



AquaVial Plus Water Test Kit

FAQ

Q: How many tests does the kit include?

A: AquaVial Plus contains two tests, one for E. coli and fecal coliform bacteria and one for total bacteria and fungi. In most cases (hot tub or well water testing) you need to use both tests on the same sample to determine if the water is good to use.

Q: Can I use this kit more than once?

A: The kit includes 2 different tests - one detects fecal coliform bacteria, the second detects bacterial and fungal contamination level. In principle the two tests are meant to be used together, as one test.

Q: Can this be used to test pool water that is fed by a natural spring?

A: Yes, the test is designed to work both on treated pool water or natural spring water.

Q: I want to know if our neighborhood retention pond is safe to swim in, would this help?

A: Yes, it would. AquaVial Plus measures 2 parameters:

- 1) the level of fecal coliform bacteria, from wild life or waste water contamination, which is the main and most important parameter to make sure the water is safe to swim in.
- 2) the overall level of bacteria and fungi.

The total bacteria test will indicate if the overall bacteria and fungi levels are above 500 CFU/ml, the recommended World Health Organization level for recreational water. If both tests are negative (no color change) the water is probably safe to swim in. If the yellow (Fecal Coliform) vial changes color (from yellow to purple) the water is definitely NOT safe to swim in. If only the pink (total bacteria and fungi) vial changes color I would proceed with caution - I would avoid swimming in it if I am already sick or have a weak immune system.

Q: Does it work for commercial equipment?

A: Like an ice machine? Yes it does. The E. coli vial (the yellow vial) would let you know if there is E. coli and coliform bacteria - this is especially important in an ice machine. The Total bacteria vial (the pink vial) would tell you if a coffee machine water reservoir has bacteria or biofilm buildup. Biofilm and bacteria in coffee water really makes coffee taste different - a sour taste in most cases.

Q: Can you use this to test the water quality at a beach?

A: Yes. AquaVial Plus can be used to test beach water, both fresh and salt water beaches. For fresh water beaches both tests included are relevant, as clean beach water should give negative results (no color change) on both tests. For salt water beaches, the microbial load can vary quite significantly, and many of the microorganisms in salt water are not dangerous for humans, therefore the total bacteria test is less relevant for salt water beaches than for fresh water. However the presence of coliform bacteria is as dangerous in salt water as it is in fresh water, and a positive test result could mean a dangerous level of fecal matter in the water (possibly from a nearby sewage), which is very dangerous. For salt water beaches we recommend using the AquaVial E. Coli water test.

Q: Does this test for coliform?

A: Yes. Total coliforms include bacteria that are found in the soil, in water that has been influenced by surface water, and in human or animal waste. Fecal coliforms are the group of coliforms that are considered to be present specifically in the gut and feces of warm-blooded animals. Because the origins of fecal coliforms are more specific than the origins of the more general total coliform group of bacteria, fecal coliforms are considered a more accurate indication of animal or human waste than the total coliforms. Escherichia coli (E. coli) is the major species in the fecal coliform group. Of the five general groups of bacteria that comprise the total coliforms, only E. coli is generally not found growing and reproducing in the environment. Consequently, E. coli is considered to be the species of coliform bacteria that is the best indicator of fecal pollution and of the possible presence of pathogens.

Q: What's the importance of the yellow dry media for E.coli testing?

A: The vial with yellow dry media is designed to detect fecal coliform bacteria such as E coli at very low concentrations (one bacteria per ml or 1 CFU/ml). The pink vial will also detect E coli, but only at much higher concentrations (500 CFU/ml). Current requirement for drinking and recreational water for fecal coliform bacteria is less than 1 CFU/ml. Therefore if the vial with yellow dry media changes color within 48 hours you should not drink or swim in that water. If the pink bacteria changes color within an hour to clear, the water has high levels of bacteria or biofilm and you should treat that water before showering in it or drinking it.

Q: Can I read the results or do I have to send the sample to a lab for results reading and interpretation?

A: AquaVial plus is a "do it yourself" test that allows you to read the results, without the need to send them to the lab. Results reading and interpretation is easy when using the colour chart provided in the instructions. The total bacteria test will provide results in as little as 30 minutes, while the E. coli test requires a 24 to 48 hours incubation time. AquaVial Plus is a quick and convenient screening test, however the kit is not meant to replace mandatory water testing through an accredited laboratory.

Q: Would the bacteria Proteus Mirabilis fall under the bacteria that this kit tests for?

A: AquaVial plus includes two type of test reagents, one that is specific to Ecoli and fecal coliform bacteria, and a second one that is a general detection system for bacteria and fungi, but without the ability to identify the specific microorganisms. While the general detection test was not directly tested against Proteus Mirabilis, its wall structure suggest that it would be detected as well as other similar Gram negative bacteria at concentrations exceeding 500 CFU/ml. If you are looking to identify this specific bacteria, the best choice it to take the sample to a water testing lab. If you are looking for a DIY test for a pool or hot tub to help you ensure the total microbial levels are safe (less than 500 CFU/ml of total bacteria and fungi, and no detectable or less than 1 CFU/ml of E coli of fecal coliform bacteria), then AquaVial Plus can help.

Q: Does this test check for Legionella?

A: The total bacteria vial will change color in presence of Legionella at concentration over 500 CFU/ml, but it will not identify it. In other words, the test will detect Legionella but it is not Legionella-specific.

Q: Does this test for giardia?

A: AquaVial plus is a positive/negative test that signals if the microorganisms (such as bacteria and fungi) do not exceeded the recommended maximum of 500 CFU/ml in water samples. The kit is capable of detecting non-culturable micro-organisms such as giardia, however the test will not specifically identify the type of microorganism.

Q: Does this test show the presence of cyanobacteria? The blue-green algae?

A: This test is designed to detect bacteria and fungi, and identify the presence of coliform bacteria. It will not detect algae, such as blue-green algae.

Q: How much water is needed to test?

A: You need in total about 25 ml of water sample - 20 ml for total bacteria test and 5 ml for the fecal coliform test. For best results we recommend sampling with twice the amount - about 50 ml to minimize cross contamination.

Q: I filled the bacteria vial over the fill line, is the result still accurate?

A: If you overfill the vial, the color change might be less obvious (final color less intense) and the sensitivity slightly higher but will not significantly affect the test results. That means that if you still see a color change from yellow to pink for the Fecal Coliform vial, or from pink to clear for the total bacteria vial, you still have microbiologically contaminated water.