



TEST FACILITY: University of Tennessee Health Science Center – Regional Biocontainment Laboratory

TEST COMPLETION DATE: 3 November 2020

STUDY NUMBER: 2021.026.01

TITLE: Evaluation of PhoneSoap device for its virucidal effect against SARS-CoV-2

SPONSOR: PhoneSoap

STUDY DIRECTOR: Dong Yang, PhD

STUDY POC: Shannon Taylor, PhD

I. SAMPLES AND TEST CONDITIONS:

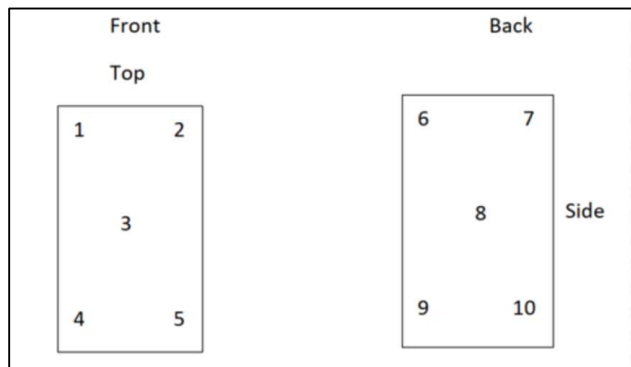
Virus Strain - SARS-CoV2 p3 Isolate USA-WA1/2020 (Inoculum contains 5% FBS)

Host Cells – Vero E6

Infective Titer Measurement – Plaque Assay

Method – UV-C Germicidal Irradiation

Samples:



10 Controls-Ambient Light
10 Samples-MedPRO Treated



Place slides with pathogen facing bulbs
This is important, as UV light cannot penetrate the glass of the slide



Place fake phone over
Glass slides



Place other five slides
With pathogen facing up

II. CALCULATIONS:

Percent Reduction = % Reduction = $(C-T) \times 100 / C$

Log Reduction = $\log_{10} (C/T)$

C = mean viable virus recovered from untreated control carriers

T = mean viable virus recovered from UV-treated carriers

III. RESULTS:

Table 1. Data and Reduction Results

Sample	Replicates (pfu/ml)					Mean	Mean Log ₁₀ Reduction	Mean % Reduction
	# 1	# 2	#3	#4	#5			
Ambient Light Front	2.50E+04	2.75E+04	2.50E+04	2.50E+04	3.00E+04	2.65E+04	-	-
Ambient Light Back	3.00E+04	2.50E+04	2.50E+04	2.75E+04	3.00E+04	2.75E+04	-	-
MedPro Front	ND	ND	ND	ND	ND	-	4.42	99.99*
MedPro Back	ND	ND	ND	ND	ND	-	4.44	99.99*

ND = No plaques detected

* % Reduction based on Log₁₀ Reduction when compared to equivalent control, see Table 2

Table 2. Performance Reference

<i>Log Reduction</i>	<i>% Reduction</i>
1	90%
2	99%
3	99.9%
4	99.99%
5	99.999%
6	99.9999%

IV. CONCLUSIONS:

The average recovery of virus from the “front” control samples was 2.65×10^4 pfu/ml and 2.75×10^4 pfu/ml from the “back” control samples. With virus treated in the MedPRO device, no plaques were detected in any of the designated sample numbers on the “front” or “back” of test glass slides. The maximal reported reduction based on a 4 Log decrease is 99.99%. No cytotoxicity was observed during the test.

Please refer to performance reference Table 2 for appropriate % reporting.

REPORTED BY: Dong Yang, PhD and Shannon Taylor, PhD