

Home Uses for Chlorine Dioxide

Chlorine dioxide (activated sodium chlorite solution) is produced when sodium chlorite solution is mixed with an acid (activator). It is useful in many ways around the house. In fact, it can do the work of several products that you may already use while providing a much healthier and less toxic environment in your home. It is particularly important to consider the biological effects of your environment if you have young children at home, whose developing bodies and minds are extremely sensitive to toxins in cleaning products and other household chemicals. Chlorine dioxide is a wonderful bleach (sodium hypochlorite) alternative. Since the chemistry of chlorine dioxide products is slightly different than bleach, sodium chlorite solution is not an exact bleach replacement. However, it can be used in place of bleach in most circumstances with much fewer negative side effects. Read our article on sodium chlorite solution and bleach for more details on this subject (<https://discoverwps.com/chlorine-dioxide-as-activated-sodium-chlorite-solution-bleach>). In this report, we have compiled many of the handy ways to use sodium chlorite solution at home.

Water purification

For long term storage of water - Use 1-2 drops of sodium chlorite solution for each gallon of well water or tap water that you wish to store. Water will be purified in 8 hours. Do not use an activator (acid) for long term storage. For containers not exposed to sunlight, treat every 60 days. For containers exposed to sunlight, treat every 7 days. Also, for safety, treat again 8 hours before use.

For standing water, or water from a suspect source - Use 3-4 drops of sodium chlorite solution to each gallon of water. Do not use an activator. Let stand for 8-10 hours before drinking.

For pure water on demand use a weak acid activator - 50% Citric or 4% Hydrochloric acid solution at a 1:1 ratio (one drop of acid per drop of sodium chlorite solution) is recommended as an activator, but lemon/lime juice or vinegar will work at a 5:1 ratio (5 drops of juice or vinegar per drop of sodium chlorite solution). Use 3-4 drops of activated sodium chlorite solution to each gallon of water. Do not add directly to water, mix sodium chlorite solution and activator in separate container. Wait 30 seconds if using recommended activator or 3 minutes otherwise, then add activated sodium chlorite solution to water. Wait 15 minutes before drinking.

Preparing food

Chlorine dioxide is far and away the best food cleaning agent available. Using chlorine dioxide to help prepare your meals is a powerful way to improve the quality of your food in your home.

As a rinse - Use a mild chlorine dioxide and water solution and scrub on vegetables before preparing them for salads or cooking. Add 10-15 drops of activated sodium chlorite solution to a bowl or pot of rinse water to rinse leafy greens, brush off mushrooms, or clean any other produce you prepare.

We have noticed, and have heard from others, that after rinsing a large amount of food with chlorine dioxide, there is often a noticeable residue left behind after soaking some produce. You may notice a thin, waxy coating on top of the water that is left behind by the chlorine dioxide cleaning off pesticides, herbicides and processing gunk from the surface of produce. Needless to say, this is better left off of your food than staying on for you to eat.

For poultry, fish, beef, and other meats, use chlorine dioxide solution as a safeguard against pathogens hiding in the meat. Chlorine dioxide can be used as either a scrub or a soak to help keep your meat products safe to eat.

As a scrub - Add 5-10 drops of activated sodium chlorite solution to half cup of water. Use this solution to rub firmly onto the surface of a fish fillet, chicken breast, steak, or other meat item. Allow the solution to stay on the surface of the meat for a few minutes, then rinse off.

As a soak - Add 5-15 drops of activated sodium chlorite solution to enough water to cover your meat items in a bowl or pan. Submerge your meat items in the chlorine dioxide soak solution as you prepare other items in the meal or preheat the oven. When you are ready to use the meat, rinse it off and drain the rinse solution, or add a few more drops of activated sodium chlorite solution and reuse to soak for another item.

Cleaning and disinfecting in the kitchen

Studies have shown that the average kitchen sink and sponge contain up to ten times more bacteria than the average toilet! When it comes to keeping the kitchen clean, chlorine dioxide is a sensible alternative to both bleach, which can create toxic byproducts, and antibacterial cleaning soaps, which create drug-resistant germs.

