Tru-D® SmartUVC

A PDI SOLUTION

SCIENTIFIC EVIDENCE FOR TRU-D SMARTUVC

April 2022

BACKGROUND & OVERVIEW

Tru-D SmartUVC provides hospitals with cutting-edge technology for enhanced disinfection of hospital environments. Tru-D SmartUVC aims to offer a comprehensive solution for hospitals' room disinfection needs and works with each facility to implement a successful UVC program.

Company Profile

More than a decade ago, Tru-D SmartUVC was the first to bring to market a UVC disinfection robot capable of precisely measuring UVC dose with its patented Sensor360® technology, resulting in consistent and thorough room disinfection. This measured UVC dose is capable of inactivating microorganisms on hard, non porous surfaces in a room and is validated by more than 10 independent studies. The Tru-D device's combined automated, measured dosing capabilities and real-time usage-tracking features make it one of the most precise and advanced automated UVC disinfection systems available.

Scientific Evidence

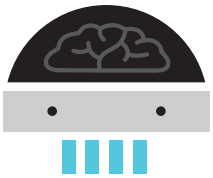
This overview of third-party, peer-reviewed publications provides device-specific scientific validations of the Tru-D device's capabilities.

The Future

Tru-D SmartUVC takes pride in the research and science behind its product and looks to expand upon the solid studies that validate its technology to provide facilities with evidence-based best practices. With strategic leadership and a growing team, Tru-D SmartUVC will continue to offer best-in-class support and partnership to its customer base.

The Tru-D device's basis of scientific evidence and widespread adoption throughout prestigious hospital systems continue to drive market acceptance of UVC disinfection technology.

The Science Behind Tru-D



Third-Party Studies and Papers

- **Rutala WA, et al (2021)**. Inactivation of *Candida auris* and *Candida albicans* by ultraviolet-C. *Infection Control and Hospital Epidemiology*. 1-3.
- **Cadnum JL, et al (2019)**. A comparison of the efficacy of multiple ultraviolet light room decontamination devices in a radiology procedure room. *Infection Control & Hospital Epidemiology*. (40)158–163. doi: 10.1017/ice.2018.296
- **Sexton, D., Anderson, D., et al (2018).** Implementation Lessons Learned From the Benefits of Enhanced Terminal Room (BETR) Disinfection Study: Process and Perceptions of Enhanced Disinfection with Ultraviolet Disinfection Devices. *Infection Control and Hospital Epidemiology*. doi: 10.1017/ice.2017.268.
- **Fleming, M., et al (2017).** Deployment of a touchless ultraviolet light robot for terminal room disinfection: The importance of audit and feedback. A*merican Journal of Infection Control.* 46(2):241-243
- **Nottingham, M., et al (2017).** Ultraviolet-C as a means of disinfecting anesthesia workstations. *American Journal of Infection Control.* 45(9):1011-1013.
- **Weber, D., et al (2016).** 'No touch' technologies for environmental decontamination: focus on ultraviolet devices and hydrogen peroxide systems. *Current Opinion in Infectious Diseases,* 29:000-000.
- **Rutala, W., et al (2013).** Rapid Hospital Room Decontamination Using Ultraviolet (UV) Light with a Nanostructured UV-Reflective Coating. *Infection Control and Hospital Epidemiology*, 34(5), 527-529
- **Mahida, N., et al (2013).** First UK evaluation of an automated Ultraviolet-C room decontamination device (Tru-D). *Journal of Hospital Infection,* 05(005), 1-4.
- **Boyce, J., et al (2011).** Terminal Decontamination of Patient Rooms Using an Automated Mobile UV Light Unit. *Infection Control and Hospital Epidemiology,* 32(8) 737-742.
- **Rutala, W., et al (2010).** Room Decontamination with UV Radiation. *Infection Control and Hospital Epidemiology,* 31(10), 1025-1029.
- **Rastogi, V., et al (2007).** Disinfection of Acinetobacter Baumannii-Contaminated Surfaces Relevant to Medical Treatment Facilities with Ultraviolet C Light. *Military Medicine*, Vol172.

Tru-D SmartUVC vs **SARS-CoV-2**

Tru-D device demonstrated inactivation of the virus at distances up to 14 feet

Tru-D SmartUVC has generated data showing its patented Sensor360® technology is effective for inactivation of the SARS-CoV-2 virus on hard, nonporous surfaces. An independent laboratory that performs environmental, food and life science testing for businesses, performed the efficacy testing. The testing demonstrated the Tru-D robot achieved **3 to 4 log_{10} reduction** of the SARS-CoV-2 virus at **up to 14 feet in both direct and shadowed areas**.

	Distance	Exposure Type		Baseline Viral Load ($Log_{10}TCID_{50}$)	Log_{10} Reduction
A	6ft	Direct	1	5.91	≥ 4.48
			2		≥ 4.48
		Indirect	1		≥ 4.48
			2		≥ 4.48
	14ft	Direct	1		≥ 4.48
			2		≥ 4.48
		Indirect	1		4.72
			2		4.39
B	6ft	Direct	1	5.34	≥ 3.91
			2		≥ 3.91
		Indirect	1		≥ 3.91
			2		≥ 3.91
	14 Ft	Direct	1		≥ 3.91
			2		≥ 3.91
		Indirect	1		3.61
			2		4.15

≥ Denotes complete inactivation of virus

October 2020, Evaluation of Virucidal Efficacy by Tru-D's UV Device on a Surface – Severe Acute Respiratory Syndrome-Related Coronavirus 2 (SARS-CoV-2)

Testing completed at Microbac Laboratories, Inc., 105 Carpenter Drive, Sterling, VA 20164