

SHOCK CHLORINATION STEP-BY-STEP

Summary

1. One gallon chlorine
2. Remove the well cap and pour chlorine
3. Open faucets until a strong chlorine odor is detected (else add more chlorine)
4. Let water sit in the pipes overnight
5. Flush water from an outdoor faucet to waste rather than through septic system
6. Re-test for coliform bacteria two to three weeks later

Detail

1. Supplies.

- Clean 5-gallon mixing bucket
- Tools to remove the well cap
- Scrub brush
- Clean garden hose
- Safety gear. Goggles and protective gloves and clothing
- Liquid household bleach containing 5.25% chlorine. Do not use bleach with a "fresh scent," lemon fragrance, or other cleaners added.

2. How much chlorine? The amount of chlorine depends on the water depth, not the total depth of the well. Water depth is the distance from the bottom of the well to level of the water. Consult the table below.

Example: A 6" well with a depth of 300 feet. The water level is 150 feet from the surface.
 $300 - 150 = 150$. Answer: 5 pints

6" is a very typical well diameter. If you are unsure of the water depth, it is better to err on the side of more chlorine than less.

Water Depth (feet)	Well Diameter (inches)					
	6	8	10	24	32	36
10	1c	1c	2 c	3 qt	4 qt	6 qt
20	1c	2c	4 c	5 qt	8 qt	10 qt
30	2 c	4c	3 pt	c = cup, pt = pint, qt = quart		
40	1 pt	2 pt	4 pt			
60	2 pt	3 pt	6 pt			
80	2 pt	4 pt	7 pt			
100	3 pt	5 pt	4 qt			
150	5 pt	4 qt				

Source: Penn State Cooperative Extension, *Shock Chlorination of Wells and Springs*, publication F140.

3. Fill bucket with water.

4. Shut off electricity. To prevent an electric shock, turn the pump circuit breaker off before removing the well cap or cover.

5. Remove the well cap. Place cap on clean surface.
6. Mix the chlorine with water. Mix chlorine in plastic bucket.
7. Clean the surface. Remove all loose or foreign debris from around the well. Use a scrub brush to clean the surface of the well casing and well cap.
8. Pour. Open the well cap and carefully pour the chlorine down the well. Try to coat the casing (sides of the well) as you pour.
9. Insert a garden hose. Circulate the chlorine by placing a garden hose back into the well and run for 15 minutes or until a strong chlorine odor is present.
10. Replace well cap. Again, turn the pump circuit breaker off before re-installing the well cap.
11. Open faucets. Open each faucet – both hot and cold – in one room at a time – and let the water run until a strong chlorine odor is detected, then turn it off and go to the next room. Flush the toilets. Don't forget outdoor faucets and hydrants. If a strong odor is not detected at all outlets, add more chlorine to the well.
12. Turn off faucets. Let water sit in the pipes overnight – a minimum of 6 hours and preferably 12 hours.
13. Flush. Run water from an outdoor faucet to waste. Do not discharge large amounts of chlorine into the septic system, onto lawns and gardens, or into streams or ponds. After the chlorine odor becomes slight or not detected, run each indoor faucet until there is no chlorine odor.
14. Backwash. Chlorinate water softeners and iron or sand filters according to the manufacturer's directions. Bypass carbon or charcoal filters because chlorination will use up their capacity.
15. Re-test. Re-test for coliform bacteria approximately two weeks after the shock chlorination. If no coliform bacteria are present, wait an additional two to three weeks and have the water tested again. If the bacteria return in either of these subsequent tests, a continuous disinfection treatment system may be necessary to correct the problem.

Note: Shock chlorination corrects immediate bacteria problems in wells and pipes, but it does not address the source of the bacteria.

16. Ongoing maintenance. Steps to take to make sure well stays clean.
 - Keep the area around your well clean and make sure it is always accessible
 - Limit activities such as use of fertilizers or pesticides near the well
 - Be aware of local activities that may impact your well water
 - Complete a visual inspection of your well casing to detect any cracks, holes or corrosion
 - Replace a standard well cap with a sanitary well cap to keep out insects, small mammals and other surface contamination