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The Lab-Oratory Newsletter ▪ Fall 2016



EAI Expands Environmental Laboratory Capabilities – *Pseudomonas aeruginosa* and *Clostridium perfringens* Testing Now Offered!

Pseudomonas aeruginosa

Pseudomonas aeruginosa is a common environmental organism and can be found in feces, soil, water and sewage. It can multiply in water environments and also on the surface of suitable organic materials in contact with water. *Pseudomonas aeruginosa* is a recognized cause of hospital-acquired infections with potentially serious complications. It has been isolated from a range of moist environments such as sinks, water baths, hot water systems, showers and spa pools. If you have a hot tub or sauna, it is a good idea to test for *Pseudomonas*.

Pseudomonas is the leading cause of infection in immunocompromised people, and is commonly found in hospitals, pools, hot tubs, and other warm bodies of water. It can form biofilms in plumbing and can be difficult to eradicate. Public places such as hotels and spas are recommended to test for these bacteria.



Photo: The hold-time for these samples is 8 hours, and can be collected in the sterile 100mL bottles.

Clostridium perfringens

Clostridia bacteria are anaerobic bacteria found in the environment and gut of many warm-blooded mammals (including humans). *Clostridium perfringens* is a well-known bacterium that indicates fecal contamination when found in a water source. They are spore-forming, and as a result can survive many decontamination methods, including chemicals and UV light. If *C. perfringens* is found to be present in drinking water, it is an indication that fecal contamination occurred, however, it is not necessarily an indication that the disinfection process has been compromised since these bacteria are so resistant to disinfection methods. They are good indicator bacteria for the presence of *Cryptosporidium*, a more dangerous organism.

If someone ingests large amounts of *Clostridium perfringens*, the result is gastro-intestinal distress. The risk of getting sick from drinking water is low, but if that water is used to prepare food that risk can increase, especially if the food is stored improperly. If this organism makes its way into an open wound, the result is gas gangrene. Under ideal conditions, the population of *C. perfringens* can double in just 10 minutes.



Photo: *Clostridium perfringens* is a well-known bacterium that indicates fecal contamination when found in a water source

Samples to be tested for *C. perfringens* can be kept at room temperature and collected in sterile 100mL bottles. The hold time is 8 hours, similar to a Heterotrophic Plate Count. These samples should not be frozen.

Questions?

Have technical questions regarding *Pseudomonas aeruginosa* and/or *Clostridium perfringens*? Want to learn more about EAI's laboratory services? Then please call **800-287-0525** or email us today!