

## RESIDENTIAL WELL DISINFECTING PROCEDURE

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If a sample is to be drawn from a newly constructed well, the water supply system needs to be disinfected prior to sampling. Sampling must be delayed until the disinfectant has dissipated. In the event that Spectrum Analytical detects any residual disinfectant in the water sample during the course of analysis, work will be stopped and you will be asked to resample the well at your expense. Additionally, you should ask the local Director of Health whether organic chemicals scan is required because of area of groundwater conditions and/or area land use.

### Disinfecting Directions

This is a general description only; state and county codes may vary.

Using a chlorine and water mixture most economically disinfects wells. The best source is dry granulated chlorine, but this can be DANGEROUS to use and is NOT recommended for homeowner use. A safer and more convenient source of chlorine for do-it-yourself disinfecting is household laundry bleach. Bleach should not be put into the well straight from the bottle. The general recommendation is to dilute the laundry bleach 1:100, (one gallon of bleach to 100 gallons of water; half a gallon of bleach to 50 gallons of water; a quart of bleach to 25 gallons of water.) (Although almost any brand of laundry bleach may be used, some states recommend specific products. Some manufacturers of laundry bleach state that their product is formulated for laundry use and that it has not been made for any other purposes.)

For a 6" diameter well (the usual household well size), 15 gallons of (chlorine + water) solution are needed for every 10 feet of well depth (depth of well below water level). For example, a 200 ft. deep, 6" diameter well, will need 300 gallons of mixture. Three gallons of household laundry bleach should be enough, mixed at a 1 to 100 ratio with water. A new clean garbage can holds about 25 gallons.

- A 4-inch diameter well needs 7 gallons of chlorine + water mixture for each 10 feet.
- An 8-inch diameter well needs 26 gallons of chlorine + water mixture for each 10 feet.

For a large diameter well a bit of elementary math will be needed to work out the volume of bleach mixture required.

1. Remove the well cap and pour the chlorine and water solution into the well. If a 25-gallon container is used, it will probably be necessary to mix and pour several times to get the right volume of chlorine and water mixture into the well.
2. Once all the chlorine mixture is in the well, use a hose connected to the home system being chlorinated and run water back down the well for at least 15 to 20 minutes. This will ensure that the chlorinated water is being circulated. At this time, make sure that the hose is used to thoroughly rinse down the sides of the well casing above water level.

3. In some low yielding wells that are really encrusted, the well casing may "fill-up" as you add the mixture. You will need to take a longer time in adding the mixture. (It may be necessary to remove the pump and rehabilitate the well to regain the original yield. This will have to be done by a contractor.)
4. Run each of the water taps in the house (hot & cold and those to the washing machine and dishwasher) until there is a smell of chlorine, then turn the tap off. Leave the chlorinated water in the system, (well and plumbing) for 12 to 24 hours. This will disinfect the whole water system. Turn off the water heater during this time. If you don't have a good sense of smell, the use of a swimming pool chlorine test kit can show whether or not there is chlorine throughout the plumbing system.
5. Remove all the chlorinated water from the well by running the pump and leading the hose to a "safe" area. Do not put the chlorine solution into a septic system. Do not put it in a creek where it could kill fish. Do not put it onto a flower or vegetable garden because it can kill plants. Check with the authorities before putting it into a municipal sewer. At a 1 to 100 concentration, the small amount left in house plumbing system can safely be put down the drain.
6. Run the system until all smell of chlorine is gone. Sample the well a day or two later and retest the water.
7. Take the water sample following the Residential Drinking Water Sampling Directions.