MICROCHEM LABORATORY

STUDY REPORT

## Study Title

Antibacterial Activity and Efficacy of Cres Cor's Device

## Test Method

Custom Device Study Based on: ASTM E1153

## Study Identification Number

NG20913

## Study Sponsor

Cres Cor | www.crescor.com

## Test Facility

Microchem Laboratory
1700 Chisholm Trail Rd.
Round Rock, TX 78681
(512) 310-8378
Testing performed by: Christopher Sun

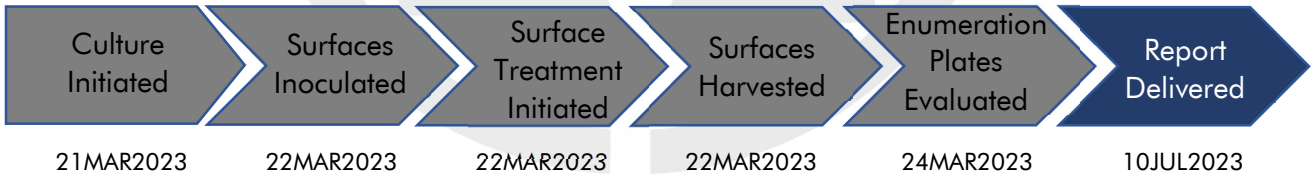
# ASTM E1153: General Information

ASTM International, formerly the American Society for Testing and Materials (ASTM), is an internationally recognized organization that develops and publishes product and testing standards. ASTM E1153 is a quantitative test method designed to evaluate the antimicrobial efficacy of sanitizers on pre-cleaned inanimate, nonporous, non-food contact surfaces. The method is typically used with a maximum contact time of 5 minutes, during which the sanitizer reduces the concentration of viable test microorganisms. ASTM E1153 utilizes non-antimicrobial agents as controls to establish baselines for microbial reductions. The ASTM E1153 method is a benchmark method for non-food contact surface sanitizers and is recognized by several regulatory agencies as an approved method for claim substantiation. See study modifications for changes made to the study method to accommodate a device.

# Laboratory Qualifications Specific to ASTM E1153

Microchem Laboratory began conducting the ASTM E1153 test method in 2007. Since then, the laboratory has performed hundreds of ASTM E1153 tests on a broad array of test substances, against a myriad of bacterial and fungal species. The laboratory is also experienced with regard to modifying the test method as needed in order to accommodate customer needs. Every ASTM E1153 test at Microchem Laboratory is performed in a manner appropriate for the test substances submitted by the Study Sponsor, while maintaining the integrity of the method.

# Study Timeline







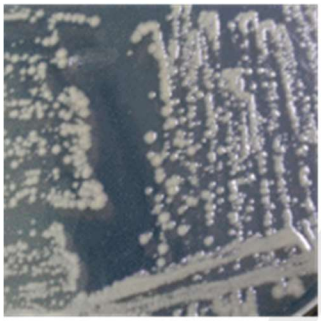

1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

## Test Substance Information

The Cres Cor ERAD Model #UV4RHA9 and Carriers were received on 27JAN2023.

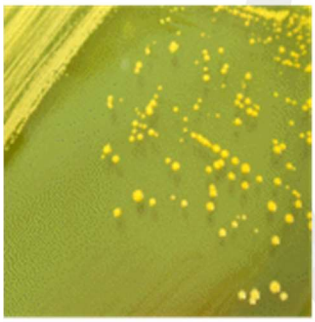
## Test Microorganism Information

The test microorganism(s)selected for this test:



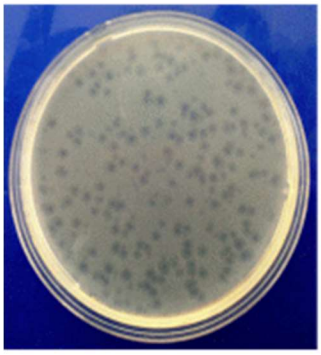
***Escherichia coli***

This bacteria is a Gram-negative, rod shaped, facultative anaerobe commonly found in the gastrointestinal tract of mammals. Although most serotypes of this microorganism are harmless there are pathogenic groups of *E. coli* such as enterohemorrhagic (EHEC), verocytotoxin producing (VTEC) and Shiga-like toxin producing (STEC) that can cause a multitude of illnesses. *E. coli* is relatively susceptible to disinfection when dried on a surface, yet it can be a challenging microorganism to mitigate in solution.



