

Overview

This document provides Information and data for parties Interested In learning about the efficacy of BioShield® antimicrobial products against the virus that causes COVID-19.

Market Context

About conventional disinfection:

Disinfection is the most common process by which bacteria and viruses are killed on surfaces

- It works via a simple chemical kill action which lasts a few minutes and has no residual protection; the disinfectant stops working after a few minutes post application and leaves the surface vulnerable to immediate recontamination
- It leaves the surface defenseless against bacteria and viruses after application and between disinfection cycles (whether days, weeks or months) when bacteria and virus outbreaks typically strike.
- There are hundreds of effective disinfection products available, all with 99.999% kill claims. The vast majority of them kill viruses, including SARS-CoV-2, the virus strain that causes COVID-19. Many of them are permitted to certify that fact on their labels.

BioShield® technology functions in a way that is fundamentally different to the disinfection process described above. It provides ongoing, residual protection against bacteria and viruses after application and is proven to last up to 90 days on surfaces. This is described as “dry state” efficacy in testing protocols and demonstrates that treated surfaces continue to inhibit growth of bacteria and viruses after the product has been applied.

Outdated regulations prevent us from making certain claims about virucidal activity

The US EPA regulates what statements companies can make regarding product efficacy against bacteria and viruses, and BioShield® is certified to make claims that it inhibits bacteria growth for up to 90 days.

However, because of the unprecedented nature of dry-state antiviral technology, there is no regulatory path or test for anyone in the US to make any claim regarding residual efficacy against any virus. EPA regulations have not caught up with the concept of residual efficacy against viruses, and BioShield® is actively lobbying the EPA to set a regulatory path to make this claim.

Despite the regulatory limitations on our product labeling, BioShield® has carried out rigorous testing against viruses in independent world-class laboratories using multiple methodologies, which have consistently confirmed a dramatic reduction in the number of viable viruses able to cause infection.

While we are not certified to put this on our product label, we can share facts about our testing data as appropriate.

Independent Test Results

Tests conducted in 2020 at two independent laboratories demonstrated that BioShield[®] Technology has an immediate kill of >99% of the virus strain causing COVID-19.

On June 16, 2020, BioShield[®] Technology demonstrated to have a residual kill rate of 99.9% of the virus strain that causes COVID-19.

Post-application, BioShield[®] Technology continues to destroy bacteria and viruses (including those that cause COVID-19) for up to 90 days. This residual efficacy is groundbreaking.

Lab	Date	Test Method	Virus	Conditions	BioShield [®] Technology	
					%	Log
Situ Biosciences	20 Feb 2020	Quantitative suspension test of viral efficacy in liquid suspension	Feline Coronavirus Munich Strain	Immediate Kill (Wet)	99.9%	4.08
Microchem	16 June 2020	Virucidal efficacy, for use on nonporous, inanimate objects	Human Coronavirus Strain 229E, AATC VR-740	Residual Efficacy (Dry)	99.9%	3.75

How Laboratories Handle Testing Related to COVID-19

COVID-19 is the disease caused by SARS-CoV-2 virus strain (Severe Acute Respiratory Syndrome Coronavirus).

Because of the scarcity of available virus, it is not currently possible for laboratories to test efficacy directly against SARS-CoV-2. Therefore, as is common best-practice, laboratories use the closest comparable coronavirus surrogates, in this case Human Coronavirus and Feline Coronavirus.