



ResInnova LABORATORIES

June 8, 2020

To: Max Munn
SteriLumen
50 N. Macquesten Parkway
Mount Vernon, NY 10550

From: Matthew Hardwick, PhD
ResInnova Laboratories
8807 Colesville Rd, 3rd Floor
Silver Spring, MD 20910

Dear Mr. Munn,

The Sterilumen mirror and drain units are estimated to have sufficient ultraviolet light (UV) intensity for a significant virus kill. Over the course of 2 hours, it is estimated that the mirror unit has a fluence of approximately 300 mJ/cm². The drain unit has an estimated fluence of 36 mJ/cm² after a 15 min exposure. Enveloped viruses, such as human coronavirus SARS CoV-2 (the virus that causes COVID19) and H1N1 influenza A, require approximately 4 mJ/cm² for > 4-log kill¹. It is anticipated that both units generate enough UV fluence in order to kill human coronaviruses.

Our laboratory tested both the mirror and drain units against H1N1 human influenza A virus. The units demonstrated a greater than 2.91-log (mirror) and a 4.21-log (drain) kill after 2 hours and 15 min, respectively. Please find the corresponding report in the following pages.

Testing against human coronavirus 229E, another enveloped RNA virus and a common surrogate for SARS CoV-2, has begun and results are anticipated in the next few weeks.

Sincerely,

Matthew Hardwick, PhD
President/CEO
ResInnova Laboratories

¹ Darnell, et al. Journal of Virological Methods (2004)121:85-91

Antiviral Evaluation

Test Method Details

Test Method	Modified ISO 18184
Test Organism	H1N1 human influenza A virus
Test Solution	Eagles Modified Medium with 2% Fetal Bovine Serum
Test Disks	20mm diameter magnetic stainless steel disk
Inoculum Applied to Test Disk	0.010 mL applied to each disk and spread to within 1 mm of edges, then dried at room temperature
Recovery Solution	Modified SDLP Buffer
Measuring Method of Number of Viable Viral Particles	Dilution Plate Method onto MDCK cells, viral particles were detected by. Presence of viral particles (foci) were determined using an anti-XXX monoclonal antibody. Foci were then counted giving Foci Forming Units (FFU).

Results

Modified ASTM E2197: Standard Quantitative Disk Carrier Test Method				
Number of Replicate Experiments		1		
Average Concentration of Inoculum (FFU/mL)		3.55E+04 = 4.55 log		
Average Control Recovery (FFU/mL)		3.72E+04 = 4.56 log		
Location	Average Virus Recovered (FFU/ disk)	Average Log Recovery	Average Log Reduction (vs Control)	Average Percent Reduction (vs Control)
Sink Backsplash	5	0.70	4.06	>99.99%
Sink Edge	72.5	1.86	2.91	99.81%
Sink Drain	135	2.13	3.00	99.90%
Drain Pipe 1	2.5	0.40	4.21	>99.99%



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