



DOH 970-216 January 2015

## Disinfecting and Sanitizing with Bleach

### Guidelines for Mixing Bleach Solutions for Child Care and Similar Environments

#### Preparation Tips

- **Prepare** a fresh bleach solution each day in a well-ventilated area that is separate from children.
- **Label** bottles of bleach solution with contents, ratio and date mixed.
- **Use cool water. Always add** bleach to cool water, **NOT** water to bleach.
- **Wear** gloves and eye protection.
- **Prepare** solution in an area with an eye wash.

#### Disinfecting Solutions

For use on diaper change tables, hand washing sinks, bathrooms (including toilet bowls, toilet seats, training rings, soap dispensers, potty chairs), door and cabinet handles, etc.

Water	Bleach Strength* 2.75%	Bleach Strength* 5.25-6.25%	Bleach Strength* 8.25%
1 Gallon	1/3 Cup, plus 1 Tablespoon	3 Tablespoons	2 Tablespoons
1 Quart	1½ Tablespoons	2¼ Teaspoons	1½ Teaspoons

#### Sanitizing Solutions

For use on eating utensils, food use contact surfaces, mixed use tables, high chair trays, crib frames and mattresses, toys, pacifiers, floors, sleep mats, etc.

1 Gallon	1 Tablespoon	2 Teaspoons	1 Teaspoon
1 Quart	1 Teaspoon	½ Teaspoon	¼ Teaspoon

Disinfection of non-porous non-food contact surfaces can be achieved with 600 parts per million (ppm) of chlorine bleach. To make measuring easier, the strengths listed in this table represent approximately 600-800 ppm of bleach for disinfecting, and approximately 100 ppm for sanitizing. Chlorine test strips with a measuring range of 0-800 ppm or higher can also be used to determine the strength of the solution.

**Contact your local health jurisdiction** for further instructions on cleaning and disinfecting if specific disease or organisms are identified as causing illness in your program.

**\*Use only plain unscented bleach** that lists the percent (%) strength on the manufacturer's label. Read the label on the bleach bottle to determine the bleach strength. For example, Sodium Hypochlorite...6.25% or 8.25%.

#### Steps to Follow

- **Clean** the surface with soap and water before disinfecting or sanitizing.
- **Rinse** with clean water and dry with paper towel.
- **Apply** chlorine bleach and water solution to the entire area to be disinfected or sanitized.
- **Air dry** for at least 2 minutes.

This chart was created by the Disinfection Workgroup led by the Washington State Department of Health. Workgroup members consist of staff from the Department of Early Learning, Snohomish Health District, Local Hazardous Waste Management Program in King County, Washington State Department of Ecology, the Coalition for Safety and Health in Early Learning, and the Washington State Department of Health.

For people with disabilities, this document is available on request in other formats.  
To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

Bleach used as a disinfectant must be plain, unscented liquid sodium hypochlorite. Do not use scented, powdered, splash-less or color-safe bleach. Check the label. Bleach concentrations have continued to increase over time, from 5.25% sodium hypochlorite to 6.15%. Now companies are marketing an 8.25% concentration to reduce package. Read the label and know what your product is. The Clorox bleach MSDS (Material Safety Data Sheet) covers concentrations from 5-10%.

Bleach solutions for disinfection or sanitization must be prepared fresh daily. After bleach is mixed with water, it is only good for 24 hours. Add the required amount of bleach to cool water to reduce fumes. Label the bottle with the contents and the date mixed. Eye protection and gloves should be used when diluting full strength bleach. The Department of Labor and Industries, WAC 296-800-15030, require an emergency eye wash within 50 feet or 10 seconds of full strength bleach being used.

Bleach is a disinfectant, not a cleaner. Surfaces must be cleared with detergent/soap and water to remove dirt and organic material **before** the bleach solution is used. Read labels of both detergent and bleach products to check for compatibility. Bleach rapidly loses efficacy in the presence of organic material. Do not mix soap/detergent in with bleach.

After application of the bleach solution, the surface does not need to be rinsed, unless high concentrations of bleach were used, but does need to be dry before using. Air drying is preferred.

Bleach solutions of 8.25% concentration:

- Food contact surfaces must be thoroughly cleaned with hot, soapy water, then rinsed with clean water, then sanitized. The sanitizer must be at 50-100 ppm bleach, approximately 1 tsp/gallon.
- General sanitizing (bottles, mouthed toys, etc.) (300 ppm bleach)
  - $\frac{3}{4}$  tsp bleach/1 quart water
  - 1 tbsp bleach/1 gallon water
  - Area must stay wet for 2 minutes
  - Air dry
- General disinfecting (diaper area, bathrooms) (~600 ppm bleach)
  - $\frac{1}{2}$  tsp bleach/1 quart water
  - 1/8 cup (2 tbsp) bleach/1 gallon water
  - Area must stay wet for 3-5 minutes.
- Sporicide/Noroviruses/Hanta viruses (blood spills, diarrhea), stools, rodent droppings) (6,000 ppm bleach)
  - Usual language requires a 1:10 solution, 1 part bleach to 9 parts water, 1 1/2 cups bleach/1 gallon water
  - 8.25 % bleach, 1:12 – 1 1/4 cups bleach/1 gallon
  - Wet contact time for diarrheal stools: 5+ minutes
  - Wet contact time for Noroviruses: 1+ minutes
  - Wet contact time for rodent droppings: 10 minutes