



## Evaluation of pathogens in water line biofilms

Farm waterlines are perfect niches for several microorganisms. The use of additives such as electrolytes, vitamins, and organic acids provides nutrients for bacteria growth, while the slow water movement through the system allows bacteria to attach to the walls of the pipes, hence forming biofilms. These biofilms store nutrients and protect potentially harmful microorganisms from external stresses such as disinfection, making it difficult to effectively remove bacteria from the water lines. When mature, the biofilm can subsequently release bacteria into the water and infect birds. Several pathogenic bacteria are known to be capable of forming biofilm including *Salmonella*, *Enterococcus* species, *Clostridium perfringens*, *Escherichia coli*, etc., we easily find them in submitted samples. This is why it is important to regularly check the effectiveness of water lines cleaning and disinfection by swabbing their inner walls.

The laboratory of the Poultry Research Chair has set up tests to evaluate the effectiveness of disinfection in water lines as well as the detection and quantification of pathogens in biofilms that may be found there. These analyses are now available to veterinary practitioners.

## Price list for evaluation of pathogens in waterline biofilms

### 2022 prices

**\* Prices subject to change without notice**

\*\* Samples received Monday through Wednesday will be analyzed upon arrival at the laboratory. However, samples received on Thursday and Friday will be analyzed the following week but total aerobic counts cannot be performed.

Test**	Price / sample *
Total Aerobic Count (1/10 dilutions, inoculation on a general media, recount)	36\$
<i>C. perfringens</i> detection (Enrichment, isolation on selective media)	44\$
<i>Enterococcus</i> spp detection (Enrichment, isolation on selective media)	36\$
<i>Enterococcus cecorum</i> detection and qPCR <i>Enterococcus cecorum</i> Pathogen (Enrichment, isolation on selective media, catalase test, DNA extraction, and qPCR for 16S and AgO genes)	84\$
Coliforms detection (Enrichment, enzyme-substrate test Colitag)	23\$
<i>Pseudomonas aeruginosa</i> detection (Enrichment, isolation on selective media)	21\$
<i>Salmonella</i> spp detection (Enrichment, isolation on selective media)	28\$

**\*\*\* Please allow 48 hours for the preparation and dispatch of the sampling kits**

Kit***	Prix (more taxes) *
Starter sampling kit <u>This price includes the costs of preparing and sending the material</u> (Styrofoam cooler containing 5 sponges (in a chemical neutralizing medium) pencil, 8" forceps, Icepack, 10 alcohol swabs, protocol, and submission sheet)	105\$
Sampling kit <u>This price includes the costs of preparing and sending the material</u> (Styrofoam cooler containing X number of sponges (in medium neutralizing chemicals) determined by the customer, 2 alcohol swabs per sponge, protocol and submission sheet)	50\$ + 11,5 \$/sponge
Sponge in a chemical neutralizing medium <u>This price includes preparation costs</u> This price is only applied for sponges collected on site	11,5 \$ /sponge (Purolator shipping 20\$)