***Staphylococcus aureus* 6538**

This bacterium is a Gram-positive, spherical-shaped, facultative anaerobe. *Staphylococcus* species are known to demonstrate resistance to antibiotics such as methicillin. *S. aureus* pathogenicity can range from commensal skin colonization to more severe diseases such as pneumonia and toxic shock syndrome (TSS). *S. aureus* is commonly used in several test methods as a model for gram positive bacteria. It can be difficult to disinfect but does demonstrate susceptibility to low level disinfectants.



**MS2 Bacteriophage (MS2), ATCC 15597-B1**

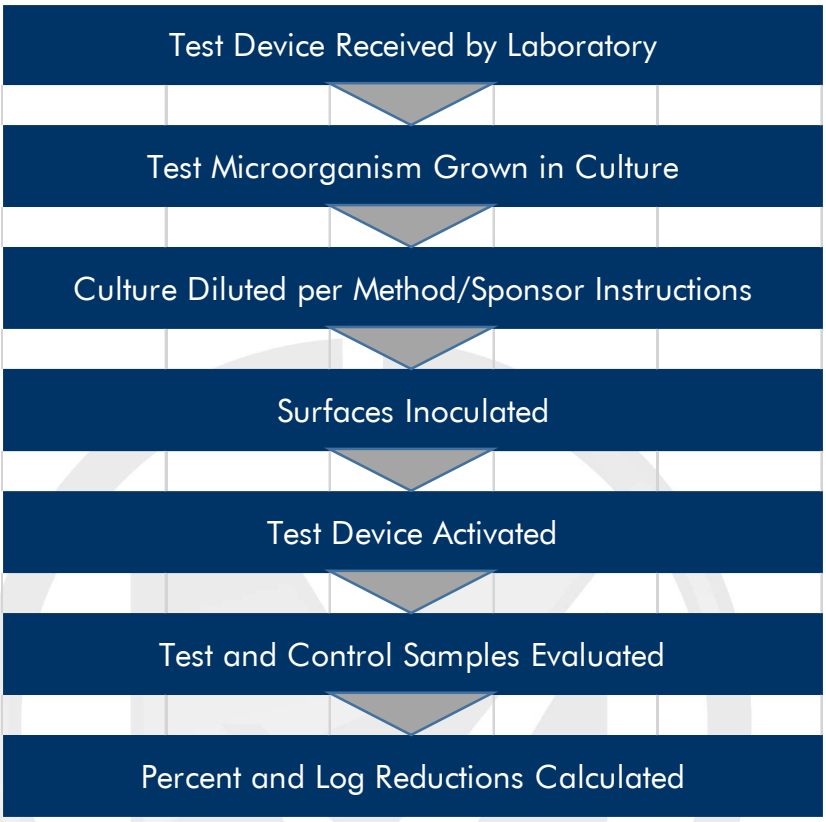
This virus is a non-enveloped positive-stranded RNA virus of the bacteriophage family Leviviridae. Bacterial cells are the hosts for bacteriophages, and *E. coli* 15597 serves this purpose for MS2 bacteriophage. Its small size, icosohedral structure, and environmental resistance has made MS2 ideal for use as a surrogate virus (particularly in place of picornaviruses such as poliovirus and human norovirus) in water quality and disinfectant studies.

**Permissive Host Cell System for MS2:** *Escherichia coli*, 15597



1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

## Diagram of the Procedure




## Summary of the Procedure

- The test microorganisms were prepared in liquid culture medium and allowed to incubate overnight.
    - Following incubation, microorganisms were pooled to form the test inoculum.
- Sterilized carriers were inoculated with 0.02 ml of the pooled test inoculum at each of three test sites and allowed to dry. Only completely dried carriers were used in the test.
- Test carriers were loaded into test device, and device was set to sponsor-defined parameters and allowed to run for test cycle duration.
- Following test device run, test carriers were harvested via swab.
- Test samples and Control samples were enumerated and incubated.





