

Analysis Report



Twin Arbor Analytical

3990 Ruth Way Suite D

Paso Robles, CA 93446

Applicant: Kapsule UV-C Sanitizing

Laboratory ID: 200626-127-2

Sample Description:

Item Name: UV-C Sanitizing Portable Wand 2.0



Tests Conducted:

Tested Sample: Tested systems reported efficacy claim

Standard: ASTM E3135-18 Standard Practice for Determining Antimicrobial Efficacy of Ultraviolet Germicidal Irradiation Against Microorganisms on Carriers Using a Time-Kill Procedure

Results:

Assessment efficacy criteria was met. See attached page(s) for test result assessment values

Prepared and Checked By:

Twin Arbor Analytical

A handwritten signature in black ink that reads "Shawn Richmond".

Shawn Richmond

Microbial Laboratory Director

Authorized By:

Twin Arbor Analytical

A handwritten signature in black ink that reads "Savannah Perez".

Savannah Perez

Quality Control Manager

Certificate Disclaimer: The results contained within this report only apply to the material presented to Twin Arbor Analytical in the condition it was provided. This report is confidential and for the exclusive use of the individual or organization for whom it was prepared. This report shall not be altered and must not be reproduced, unless in its entirety, without the express written permission from Twin Arbor Analytical.

Test Conditions

Exposure time points: 15s ± 5s
 30s ± 5s
 1min ± 5s

Test temperature: (20 ± 2) °C

Incubation: (32.5 ± 2) °C, 24-48 hours

Agar medium: Brain Heart Infusion Agar, pH 7.4 ± 0.2

Diluent: Buffered Peptone Water, pH 7.2 ± 0.2

Test culture: *Escherichia coli* (ATCC 8739)
Salmonella typhimurium (ATCC 13311)
Listeria monocytogenes (ATCC 19111)

Culture suspension: 10uL of initial culture suspension was added to a glass carrier and dried for 10-15min prior to exposure time points. Cells were recovered by vortexing the glass carriers in the diluent for 20 minutes and then immediately plated for colony counts.

Log₁₀ reduction criteria: R ≥ 3.0

% reduction criteria: ≥ 99.9

Results

| Test microorganisms | Initial culture suspension count (cfu/ml) | Positive control recovered count** (cfu/ml) | 15s exposure average recovered count (cfu/ml) | 30s exposure average recovered count (cfu/ml) | 1 min exposure average recovered count (cfu/ml) | Log ₁₀ Reduction* | % Reduction* |
|--|---|---|---|---|---|------------------------------|--------------|
| <i>Escherichia coli</i> (ATCC 8739) | 1.2 X 10 ⁸ | 4.6 X 10 ⁴ | <10 | <10 | <10 | >3.0 | >99.9% |
| <i>Salmonella typhimurium</i> (ATCC 13311) | 5.3 X 10 ⁸ | 1.7 X 10 ⁶ | <10 | <10 | <10 | >4.0 | >99.99% |
| <i>Listeria monocytogenes</i> (ATCC 19111) | 4.3 X 10 ⁸ | 9.9 X 10 ⁵ | 175 | <10 | <10 | >5.0 | >99.999% |

*reported values are for the longest exposure time point

**the positive control was subjected to the same drying time and vortexing, but did not receive any UV-C exposure.

End of Report