

Black Jack Clay Company
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Inoculation Study

One 0.5 micron filter was received from Ron Mathis for a challenge study against generic *Escherichia coli*. One liter of water was inoculated with a known concentration of *E. coli*. The inoculated water was then passed through the filter and collected in a sterile sample bag. This water was plated onto violet red bile agar with MUG (VG) and incubated at 35°C for 18-24 hours. After incubation 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 was 2.3×10^6 cfu/mL. After the water was passed through the filter, bacteria could not be cultured from the water. Therefore the filtering percentage for this size filter for *Escherichia coli* is 100%.

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