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

# Criteria for Scientific Defensibility of a Custom Device Study

For Microchem Laboratory to consider a Device Study to be scientifically defensible, the following criteria must be met:

1. Positive/Growth controls must demonstrate growth of the appropriate test microorganism.
2. Negative/Purity controls must demonstrate no growth of test microorganism.

## Passing Criteria

Due to the modified nature of the study, passing criteria may be determined by the Study Sponsor.

## Testing Parameters

| | | | |
|---|---|---|---|
| Test Substance Mode of Use: | Heat, UV light | Carriers: | 1"x3" Glass Carriers and Knife |
| Carrier Sterilization Method: | UV light and Ethyl Alcohol | Replicates: | Single Replicate (3 sites evaluated per carrier type) |
| Culture Growth Media: | Tryptic Soy Broth | Culture Growth Time: | 24±4 hours |
| Contact Time(s): | 15 Minute UVC,<br>30 Minutes of UVC and Heat (120°F),<br>30 Minutes of UVC and Heat (140°F),<br>30 Minutes of UVC and Heat (160°F). | Inoculum Volume: | 0.020 ml |
| Neutralizer (Vol.): | Phosphate Buffered Saline (10 ml) | Enumeration Media: | Tryptic Soy Agar (Bacterial)<br>50% TSA (MS2) |
| Enumeration Plate Incubation Temperature: | 36°C ± 1°C | Enumeration Plate Incubation Time: | 24-48 Hours (Bacterial)<br>24±4 Hours (MS2) |

PARAMETERS



1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

## Study Notes

The settings evaluated were 15 minutes of UVC, 30 Minutes of UVC and Heat (120°F), 30 Minutes of UVC and Heat (140°F), and 30 Minutes of UVC and Heat (160°F).

The knife carrier was initially sterilized by exposure to UV for ≥15 minutes on both sides. Then sterilized via ≥95% Ethyl Alcohol between test runs/cycles.

The glass slide and knife carriers were placed on a rack located in the center of the device with the inoculated locations facing up. Please see Figure 2 in the "Study Photographs" section.

## Amendments

Amendment 1: Per study sponsor request, the word UV was corrected to UVC throughout the results.

Amendment 2: Per Study Sponsor request the model's name was changed from "The Cres Guard Mobile Decontamination Unit Model# CGUV57A "to "The Cres Cor ERAD Model #UV4RHA9". Sufficient evidence was provided to prove that both units are identical in the components that would affect efficacy.

## Study Photographs


Figure 1: Tested Sites on the Knife Carrier are indicated by the red boxes. The numbers represent the Test Site Number and are referenced in the "Results of the Study" section.





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

## Study Photographs, Continued

Figure 2: Location of carriers in the Test Device





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

## Control Results

| | | | |
|---|---|---|---|
| Neutralization Method: | N/A [1] | Media Sterility: | Sterile |
| Growth Confirmation: | Pure Growth | | |

[1] *Note: Neutralization not evaluated for this study.*

## Calculations

$$\text{Percent Reduction} = \left(\frac{B - A}{B}\right) \times 100$$

Where:

B = Number of viable test microorganisms on the control carriers immediately after inoculation

A = Number of viable test microorganisms on the test carriers after the contact time

$$\text{Log}_{10}\text{Reduction} = \text{Log}\left(\frac{B}{A}\right)$$

Where:

B = Number of viable test microorganisms on the control carriers immediately after inoculation

A = Number of viable test microorganisms on the test carriers after the contact time



1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

# Results of the Study

Table 1: Results of 15 Minute UVC Against MS2.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | PFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| MS2 Bacteriophage | UVC (15 Minutes) | Glass Slides | Time Zero, Site 1 | 1.15E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.27E+06 | | |
| | | | Time Zero, Site 3 | 1.41E+06 | | |
| | | | Test, Site 1 | 5.50E+01 | 99.995% | 4.32 |
| | | | Test, Site 2 | 3.00E+01 | 99.998% | 4.63 |
| | | | Test, Site 3 | 6.00E+01 | 99.996% | 4.37 |
| | | Knife | Time Zero, Site 1 | 1.49E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.18E+06 | | |
| | | | Time Zero, Site 3 | 2.02E+06 | | |
| | | | Test, Site 1 | 3.00E+01 | 99.998% | 4.70 |
| | | | Test, Site 2 | 1.60E+02 | 99.986% | 3.87 |
| | | | Test, Site 3 | 8.15E+04 | 95.97% | 1.39 |

Limit of detection for this assay was 5.00E+00 PFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00.

