Detection of *Campylobacter* in water samples

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**Conclusions**

*Campylobacter* in large volumes of water can be concentrated by filtration through a dialysis filter (ultrafiltration). Preliminary results indicate that this technique might be a sensitive method.

**Introduction**

Campylobacteriosis is one of the most commonly reported zoonosis worldwide. Contaminated water has been shown to be an important source for the transmission of *Campylobacter* to broiler flocks and to humans.

The number of *Campylobacter* in water is usually low and for this reason large volumes of water need to be analyzed. Many detection methods analyze 1L of water but with ultrafiltration >50L of water can be analyzed.

**Method**

Water samples, spiked with varying levels of *Campylobacter*, is pumped through the dialysis filter.

The concentrated material including microorganisms in the filter is eluted through "Backflush" system where the flow is reversed and 500 ml of elution buffer is pumped through the system.

**Results**

The results showed that approximately 10 CFU/liter of *Campylobacter* could be detected, which was the lowest spiking level tested.

**Future work**

Additional studies are needed in order to reliably confirm the sensitivity of the method. Centrifugation of the eluate will be tested in order to further concentration the low numbers of *Campylobacter*.