

## ANTIBACTERIAL TEST REPORT

Date: March 2, 2011  
Standard Performed: Antibacterial Test  
Method Performed: 3M Petrifilm  
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In-House Lab Test at Organic By Nature, Inc.

### INTRODUCTION

Mica Miracle solution manufactured by Organic By Nature, Inc. was tested for antibacterial properties. Control batch prepared with E. coli ATCC 51813 in sterile DI H<sub>2</sub>O and similar batch prepared and treated with Mica Miracle solution at 1:1000 dilution. Control and test batches were tested with 3M Petrifilm E. coli/Coliform plates.

### MATERIALS

Mica Miracle concentrated solution  
Sterile DI H<sub>2</sub>O – Hardy Diagnostics  
Microbiologics EZ-FPC E. coli ATCC 51813 at  $6.1 \times 10^3$  CFU/pellet  
3M – Petrifilm – E. coli/Coliform  
Incubator  $35^\circ \pm 1^\circ\text{C}$

### PROCEDURE

1. Remove the vials from the refrigerator and allow them to warm to room temperature.
2. Place the sterilized water containers in the incubator at  $35^\circ \pm 1^\circ\text{C}$  for approximately 30 minutes.
3. After the 30-minute warming period, remove one sterilized water container from the incubator.
4. Carefully open the sterilized water container.
5. Open the appropriate bacteria sample vial and aseptically transfer the gelatin tablet into the sterilized water container and labeled accordingly.
6. Reseal the sterilized water container that now contains the bacteria sample.
7. Aseptically add 1 E. coli pellet to sterile DI water and control.
8. Place the inoculated samples into the incubator at  $35^\circ \pm 1^\circ\text{C}$  for an additional 30 minutes to dissolve the samples.
9. After the 30-minute dissolution period, gently shake each inoculated sample to ensure that the gelatin tablet has completely dissolved.
10. Inoculate 3M Petrifilm with 1 ml of spiked solution and control

11. Incubate 24 hours at 35°± 1°C
12. Add 0.1 ml of Mica Miracle solution to spiked sample with E. coli ATCC 51813 at 6.1 x 10<sup>3</sup> CFU/pellet

## RESULTS

Parameter	Control Samples	Mica Miracle Solution
Escherichia coli	Present	Absent

## CONCLUSION

The Mica Miracle solution prepared at 1:1000 effectively kills E. coli ATCC 51813 present in the challenge water at about 6.1 x 10<sup>3</sup> CFU /ml.

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