CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2019

DateRun: 08/18/2019

Experimenters: Ross Goding, Nicole Kebler, Adorrah-Le Khan, Nancy Goodyear

ClientType:

ProjectNumber: Project #1

Substrates: Glass/Quartz

PartType: Part

Contaminants:

Cleaning Methods: Immersion/Soak

Analytical Methods: Organism count

Purpose: To determine the minimum amount of time necessary to obtain 99.9% reduction using the EMop device supplied by the company

Experimental Procedure:

Bacterial strains

Strain used:

- E. coli 29214 as a representative gram-negative organism

Surface

Stainless steel was used as the test surface.

Device Operation

Following the instructions provided by the company (via email, none provided with unit), 3 g salt was added to the unit, which was filled with 450 mL dI water and cycled. Electrolyzed water was used within 30 minutes of cycle completion. Free chlorine based on salt usage and manufacturer's supplied information, for each run was ~310 ppm. When not properly shaken, value was recorded in lab at ~200ppm.

Disinfection Method

Overnight growth (10 mL) of bacteria (E.coli) was spotted to the coupon and allowed to air dry for 30 minutes in the incubator. Freshly prepared electrolyzed water (500 mL) was pipetted onto each coupon, to fully cover the bacteria. After the appropriate contact time, the entire coupon was placed in a conical tube containing 15 mL DE Neutralizing broth to stop the disinfectant activity. Conical tubes were shaken on a wrist action shaker for 10 minutes followed by a 30 min incubation. Serial dilutions were spread plated in duplicate on tryptic soy agar and incubated overnight at 37°C. After incubation, colonies were counted, and CFU/mL calculated.

Controls

Positive (no treatment) and negative (no bacteria) controls were included with each run.

Percent and Log Reduction Calculations

Percent and log reduction were calculated based on the reduction of the test coupons from the positive control. In each run, duplicate test coupons were included and averaged. For each time point, two separate runs were performed and averaged. If the two duplicates or runs did not agree, an additional run was performed.

Results:

Results – Initial Protocol

The results of the initial runs showed that for *E. coli*, 99.9% reduction was achieved at 60 seconds, but not at 30 sec.

Table 1. Data Summary *E. coli* (Average of 2 Runs)

Bacteria	Contact Time	Avg % Reduction	Avg Log Red
E. coli	30 sec	99.6215	2.41
E. coli	60 sec	99.8719	2.86
E. coli	90 sec	99.8502	2.84

Summary:

Substrates:	Glass/Quartz				
Contaminants:					
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Thane Direct Inc	E Mop	3 g salt	0.00	☑	E. coli 60 sec 99.8719 2.86

Conclusion:

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The minimum 99.9% reduction of *E. coli* with 60 seconds contact time was achieved without pre-dissolving the salt.