Table 2: Results of 30 Minute UVC and Heat (120°F) Against MS2.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | PFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| MS2 Bacteriophage | UVC and Heat (120°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 1.15E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.27E+06 | | |
| | | | Time Zero, Site 3 | 1.41E+06 | | |
| | | | Test, Site 1 | 5.00E+00 | 99.9996% | 5.36 |
| | | | Test, Site 2 | >5.00E+00 | >99.9996% | >5.40 |
| | | | Test, Site 3 | 2.00E+01 | 99.9986% | 4.85 |
| | | Knife | Time Zero, Site 1 | 1.49E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.18E+06 | | |
| | | | Time Zero, Site 3 | 2.02E+06 | | |
| | | | Test, Site 1 | 3.00E+01 | 99.998% | 4.70 |
| | | | Test, Site 2 | 1.00E+01 | 99.9992% | 5.07 |
| | | | Test, Site 3 | 1.21E+05 | 94.01% | 1.22 |

Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00.





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

# Results of the Study, Continued

Table 3: Results of 30 Minute UVC and Heat (140°F) Against MS2.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | PFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| MS2 Bacteriophage | UVC and Heat (140°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 1.15E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.27E+06 | | |
| | | | Time Zero, Site 3 | 1.41E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.9996% | >5.36 |
| | | | Test, Site 2 | 2.50E+01 | 99.998% | 4.71 |
| | | | Test, Site 3 | 4.50E+01 | 99.9968% | 4.50 |
| | | Knife | Time Zero, Site 1 | 1.49E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.18E+06 | | |
| | | | Time Zero, Site 3 | 2.02E+06 | | |
| | | | Test, Site 1 | 1.50E+01 | 99.9990% | 5.00 |
| | | | Test, Site 2 | 5.00E+00 | 99.9996% | 5.37 |
| | | | Test, Site 3 | 8.65E+04 | 95.72% | 1.37 |
| Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00. | | | | | | |

Table 4: Results of 30 Minute UVC and Heat (160°F) Against MS2.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | PFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| MS2 Bacteriophage | UVC and Heat (160°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 1.15E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.27E+06 | | |
| | | | Time Zero, Site 3 | 1.41E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.9996% | >5.36 |
| | | | Test, Site 2 | 5.00E+00 | 99.9996% | 5.40 |
| | | | Test, Site 3 | 2.50E+01 | 99.9982% | 4.75 |
| | | Knife | Time Zero, Site 1 | 1.49E+06 | N/A | |
| | | | Time Zero, Site 2 | 1.18E+06 | | |
| | | | Time Zero, Site 3 | 2.02E+06 | | |
| | | | Test, Site 1 | 1.00E+02 | 99.9933% | 4.17 |
| | | | Test, Site 2 | <5.00E+00 | >99.9996% | >5.37 |
| | | | Test, Site 3 | 2.15E+02 | 99.989% | 3.97 |
| Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00. | | | | | | |





