

Preparing Bleach as a Disinfectant

Bleach can be diluted with water and used as a high-, intermediate-, or low-level disinfectant. The following chart provides dilution instructions based on bleach containing 5.25% sodium hypochlorite (50,000 parts per million available chlorine). If a concentration other than 5.25% sodium hypochlorite is used, use Public Health Ontario's [chlorine dilution calculator](#) to mix the solution.

This chart is to be used as a guide when using bleach as a disinfectant. Other disinfectants can be used. Refer to the [Guide to Infection Prevention and Control in Personal Service Settings](#) for more information as well as specifics on when and how to use disinfectants.

The bleach solution must be prepared fresh daily to preserve its strength as a disinfectant.

Level of Disinfection Required	When to Use	How to Mix the Bleach Solution
High-level disinfection 1:10 chlorine bleach solution (1 part bleach and 9 parts water); 5,000 parts per million available chlorine	• Use on semi-critical equipment, instruments, and items that contact mucous membranes or non-intact skin during use but do not ordinarily penetrate the skin or enter sterile tissue (e.g., tweezers used to expose and remove ingrown hairs). • Use on items that accidentally penetrate the skin and/or come into contact with blood/body fluids (e.g., scissors that accidentally cut someone while cutting hair). • Use on items that hold, manipulate, or contact critical items. • Use to disinfect contaminated surfaces following a spill of blood/body fluids.	62 ml (1/4 cup) bleach with 562 ml (2 ¼ cups water) Contact time ≥ 10 minutes
Intermediate-level disinfection 1:50 chlorine bleach solution (1 part bleach and 49 parts water); 1,000 parts per million available chlorine	• Use on non-critical equipment, instruments, and items that are intended to contact only intact skin, but may accidentally come into contact with non-intact skin or mucous membranes, or penetrate the skin (e.g., nail clippers or cuticle nippers, as these may accidentally penetrate the skin).	10 ml (2 tsp) bleach with 495 ml (2 cups) water Contact time ≥ 10 minutes
Low-level disinfection 1:500 chlorine bleach solution (1 part bleach and 499 parts water); 100 parts per million available chlorine	• Use on non-critical equipment, instruments, and items that do not directly contact the client, or contact only hair or intact skin (e.g., hair cutting scissors).	5 ml (1 tsp) bleach with 2½ l (10 cups) water Contact time ≥ 10 minutes

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario), [Guide to infection prevention and control in personal service settings](#). 3rd ed. Toronto, ON: Queen's Printer for Ontario; 2019.