

Topic: Effect of Chlorine Treatment when applied to BART testers

Chlorine treatment commonly using bleach has been a standard treatment for wells suffering some form of production or quality control problems that could at least be partly caused by the natural growths and activities of microbes in, and around the water wells. These growths and activities can cause plugging, corrosion, discolored water, smells and can also affect the amount of water that can be pumped from a well. Within the well the microbes are commonly dominated by different groups of bacteria and chlorine has been found to limit these growths and activities. Of the chlorine products it is sodium hypochlorite that is most commonly used as a 5.5% solution which is readily available as domestic bleach and is an economical means of applying shock chlorination to water wells that are showing symptoms. Symptoms that commonly irritate the well users include losing flows from the well, offensive odors (such as rotten eggs), dirty or discolored water, and frequent equipment failures due to corrosion or plugging. BART testers can be used to identify some of the bacteria that are the principal cause of these failures. Going to the web site can give more information as to which testers would be the most appropriate for identifying the types of problems. If the BART testers do show reactions then it is possible that you can use BART testers when they have finished being used (e.g. ten days after the start of a test). The testers showing reactions would clearly have active bacteria in the testers and it would be possible to very crudely determine whether a chlorine treatment would impact these active bacterial growths. This may be done by adding five drops of the liquid bleach into the inner tester just above the BART ball and then resealing the tubes. Do not shake but allow the chlorine chemical to work its way down into the tester. This reaction may take several hours (six hours is a typical delay).

Remember that it is recommended that safety goggles be worn and that the hands be protected by wearing latex or rubber gloves. While it is not probable that there will be a significant reaction between the chlorine bleach and the contents of the BART tester it is recommended to err on the side of caution. Furthermore remember that the BART tester may contain active microorganisms and disposal should follow the standard recommended procedures as described on the Certificate of Analysis that can be found in all boxes of BART testers.

If the chlorine is effective then changes may be seen in the form of growth reactions seen in the tester. Commonly effective chlorine will cause the colors to lighten, growths to break apart and some level of clarity return to the water in the tester. Failure in the development of these responses to the chlorine (it looks the same after six hours as it did before adding the chlorine!) means that the bleach did not have any obvious effect. It should be noted that some chlorine may be neutralized by the chemicals in the BART tester and the failure to get any reaction does not mean that the treatment would fail.