

Water Facts: Number 5 Shock-chlorination of domestic wells

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This information has been reviewed by university faculty

<http://ag.arizona.edu/pubs/water/az9418.pdf>

Publication number 194018
Published and reviewed
February 1994

Shock-chlorination is an effective way to disinfect your well and household plumbing. You should shock-chlorinate your well after repairing it, or, if a lab test shows there are coliform bacteria in the water. Arizona law requires well drilling contractors to disinfect new wells, which are for human consumption, before removing the drill rig from the site.

Shock-chlorination adds high levels of chlorine to a system. The chlorine remains in the system, undisturbed, for a maximum of 24 hours. This destroys harmful bacteria or other microorganisms that may be in the water.

Before you begin, disconnect all carbon filters and reverse osmosis units attached to your household water lines. The strong chlorine solution will ruin the effectiveness of these filters. However, it is all right to chlorinate water softeners, iron filters, and sand filters. Check with the manufacturer or dealer if you are unsure.

To disinfect your well and plumbing, use household laundry bleach, containing 5% available chlorine. Mix 2 quarts bleach with 10 gallons of water. Mix the chlorine and water in a well-ventilated area; wear gloves and protective clothing. Do not combine the chlorine with other chemicals; toxic fumes may result.

Pour this solution into your well while the well is pumping. Allow the chlorine solution to circulate through the system until you notice a strong chlorine odor at each faucet. Close each faucet after you detect the chlorine.

If you do not detect a strong odor at the faucets, add more chlorine to the well water. Over-chlorination will not harm the system, so it's better to use too much chlorine than too little.

Stop the pump and make sure all taps are closed. Mix another 2 quarts bleach with 10 gallons of water. Pour this solution into your well and allow to stand at least eight hours. Let stand 12 to 24 hours, if possible.

Then, pump the chlorinated water out of the well and flush all lines. Flush outside lines first. Open outside faucets, one at a time, and flush until you no longer smell chlorine. Do not let the water run on your lawn or other vegetation. Direct the water to a drainage ditch. To conserve the water, you may run it into a storage tank and use it to water vegetation after the chlorine dissipates.

Next, flush the inside faucets one by one, being careful not to let more than 100 gallons of chlorinated water drain into your septic system.

You can use the water for the next week or two for all household purposes, except drinking and cooking. Then have a state-certified lab test your

water for coliform bacteria. Test your water again in two or three months to ensure the contamination has been cleared up.

Shock-chlorinate the system again if the contamination continues. Contact a well driller for more help if several chlorination attempts do not stop the problem.

For persistent problems, try to locate and remove the source of contamination. You may need to continuously disinfect your well water with chlorine. Or, you may have to abandon the well and find another water source.

Shock-chlorination is a simple, inexpensive, and effective way to disinfect your well and generally provide microbiologically safe water for your household.

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, James A. Christenson, Director, Cooperative Extension, College of Agriculture, The University of Arizona.

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