

SHOCK DISINFECTION OF A DRILLED WELL

MATERIALS NEEDED:

- Clean 5 gallon bucket
- Enough hose to run from an outdoor/frost-free spigot to the well head
- Household bleach (5.25% to 6 % strength)- UNSCENTED
(the amount needed is based on 1 ½ quarts of bleach for every 100 foot of water standing in a 6" cased drilled well)

PROCEDURE:

1. Mix the appropriate amount of bleach (for example, 3 quarts for a well with 200 feet of standing water) in the clean bucket with 4+ gallons of water. This will provide you with a large working volume.
2. Remove the well cap from the well head being careful not to drop any materials down the well casing. Carefully move all the wire connections to the side and out of the casing.
3. Pour the bleach/water down the well casing (Do not pour on wire connections).
4. Connect a hose to either an outdoor faucet or to a frost free hydrant near the well. Stick the end of the hose down the well casing (far enough so that it will not pull out). Turn on the water and allow it to re-circulate until you can smell bleach coming out of the hose.
- 5.***If there is no outside spigot, then pull the water through the household plumbing until you can smell the beach. Turn off all water and follow instructions below.
6. Turn off the spigot and go into the house and turn on each spigot and let it run until you smell the bleach and then turn each one off. DO NOT ALLOW WATER TO RUN INDEFINITELY (If you have an onsite sewage disposal system you do not want to flood the drainfield and/or kill the bacteria in the septic tank with large amounts of bleach).
7. Allow the water to stand in all plumbing (undisturbed) for at least 8 hours (or overnight). This is "contact time" and will disinfect the column of water in the well and in the plumbing as well as the fixtures in the house.
8. To flush system connect the hose to an outside spigot and allow the water to run until all traces of bleach are gone from the water. Do not run on plants if bleach smell is strong. If it is a low yielding well and there are concerns about running the well dry, run the well for short periods and shut off for recovery. (Your testing lab should be able to provide you with test packets to test for the presence of chlorine (bleach)).

9. Once ALL of the bleach is gone from the system you may take the water sample. It is suggested that you take the sample from a fixed (non-swiveling) spigot that has no plastic parts (bath tub or pressure tank). Sometimes the kitchen faucet (swiveling) and fittings are difficult to disinfect and the results may be affected.

10. To disinfect the fixture, swab with alcohol and then burn with a torch or lighter (be sure all aerators/screens and washers have been removed and be sure it is a metal fixture or you may melt the plastic). Allow the water to run for about 5 minutes (or until the pressure tank has emptied and refilled with fresh water) and then take your sample. BEING VERY CAREFUL NOT TO TOUCH THE INSIDE OF THE BAG/BOTTLE.

11. Water samples should be submitted within 30 hours to your local lab. Contact your laboratory for specific handling/delivery instructions.

Table 1a. Quantities' of liquid chlorine bleach (5.25% chlorine) required for water well disinfection.

Depth of water In well (ft.)	Well Diameter (in)															
	2	3	4	5	6	8	10	12	16	20	24	28	32	36	42	48
5	1C	1C	1C	1C	1C	1C	1C	1C	2C	4C	1Q	2Q	3Q	3Q	4Q	5Q
10	1C	1C	1C	1C	1C	1C	2C	2C	1Q	2Q	3Q	4Q	6Q	8Q	8Q	2.5G
15	1C	1C	1C	1C	1C	2C	3C	4C	2Q	2.5Q	4Q	5Q	6Q	2G	3G	4G
20	1C	1C	1C	1C	1C	2C	4C	1Q	2.5Q	3.5Q						
30	1C	1C	1C	1C	2C	4C	1.5Q	2Q	4Q	5Q						
40	1C	1C	1C	2C	2C	1Q	2Q	2.5Q	4.5Q	7Q						
60	1C	1C	2C	3C	4C	2Q	3Q	4Q								
80	1C	1C	2C	4C	1Q	2Q	3.5Q	5Q								
100	1C	2C	3C	1Q	1.5Q	2.5Q	4Q	6Q								
150	2C	2C	4C	2C	2.5Q	4Q	6Q	2.5G								

Table 1 b. Quantities¹ of calcium hypochlorite (70% chlorine) required for water well disinfection.

Depth of water In well (ft.)	Well Diameter (in)															
	2	3	4	5	6	8	10	12	16	20	24	28	32	36	42	48
5	1T	1T	1T	1T	1T	1T	2T	3T	5T	8T	3 oz	4 oz	5 oz	7 oz	9 oz	12 oz
10	1T	1T	1T	1T	1T	2T	3T	5T	8T	4 oz	6 oz	8 oz	10 oz	13 oz	1.5 lb	1.5 lb
15	1T	1T	1T	1T	2T	3T	5T	8T	4 oz	6 oz	9 oz	12 oz	1 lb	1.5 lb	1.5 lb	2 lb
20	1T	1T	1T	2T	3T	4T	6T	3 oz	5 oz	8 oz						
30	1T	1T	2T	3T	4T	6T	3 oz	4 oz	8 oz	12 oz						
40	1T	1T	2T	4T	6T	8T	4 oz	6 oz	10 oz	1 lb						
60	1T	2T	3T	5T	8T	4 oz	6 oz	9 oz								
80	1T	3T	4T	7T	9T	5 oz	8 oz	12 oz								
100	2T	3T	5T	8T	4 oz	7 oz	10 oz	1 lb								
150	3T	5T	8T	4 oz	6 oz	10 oz	1 lb	1.5 lb								

¹Quantities are indicated as: C = Cups; q = Quarts; G = Gallons; T = tablespoons; oz. = ounces (by weight); lb = pounds