing removes soap residue.
4. Disinfect the surface or object. Follow manufacturer's instructions to ensure that the disinfectant is used safely and effectively. Allow appropriate contact time. Disinfection kills micro-organisms left behind after cleaning.
5. Rinse with clean water when required according to manufacturer's instruction on the label.
6. Allow to dry.
7. Remove PPE and perform hand hygiene.
8. Store newly cleaned and disinfected items in a manner that prevents contamination.

Most household chlorine (bleach) comes as 5.25% (50,000 mg/L or parts per million (ppm)) sodium hypochlorite, and requires preparation prior to use:

Making Disinfectant using Household Bleach (Chlorine) (5.25% sodium hypochlorite)	Indications & When to Use	Contact Time
500 ppm To make this concentration, mix 10 mL of bleach (chlorine) with 990 mL of water.	"Everyday use" Use this concentration on surfaces and items, such as toys, play mats, diaper change tables, and activity tables.	A minimum of 2 minutes. Allow to air dry
5000 ppm To make this concentration, mix 100 mL of bleach (chlorine) with 900 mL of water.	"Blood and Body Fluids" Use this concentration on surfaces and items that have been contaminated with blood or body fluids.	A minimum of 2 minutes. Allow to air dry
1000 ppm To make this concentration, mix 20 mL of bleach to 980 mL of water.	"Outbreak Situation" Use this concentration during an outbreak in the child care setting.	A minimum of 2 minutes. Allow to air dry

For more information on how to dilute chlorine (e.g., to 100 mg/L or ppm), see the Public Health Ontario's Chlorine Dilution Calculator.

- Chlorine (bleach) is not a cleaning agent, and surfaces must be cleaned in order for bleach to be an effective disinfectant.
- Chlorine (bleach) must be diluted using water only. Never mix chlorine with any other chemicals or cleaning products.
- Chlorine (bleach) solution must be prepared daily, as it loses efficacy within 24 hours. Clearly label the container with chlorine concentration. Record the time that the solution was prepared.
- As with all chemicals, chlorine (bleach) must be labelled and must be stored in a safe, secure location that is inaccessible to children, and away from heat and light.
- Do not spray chlorine solution when children are present. Provide ventilation and minimize misting while applying.