

## MICROBIOLOGY TEST REPORT



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Date: January 7, 2015  
Test Type: Anti-microbial removal

Test Requested By: Aspen Air  
Contact Person: Michael Gunion

**Method (*Escherichia coli* bacteriophage MS2 – ATCC 15597-B1):** For testing the viral surrogate MS-2, filters with a predetermined amount of organism were placed in the Aspen Air test device for six time periods. The filters were placed in a diluent. An aliquot was combined with *E. coli* and agar and poured over base agar. Plates were incubated at 35°C for 24 hours. The number killed E-Coli colonies were counted and compared to the control samples.

### Results:

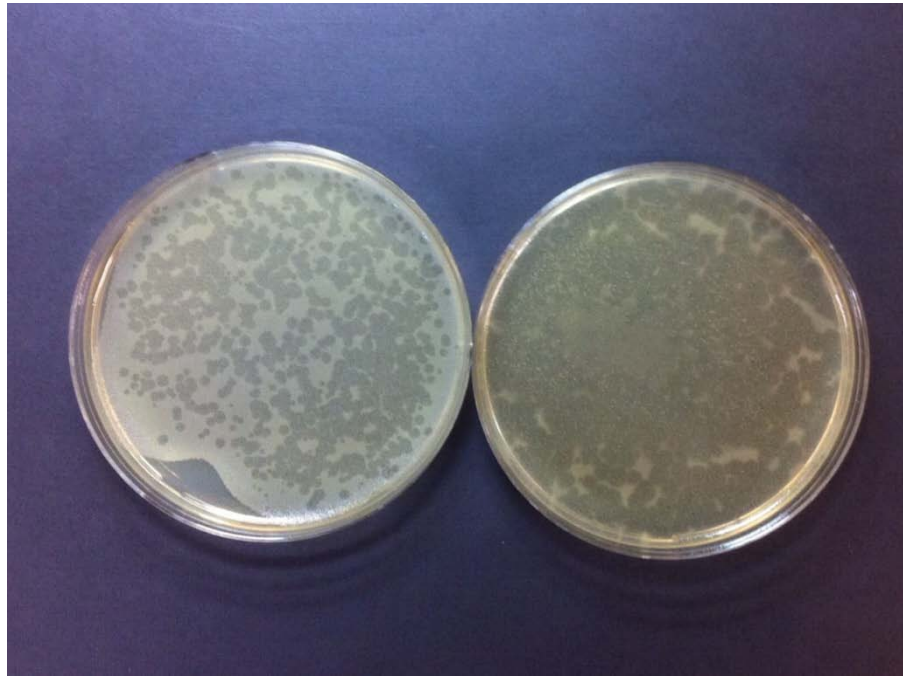
Table 1 shows the number of colony forming units on the test and control samples at multiple periods throughout the length of the test.

**Table 1. *E. coli* – results for number of colony forming units on test and control samples**

| Time   | Test Samples |     |     |            | Control Samples |     |            | % Reduction |
|--------|--------------|-----|-----|------------|-----------------|-----|------------|-------------|
|        | 1            | 2   | 3   | Average    | 1               | 2   | Average    |             |
| 0 min  | 164          | 211 | 235 | <b>203</b> | x               | x   | x          | N/A         |
| 15 min | 161          | 194 | 167 | <b>174</b> | 208             | 155 | <b>182</b> | <b>0</b>    |
| 30 min | 156          | 159 | 264 | <b>193</b> | 203             | 286 | <b>244</b> | <b>0</b>    |
| 45 min | 155          | 125 | 120 | <b>133</b> | 140             | 145 | <b>143</b> | <b>35.0</b> |
| 60 min | 80           | 130 | 100 | <b>103</b> | 130             | 200 | <b>165</b> | <b>49.0</b> |

Microbiologist  
John Cherne

Reviewed & Approved By:  
Al Vatine, President



**Figure 1. Comparison of E-coli plate at 0 time and 60 minutes**

**Conclusions:**

The filtration device showed a 49.0% reduction in *E. coli* organisms after 60 minutes indicating 51% kill rate for the virus.