

Taking Water Samples for use in Field BART™ testers
Quick Break Training **13 March 2009**

BART field testers come in a format that makes easy for them to be used in conditions away from a laboratory. The major difference from the laboratory version is that there is a second vial (bottle) that provides additional stability and protection to the tester when it is being transported and used in the field.

There are occasions when there is a need to take a water sample that would then be used to fill the inner vials (testers) while out in the field. With the BART field testers there is the potential to use the outer vial (bottle) as the means of collecting the water sample for use in the BART testers. The inside contents of the field tester are sterile and so therefore, when removed, the outer vial remains effectively sterile and can be used to collect the water sample.

To do this use the following procedure: (1) unscrew and remove the outer cap, remove the inner tester and place in the aluminum foil pouch from which the tester was taken, and lay the outer cap down on a clean surface without turning it over; (2) screw the outer cap back onto the outer vial and it is now ready to be used for collecting the water sample; (3) when collecting the water sample then remove the outer cap again and place on a clean surface; (4) add the water sample to the outer vial but do not fill beyond the fill line beneath the threads, this line denotes that 65ml of water has been added; and (5) put the outer cap back on to the outer vial and screw down. Up to 65ml of water sample can be taken using one outer vial. This would be enough to charge four inner BART testers. It should be remembered that the water sample only remains valid if it has not been contaminated during collection. Therefore do not charge the outer vial in an environment that is dust laden and always handle the outer vial from the outside to avoid contaminating the inside of the sampling bottle. If sterile latex gloves are available then it is advantageous to handle the outer vial wearing these gloves to further reduce the risk of contamination. There are no chemicals added to the outer vial and so any chemicals present in the water (for example, chlorine) would not be neutralised. However all BART testers do include sodium thiosulfate in the inner vials and so any chlorine impacts on the bacteria in the sample are limited to that period of time before the samples are dispensed into the inner testers.

It should be noted that all BART testers have to pass through a rigorous ISO 9001:2000 certification process that includes sterility checks, the use of clean rooms to minimise contamination and full quality management procedures to ensure that the products meet all claims. All sampling procedures need to be followed in both the taking and the subsequent storage of the water sample prior to starting the BART testers. See Quick Break Training document “storage of water samples” for more details on the storage of water samples if there is some delay before starting the tests.