Firewall testing

Official results:

Firewall™ is 99.999% effective in eliminating SARS-CoV-2 (COVID-19)

Testing results from the University of Arizona carried out by Dr. Gerba and his team prove the effectiveness of Firewall against the human form of COVID-19.

Firewall put to the test against COVID-19

Waterlogic's patented Firewall technology has long been recognised for its ability to purify water up to 99.99% virus-free and 99.9999% bacteria-free. In fact, it's already the world's most highly certified purification technology.

With the advent of COVID-19 and its devastating effect on population health, it's imperative we continue to guarantee peace of mind for the 50 million people around the world who rely on Waterlogic dispensers to provide safe and hygienic access to great-tasting drinking water.

To enable us to provide that promise of total purity and security, Firewall was rigorously tested against the human form of COVID-19 by a team of microbiologists from the University of Arizona led by Dr. Gerba, internationally known for his methodologies for pathogen detection in water and food.

Better thinking, better water
better for you, better for the planet™

waterlogic®

Firewall testing

How Firewall was tested

The leading independent microbiology laboratory carried out tests on two Firewall units, each with one dose of the COVID strain spiked into the water.

To make the test water, approximately 100,000,000 colonies of virus in 1ml of virus stock was added to 1 litre of sterile dechlorinated tap water (bacteria-free and chlorine free) and mixed thoroughly. This solution was added to the water reservoir as influent water. For unit 1, the average virus concentration in the water reservoir was 186,000 colonies/ml. For Unit 2, the average virus concentration in the water reservoir was 310,000 colonies/ml. The tests were conducted with extremely high doses of the COVID pathogen to stress test Firewall's capabilities. To provide context, International government water bodies permit up to 100 non-pathogenic colonies per millilitre of drinking water but zero pathogenic content.

Three samples of Firewall treated water collected from the dispenser output were applied to cell culture plates and incubated for 1 hour at 37°C to allow the virus particles to adsorb the cells. A synthetic cell culture was added, and the plates were incubated and observed for a further 7 days. Once the incubation period was complete, samples were tested for concentration of COVID-19.

Outstanding results

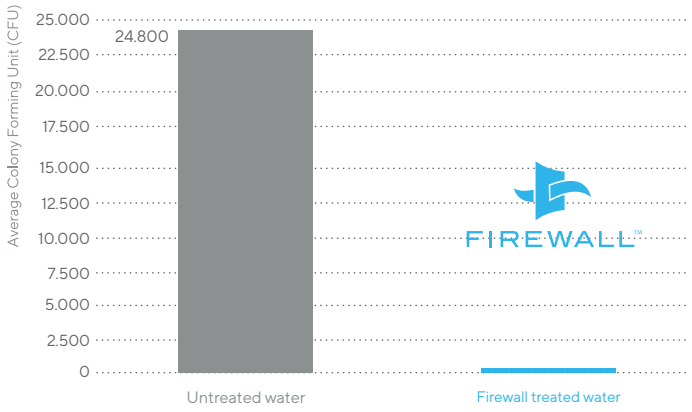
Firewall treated water showed an average colony reduction of over 5 log (99.9998%). These results demonstrate that Firewall is effective in inactivating the human form of the COVID-19 strain with a reduction of over 99.999%.

Device	Log_{10} Reduction* Per Effluent Sample	Mean Log_{10} Reduction ± SD	Mean Percent Reduction
Unit 1	> 5.67 > 5.67 > 5.67	> 5.67† ± 0.00	> 99.99979
Unit 2	> 5.89	> 5.89† ± 0.00	> 99.99987

"I have tested the Waterlogic Firewall machine and can confirm it removes COVID-19."

Dr. Charles P. Gerba, Water & Energy Sustainable Technology (WEST) Center, University of Arizona

Utilising the joint expertise of cross-cutting disciplines from colleges and departments across the University of Arizona, the WEST Center brings together microbiologists and engineers to address current and evolving national and global water issues. Visit WEST for more >



*The average of the three influent samples was 1.86×10^5 $TCID_{50}$/ml and 3.10×10^5 $TCID_{50}$/ml for unit #1 and unit #2, respectively. The log_{10} reductions in effluent samples were calculated using these values.
SD Standard deviation.
† Reductions in the treated samples were statistically significant ($P \leq 0.05$) in comparison to the influent samples (no UV treatment).

Test results received 6 November 2020.

Contact us today

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Tested and certified

Firewall technology is certified by IAPMO R&T to **NSF/ANSI 55 Class A, NSF P231, US EPA, NSF/ANSI 372** and **CSA B483.1.**

*certificate may vary depending on different models or products

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