Kitchen cleanser - Add 10 drops of activated sodium chlorite solution to a pot or bowl of water to be used to disinfect your kitchen counter, sink, sponges and/or cutting boards. Chlorine dioxide is the perfect thing for wooden cutting boards because unlike bleach, it does not create toxic byproducts when it interacts with wood. For more information on this chemistry, read our article on sodium chlorite solution and bleach (<https://discoverwps.com/chlorine-dioxide-as-activated-sodium-chlorite-solution-bleach>).

Sponge disinfectant - Add 10 drops of activated sodium chlorite solution to a cup or small bowl of water. Soak your sponges or brushes overnight every few days to keep them germ-free.

Glassware - Chlorine dioxide can also be used to put more sparkle into your glassware. Add 30 drops of activated sodium chlorite solution to your dishwasher and soak your glassware for several minutes. Rinse well and towel dry.

Cleaning off mold and mildew

Clothing - Chlorine dioxide can be added to your loads of laundry to wash mildew out of washable clothing and fabrics. Wet the mildewed section of fabric and scrub in liquid or powdered detergent onto the area. Then wash the fabric in warm water. Add 30 to 60 drops of activated sodium chlorite solution to the wash water instead of bleach. No trihalomethanes are created in your wash water, and the chlorine dioxide does not wear your clothing down the way bleach products do.

Shower wall and floor tiles - Chlorine dioxide is an excellent addition to, and in some cases, a replacement for many cleaning products. Activate 30 to 60 drops and add to a cup of warm water. Use a cloth or spray bottle to apply the chlorine dioxide solution to your shower walls and floor tiles. Let it sit for a few minutes, then wipe or scrub away and rinse off. A strong chlorine dioxide and water mix can brighten the grout between floor and wall tiles. You can also use a chlorine dioxide and warm water mix on your rubber shower mat and shower curtain to remove mildew buildup.

Cement, brick, stone - A strong chlorine dioxide and water solution can also remove mildew and stains on cement, brick, stone, and other outdoor surfaces. Use a wire brush to scrub chlorine dioxide and water onto patio stones, foundation walls, or exposed concrete surfaces.

General disinfecting

Chlorine dioxide can be used all over the house for general disinfecting purposes. A paper towel sprayed with chlorine dioxide and water makes a great disinfecting rag for wiping doorknobs, railings, banisters, and other regularly touched objects at home. This is particularly relevant during a pandemic or in winter months when flu and cold germs roam freely.

Chlorine dioxide is great for cleaning fish tanks. Add a few drops of activated sodium chlorite solution to your cleaning water the next time you clean your fish tank. A story related to a chlorine dioxide forum tells of a woman who saved her fish when it was belly-up by dropping chlorine dioxide into the tank water.

Plants and Flowers

The next time you have a bouquet at home, or have clipped yourself an arrangement of flowers from your garden, activate a drop of sodium chlorite solution and add it to your flower water with a pinch of sugar. Your flowers will last noticeably longer!

Use chlorine dioxide to disinfect gardening tools that you have used to prune diseased portions from your plants. This will stop the tools from spreading the disease to other plants the next time you use them.

If you have a houseplant that is diseased, wilting, or seems unhealthy in any way, try using a chlorine dioxide and water solution on the affected areas. Add 6 drops of activated sodium chlorite solution to a tablespoon of water. Use this to dab onto plant stems and leaves that show signs of weakness or disease. Let the chlorine dioxide stay on the plant surface for up to two minutes, then wash the area with water to remove the chlorine dioxide.

Suggestions for Personal Use

Oral Hygiene – Add 4-6 drops of activated sodium chlorite solution to 2-4 Oz of water. Brush teeth and tongue, gargle and/or use as a mouthwash. If halitosis (bad breath) persists, increase the activated drops next time, but do not exceed 10 drops.

Body Odor Eliminator – Add 20 drops of activated sodium chlorite solution to each ounce of water used and pour into a small mist spray bottle (we suggest our white HDPE bottles for this purpose, available at our website). Spray on desired area of body (arm pits, feet, etc.). Use sparingly as it may produce a mild burn and may bleach hair. The solution will last 3-4 days in an air tight container.

pH Booster – Increase the pH of drinking water by adding 3 drops of sodium chlorite solution (do not activate) to each liter (33.8 oz.) of water.

If you have additional uses for chlorine dioxide, please let us know and we'll share them with others.