

Efficacy of EnozoPRO™ AO Advantage on Bacterial and Viral Pathogens

The EnozoPRO Spray Bottle is changing the way the world fights against pathogens. It is a true multi-purpose appliance that utilizes tap water, proprietary diamond plates, and a small electrical charge to create a safe and effective cleaner, sanitizer and deodorizer. EnozoPRO replaces the need for industrial synthetic chemicals that contribute to chemical pollution, waste and irritation risks. Aqueous ozone (AO) is generally regarded as safe (GRAS) by the FDA and is recognized as safe and highly effective by the National Sanitation Foundation (NSF). Ozone is a powerful oxidizing agent and can reduce some of the most common bacterial and viral pathogens by at least 99.9% in 30 seconds. Please reference the tables below for efficacy of the EnozoPRO Spray Bottle.

Surface Sanitization

MICROORGANISM	CONTACT TIME	REDUCTION	TESTING NOTES
Escherichia coli (E. coli)	30 Seconds	99.9%	SB100 Spray Bottle Testing Results Using the ASTM E1153 Protocol. All testing was done at Lapuck Laboratories, Canton, Mass., following the directions for use in the SB100 Manual. All tests were done on non-porous stainless steel surfaces.
Staphylococcus aureus (Staph a. or S.aureus)	30 Seconds	99.9%	
Salmonella	30 Seconds	99.9%	
Klebsiella pneumoniae	30 Seconds	99.9%	
Enterobacter aerogenes	30 Seconds	99.9%	

Bactericidal Activity

MICROORGANISM	CONTACT TIME	REDUCTION	TESTING NOTES
Escherichia coli (E. coli)	5 Minutes	>99.999%	BS EN 1276:2019 conformance demonstrated through testing completed by ALS Global using modified test protocol appropriate for aqueous ozone. Complies with the 2017 U.S. FDA Food Code for use as a no rinse Food Contact Surface Sanitizer. The device is in conformity with supporting EPA requirements under OCSPP 810.2300 using modified AOAC 960.09 protocol when used as directed according to instruction and as labeled on the device.
Staphylococcus aureus (Staph a. or S. aureus)	5 Minutes	>99.999%	
Enterococcus hirae (E. hirae)	5 Minutes	>99.999%	
Pseudomonas aeruginosa (P. aeruginosa)	5 Minutes	>99.999%	
Listeria monocytogenes	5 Minutes	>99.999%	

Food Contact Surface Sanitization

MICROORGANISM	CONTACT TIME	REDUCTION	TESTING NOTES
Escherichia coli (E. coli)	30 Seconds	99.999%	SB100 Spray Bottle Testing Results Using Modified AOAC 960.09 Protocol. All tests done as suspension testing for food contact surface sanitization using non-halide chemicals
Staphylococcus aureus (Staph a. or S. aureus)	30 Seconds	99.999%	



Antiviral Efficacy

MICROORGANISM	CONTACT TIME	REDUCTION	TESTING NOTES
Human Coronavirus SARS-CoV-2 Surrogate Virus 229E/ATCC VR-740	30 Seconds	99.9%	ASTM E1052 Standard conformance demonstrated through testing by Enozo MIT PhD in Biosafety Level 2 Lab. The surrogate virus 229E/ATCC VR740 was used for this test as it mimics the SARS-CoV-2 virus (responsible for the development of the disease COVID) and is commercially available for testing.
MS-2 Bacteriophage	30 Seconds	>99.999%	SBI06 Spray Bottle testing results using modified ASTM E1052 Standard Test Method for Efficacy of Antimicrobial Agents Against Viruses in Suspension Study Report NS413.

DISCLAIMER: The EnozoAqueous Ozone Spray Bottle (also branded O₃waterworks™) is classified as a pesticidal device under the EPA regulations. It has demonstrated effectiveness against viruses similar to SARS-CoV-2 (the virus causing COVID-19) on hard non-porous surfaces employing test methods recognized as scientifically valid in the field. However, it is important to note that unlike chemical pesticides, EPA does not routinely review the safety or efficacy of pesticidal device whether, or under what circumstances, such products might be effective against the spread of COVID-19.



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