

# FAQ About Bleach Solutions

## What are the changes in bleach concentrations?

The concentration of bleach solutions sold in stores has changed throughout the country. The new, stronger bleach solution available in many stores is now 8.25% sodium hypochlorite solution. The former concentrated bleach (5.25%-6% sodium hypochlorite) is no longer available at many stores. The 8.25% solution is being produced by both brand name companies as well as companies that produce generic products. Many of these products are now EPA-registered products as well. Because of the variety of products available, it is more important than ever to check the label on your bleach bottle to determine the concentration.

## Why do disinfection and sanitation solutions need to be adjusted?

If your child care is now using the new 8.25% regular bleach, your sanitizing and disinfecting solutions will have to change. Because the new 8.25% bleach concentration is thirty percent more concentrated than the former bleach, the recipes for preparing the solutions must be adjusted to be effective and safe for children and adults.

## Why should I not use scented or splash-less bleach?

Fragrance is added to cover the smell of chlorine in bleach and make it more pleasant to use. It is best to avoid using scented bleach. In bleach, and many other products, the chemicals that produce the nice smell can trigger breathing problems and asthma for some children and adults. Splash-less bleach is a little thicker than regular household bleach. It is less likely to splash, but the sodium hypochlorite concentration is only 1-5%. It isn't strong enough to sanitize and disinfect, as the label warns. The best bleach products to use for sanitizing and disinfecting is Environmental Protection Agency (EPA) registered "Regular" bleach at 8.25% sodium hypochlorite concentration.

## Where can I find more information on safe solutions, disinfecting and sanitizing?

### Oregon:

Metro: <http://www.oregonmetro.gov/cleangreen>

Oregon Kids Healthy and Safe:

<https://www.healthoregon.org/childcare>

### National:

Centers for Disease Control and Prevention: [www.cdc.gov](http://www.cdc.gov)



## How long does regular household bleach last on the shelf?

Bleach at high concentrations degrades fairly rapidly (16% lasts only minutes), but slows as the concentration becomes lower. Bleach at 5.25% will probably last several months without too much deterioration. It continues to deteriorate slowly to about 3%, where the speed of deterioration virtually stops. According to Clorox™, the amount of hypochlorite that is added to their bleach depends on the season in which it is manufactured, because temperature affects the decomposition rate of sodium hypochlorite. So, more hypochlorite is added to bleach made in the summer than in cooler months. Clorox aims to maintain a constant hypochlorite concentration for at least six months after the manufacturing date, assuming the bleach is stored around 70°F. It takes about 4-8 weeks from the time chlorine bleach is made to when it gets to a store so that you can buy it to take home. This leaves you 3-5 months where the bleach is at the effectiveness level stated on its label.

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## What is an EPA (Environmental Protection Agency) registered product?

All products making claims as hard surface sanitizers and disinfectants are regulated by the EPA under federal law and cannot legally be sold without EPA registration. This registration is based on establishing that such products are safe, effective and environmentally sound. Registering a completely new active ingredient involves such a major commitment of time and money that few companies undertake the effort. EPA registered bleach products at 8.25% sodium hypochlorite concentration are recommended for sanitizing and disinfecting purposes because their concentrations are certified by the EPA. The EPA number is a two-part number assigned by Environmental Protection Agency to identify each bleach product registration (e.g., 1253-79). The first number is the company number; the second number (after the dash) is the product number. This registration number must appear on the product's label.

## Are there alternatives to using chlorine bleach for sanitizing and disinfecting?

Yes, there are safe and effective ways to sanitize and disinfect early care and education facilities without using bleach products. Oregon's licensing rules allow the use of many different "green" products only for the cleaning step before sanitizing and disinfecting. Talk with your Environmental Health Specialist or licensing specialist about alternative options for sanitizing and disinfecting.

<http://www2.epa.gov/childcare/green-cleaning-sanitizing-and-disinfecting-toolkit-early-care-and-education>

Two options are listed below:

### Quaternary ammonium

Unlike bleach, quaternary ammonium chlorides, or "quats," are noncorrosive, making them gentler on metal equipment and surfaces. Quats are odorless, are more stable than bleach and have a longer shelf life. Like bleach, however, they're toxic and can cause respiratory distress. In fact, it's more difficult to use quats safely because there are many different concentrates available and no general guidelines for mixing. Label directions must be followed carefully. Some formulations include additional chemical ingredients that may be harmful themselves or are not suitable for food-contact surfaces. Quats also require a longer contact time for germ-killing and are generally not as widely available.

From [http://library.oregonmetro.gov/files//sanitizers\\_and\\_disinfectants\\_web\\_10-19-11.pdf](http://library.oregonmetro.gov/files//sanitizers_and_disinfectants_web_10-19-11.pdf)

### Iodine (Iodophors)

Iodine solutions can be effective sanitizers and disinfectants against a broad range of germs. They don't produce harmful vapors and iodine has a long shelf life. The primary disadvantage to using iodine is potential staining of surfaces and skin. Iodine is also toxic if ingested.

From [http://library.oregonmetro.gov/files//sanitizers\\_and\\_disinfectants\\_web\\_10-19-11.pdf](http://library.oregonmetro.gov/files//sanitizers_and_disinfectants_web_10-19-11.pdf)