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

# Results of the Study, Continued

Table 5: Results of 15 Minute UVC Against *S. aureus* ATCC 6538.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Staphylococcus aureus* ATCC 6538 | UVC (15 Minutes) | Glass Slides | Time Zero, Site 1 | 8.60E+06 | N/A | |
| | | | Time Zero, Site 2 | 9.25E+06 | | |
| | | | Time Zero, Site 3 | 8.05E+06 | | |
| | | | Test, Site 1 | 2.50E+02 | 99.9971% | 4.54 |
| | | | Test, Site 2 | 3.50E+02 | 99.996% | 4.42 |
| | | | Test, Site 3 | 1.50E+02 | 99.9981% | 4.73 |
| | | Knife | Time Zero, Site 1 | 6.05E+06 | N/A | |
| | | | Time Zero, Site 2 | 6.95E+06 | | |
| | | | Time Zero, Site 3 | 6.50E+06 | | |
| | | | Test, Site 1 | 1.00E+01 | 99.9998% | 5.78 |
| | | | Test, Site 2 | 1.00E+02 | 99.9986% | 4.84 |
| | | | Test, Site 3 | 5.55E+03 | 99.91% | 3.07 |
| Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00. | | | | | | |

Table 6: Results of 30 Minute UVC and Heat (120°F) Against *S. aureus* ATCC 6538.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Staphylococcus aureus* ATCC 6538 | UVC and Heat (120°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 8.60E+06 | N/A | |
| | | | Time Zero, Site 2 | 9.25E+06 | | |
| | | | Time Zero, Site 3 | 8.05E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99994% | >6.24 |
| | | | Test, Site 2 | <5.00E+00 | >99.99995% | >6.27 |
| | | | Test, Site 3 | <5.00E+00 | >99.99994% | >6.21 |
| | | Knife | Time Zero, Site 1 | 6.05E+06 | N/A | |
| | | | Time Zero, Site 2 | 6.95E+06 | | |
| | | | Time Zero, Site 3 | 6.50E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99992% | >6.08 |
| | | | Test, Site 2 | <5.00E+00 | >99.99993% | >6.14 |
| | | | Test, Site 3 | 2.15E+03 | 99.97% | 3.48 |
| Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00. | | | | | | |





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

# Results of the Study, Continued

Table 7: Results of 30 Minute UVC and Heat (140°F) Against *S. aureus* ATCC 6538.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Staphylococcus aureus* ATCC 6538 | UVC and Heat (140°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 8.60E+06 | N/A | |
| | | | Time Zero, Site 2 | 9.25E+06 | | |
| | | | Time Zero, Site 3 | 8.05E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99994% | >6.24 |
| | | | Test, Site 2 | <5.00E+00 | >99.99995% | >6.27 |
| | | | Test, Site 3 | <5.00E+00 | >99.99994% | >6.21 |
| | | Knife | Time Zero, Site 1 | 6.05E+06 | N/A | |
| | | | Time Zero, Site 2 | 6.95E+06 | | |
| | | | Time Zero, Site 3 | 6.50E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99992% | >6.08 |
| | | | Test, Site 2 | <5.00E+00 | >99.99993% | >6.14 |
| | | | Test, Site 3 | 1.30E+03 | 99.98% | 3.70 |
| Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00. | | | | | | |

Table 8: Results of 30 Minute UVC and Heat (160°F) Against *S. aureus* ATCC 6538.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Staphylococcus aureus* ATCC 6538 | UVC and Heat (160°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 8.60E+06 | N/A | |
| | | | Time Zero, Site 2 | 9.25E+06 | | |
| | | | Time Zero, Site 3 | 8.05E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99994% | >6.24 |
| | | | Test, Site 2 | <5.00E+00 | >99.99995% | >6.27 |
| | | | Test, Site 3 | <5.00E+00 | >99.99994% | >6.21 |
| | | Knife | Time Zero, Site 1 | 6.05E+06 | N/A | |
| | | | Time Zero, Site 2 | 6.95E+06 | | |
| | | | Time Zero, Site 3 | 6.50E+06 | | |
| | | | Test, Site 1 | 1.00E+02 | 99.9983% | 4.78 |
| | | | Test, Site 2 | <5.00E+00 | >99.99993% | >6.14 |
| | | | Test, Site 3 | 2.15E+02 | 99.997% | 4.48 |
| Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00. | | | | | | |





