ANALYTICAL FOOD LABORATORIES

Just Water, LLC
669 Scenic Ranch Circle
McKinney, TX 75069

February 8, 2011

Inoculation Study

One filter was received from Ron Mathis on January 24, 2011 for a challenge study against generic *Escherichia coli* and *Vibrio parahaemolyticus* (*Vibrio cholera* surrogate). One liter of water was inoculated with a known concentration of each organism. The inoculated water was then passed through the filter and collected in a sterile sample bag. This water was plated onto *E.coli* Petrifilm® and incubated at 35°C for 48±2 hours and TCBS agar and incubated at 35°C for 24±2 hours. After the appropriate incubation time had elapsed the plates were inspected for typical growth. The bacterial counts were compared before and after filtering to determine the effectiveness of the filter.

Results

The initial bacterial inoculum of *Escherichia coli* was 3.5×10^7 cfu/mL and *Vibrio parahaemolyticus* was 1.1×10^2. After the water was passed through the filter, *Vibrio parahaemolyticus* could not be cultured from the water. However, the *Escherichia coli* count was 300 cfu/mL. This counts indicates that a 5 log reduction can be expected for this filter for *Escherichia coli*. The counts also indicate that a 2 log reduction can be expected for *Vibrio parahaemolyticus*. This filter is effective at removing *Escherichia coli* and *Vibrio parahaemolyticus* from laboratory water.

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