

THE UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION



A standard treatment for sanitizing your well system is shock chlorination. Guidelines for using this treatment safely and effectively are listed below.

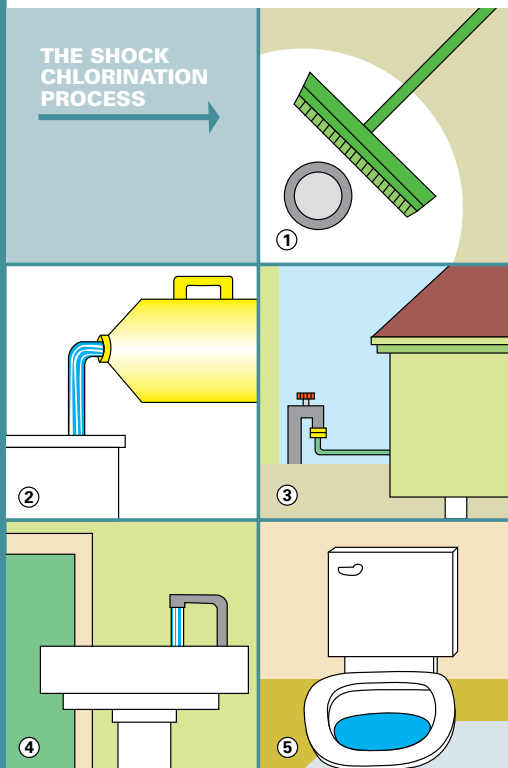
WHAT IS SHOCK CHLORINATION?

Shock chlorination is the process by which home water systems such as wells, springs, and cisterns are disinfected using household liquid bleach (or chlorine). Shock chlorination is the most widely recommended means of treating bacterial contamination in home water systems.

WHEN SHOULD SHOCK CHLORINATION BE USED?

Shock chlorination is recommended:

if a well has been idle for a long period of time, if the water has a strong chlorine taste or odor, or if the water is discolored.



If well owners have detectable levels of arsenic in water, the following steps may be useful:

1. Do not use either acid or alkaline bleach solution. Solution with pH 6-7 is best.
2. Do not leave chlorine solutions inside well casings for longer times than prescribed (12-24 hours).

When residual levels of chlorine are found:

4. Well water for drinking should be tested for arsenic after shock chlorination to make sure the arsenic concentration is at a safe level (less than 10 ppb).

WHAT PRECAUTIONS SHOULD BE TAKEN PRIOR TO SHOCK CHLORINATION?

Shock chlorination is used to remove bacterial contaminants from well water, well casings, holding tanks and the whole water supply system. A licensed well driller is trained to shock chlorinate. Should you decide to shock chlorinate your well yourself, take the following precautionary measures:

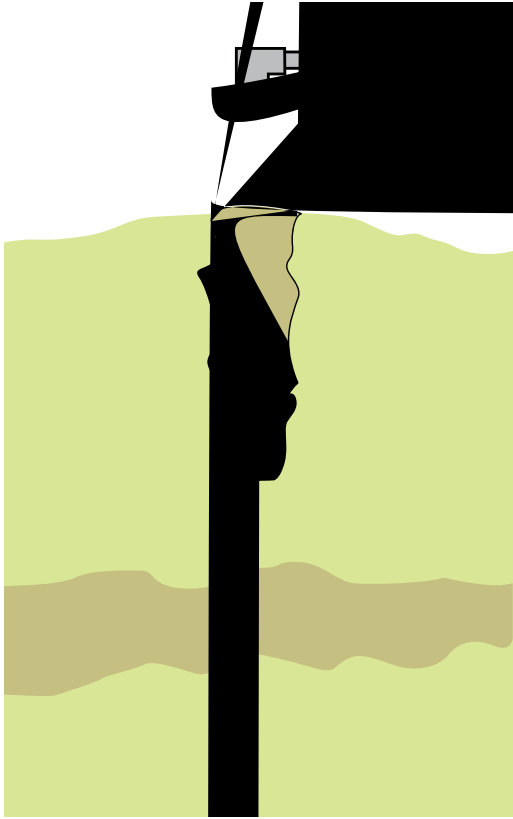
- **Concentrated chlorine solutions for shock chlorination can be dangerous.** Because of the volatile and corrosive nature of the concentrated chlorine solution, it is important to wear appropriate clothing, including goggles, a protective apron, and rubber gloves and boots. Mix and add chlorine solution in a well-ventilated area.
- **High chlorine levels in water after shock chlorination.** Arrange for an alternative source of drinking water. Make sure that children and older adults do not consume tap water during treatment.
- **Chlorine should have enough contact time to kill the bacteria.** Make sure that no one in your home uses the water for any purpose during the 12 to 24 hour treatment.
- **Preventing electric shock from the water pump.** Before removing the well cap or cover, turn the pump circuit breaker off. In Step 3 of the shock chlorination process below, you will need to turn the power back on, but be sure to turn the pump circuit breaker off again before replacing the well cap or cover (Step 6). Wear waterproof rubber boots.
- **Protecting components of water supply and treatment devices.** Shock chlorinating a water supply system can potentially damage components such as pressure tanks, some filters and filter media, and other treatment devices. Before you begin, disconnect all carbon filters and reverse osmosis units attached to your household water lines. The strong chlorine solution can damage these filters. However, some water softeners, iron filters and sand filters may not be damaged. Check with component manufacturers before shock chlorinating your water supply system to determine how to bypass or protect this equipment if necessary.

WHEN WILL THE WATER BE DRINKABLE AGAIN AFTER SHOCK CHLORINATION?

Wait one to two weeks after shock chlorinating the water supply system to re-test for total coliform and E. coli bacteria. Follow sample collection instructions carefully. If the test results show the absence of coliform bacteria, the water is safe to drink. However, if test results show the presence of coliform bacteria, the source(s) of contamination should be identified and eliminated through a licensed well driller/contractor or a continuous disinfection treatment system should be installed.

WHAT KIND OF CHLORINE BLEACH SHOULD BE USED?

Use the plain (and generally least expensive) unscented household chlorine bleach with at least 5% sodium hypochlorite found in supermarkets; do NOT buy fresh scent, lemon or other scented chlorine products.





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