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

# Results of the Study

Table 9: Results of 15 Minute UVC Against *E. coli* ATCC 8739.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Escherichia coli* ATCC 8739 | UVC (15 Minutes) | Glass Slides | Time Zero, Site 1 | 3.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 5.65E+06 | | |
| | | | Time Zero, Site 3 | 2.40E+06 | | |
| | | | Test, Site 1 | 5.00E+01 | 99.9987% | 4.88 |
| | | | Test, Site 2 | 5.00E+02 | 99.991% | 4.05 |
| | | | Test, Site 3 | 5.00E+02 | 99.98% | 3.68 |
| | | Knife | Time Zero, Site 1 | 2.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 2.15E+06 | | |
| | | | Time Zero, Site 3 | 5.00E+05 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.9998% | >5.75 |
| | | | Test, Site 2 | 1.00E+02 | 99.9953% | 4.33 |
| | | | Test, Site 3 | 1.10E+03 | 99.78% | 2.66 |

Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00.

Table 10: Results of 30 Minute UVC and Heat (120°F) Against *E. coli* ATCC 8739.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Escherichia coli* ATCC 8739 | UVC and Heat (120°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 3.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 5.65E+06 | | |
| | | | Time Zero, Site 3 | 2.40E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99987% | >5.88 |
| | | | Test, Site 2 | <5.00E+00 | >99.99991% | >6.05 |
| | | | Test, Site 3 | <5.00E+00 | >99.9998% | >5.68 |
| | | Knife | Time Zero, Site 1 | 2.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 2.15E+06 | | |
| | | | Time Zero, Site 3 | 5.00E+05 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.9998% | >5.75 |
| | | | Test, Site 2 | 5.00E+00 | 99.9998% | 5.63 |
| | | | Test, Site 3 | 1.55E+03 | 99.69% | 2.51 |

Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00.





1700 Chisholm Trail Rd. Round Rock, TX 78681 | Contact@microchemlab.com

# Results of the Study, Continued

Table 11: Results of 30 Minute UVC and Heat (140°F) Against *E. coli* ATCC 8739.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Escherichia coli* ATCC 8739 | UVC and Heat (140°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 3.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 5.65E+06 | | |
| | | | Time Zero, Site 3 | 2.40E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99987% | >5.88 |
| | | | Test, Site 2 | <5.00E+00 | >99.99991% | >6.05 |
| | | | Test, Site 3 | <5.00E+00 | >99.9998% | >5.68 |
| | | Knife | Time Zero, Site 1 | 2.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 2.15E+06 | | |
| | | | Time Zero, Site 3 | 5.00E+05 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.9998% | >5.75 |
| | | | Test, Site 2 | <5.00E+00 | >99.9998% | >5.63 |
| | | | Test, Site 3 | 3.50E+02 | 99.93% | 3.15 |

Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00.

Table 12: Results of 30 Minute UVC and Heat (160°F) Against *E. coli* ATCC 8739.

| Test Microorganism | Test Setting | Test Carrier | Sample ID/Location | CFU/Carrier | Percent Reduction Compared to Time Zeroes | Log Reduction Compared to Time Zeroes |
|---|---|---|---|---|---|---|
| *Escherichia coli* ATCC 8739 | UVC and Heat (160°F) (30 Minutes) | Glass Slides | Time Zero, Site 1 | 3.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 5.65E+06 | | |
| | | | Time Zero, Site 3 | 2.40E+06 | | |
| | | | Test, Site 1 | <5.00E+00 | >99.99987% | >5.88 |
| | | | Test, Site 2 | <5.00E+00 | >99.99991% | >6.05 |
| | | | Test, Site 3 | <5.00E+00 | >99.9998% | >5.68 |
| | | Knife | Time Zero, Site 1 | 2.80E+06 | N/A | |
| | | | Time Zero, Site 2 | 2.15E+06 | | |
| | | | Time Zero, Site 3 | 5.00E+05 | | |
| | | | Test, Site 1 | 5.00E+01 | 99.9982% | 4.75 |
| | | | Test, Site 2 | <5.00E+00 | >99.9998% | >5.63 |
| | | | Test, Site 3 | 8.00E+01 | 99.98% | 3.80 |

Limit of detection for this assay was 5.00E+00 CFU/Carrier. All enumerations below this limit of detection were written as <5.00E+00.

*The results of this study apply to the tested substances(s) only. Extrapolation of findings to related materials is the responsibility of the Sponsor.*