

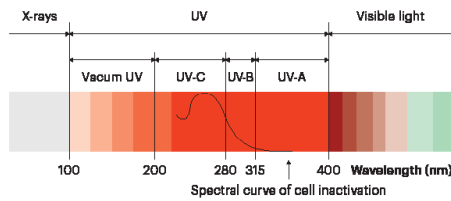
# FagronLab™ UVGI-80

UV Air Sterilizer

# FagronLab™ UVGI-80 UV Air Sterilizer

FagronLab™ UVGI-80 is suitable for dynamic indoor air disinfection in pharmacies, medical examination cabinets, waiting rooms, hospitals, food, beverage and pharmaceutical factories, restaurants, schools, universities, or any other environment with constant people circulation and potential contamination risk.

- Efficient for deactivation of virus, bacteria and protozoa;
- Illuminated boat switch;
- One button on and off;
- Silent motor operation;
- High resistance and silent swivel casters, easy to move;
- Long life, short wave UVC ozone-free lamps;
- Unique design with side air inlets and front outlet;
- Safe for environments with human presence;
- Rust and humidity resistant;
- Electronic connections fully insulated;
- CE certified.



## Technical Parameters

Circulating Air	≥800m <sup>3</sup> /h	
Noise	≤55dB	
O <sub>3</sub> concentration in the air during dynamic disinfection	≤0.1mg/m <sup>3</sup>	
Applicable Room	≤80m <sup>3</sup>	
Ultraviolet Leakage	≤5μw/cm <sup>2</sup>	
Working Environment	Temp. Range	-10°C~40°C
	Humidity	≤80%
	Atmosphere pressure	600hpa ~ 1060hpa
Consumption	≤260W	
Power Supply	AC220V±10%, 50/60Hz	
External Size (WxDxH)	425x300x830 mm	
Packaging Size (WxDxH)	510x384x930 mm	
Gross Weight	28.5 kg	

## Test results for FagronLab UVGI-80

### Test with Staphylococcus Albus

First test was performed in a temperature of (20-25°C), and relative humidity of (50-70)% RH. The sterilizer has an effect of 99.90%, 99.92%, and 99.90% respectively in terms of the disinfection rate of staphylococcus albus, after 60 minutes of operation.

#### Experimental data of quantitative test on air disinfection effect

Tested strains	Working for (min)	Test No.	Control group			Test group		
			Number of colonies before the test (cfu/m <sup>3</sup> )	Number of colonies after the test (cfu/m <sup>3</sup> )	Natural decay rate (%)	Number of colonies before the test (cfu/m <sup>3</sup> )	Number of colonies after the test (cfu/m <sup>3</sup> )	Apoptotic rate (%)
Staphylococcus albus	60	1	8.06×10 <sup>4</sup>	6.35×10 <sup>4</sup>	21.22	8.55×10 <sup>4</sup>	65	99.90
		2	9.17×10 <sup>4</sup>	7.37×10 <sup>4</sup>	19.63	8.31×10 <sup>4</sup>	53	99.92
		3	1.10×10 <sup>5</sup>	8.36×10 <sup>4</sup>	24.00	1.06×10 <sup>5</sup>	82	99.90

### Test on airborne microorganisms

The second test confirmed that the steriliser has an effect of 90.42%, 90.56%, and 92.17% respectively in terms of decay of airborne microorganisms, after 120 minutes of operation.

#### Experimental data of the identification test on air disinfection effect

Tested strains	Working for (min)	Test No.	Test group		
			Number of colonies before the test (cfu/m <sup>3</sup> )	Number of colonies after the test (cfu/m <sup>3</sup> )	Apoptotic rate (%)
Airborne microorganisms	120	1	2.40×10 <sup>3</sup>	2.30×10 <sup>2</sup>	90.42
		2	1.95×10 <sup>3</sup>	1.84×10 <sup>2</sup>	90.56

#### References

- Chang L, Yan Y, Wang L. Coronavirus Disease 2019: Coronaviruses and Blood Safety [published online ahead of print, 2020 Feb 21]. *Transfus Med Rev*. 2020;. doi:10.1016/j.tmr.2020.02.003
- Eischeid AC, Meyer JN, Linden KG. UV disinfection of adenoviruses: molecular indications of DNA damage efficiency. *Appl Environ Microbiol*. 2009;75(1):23-28. doi:10.1128/AEM.02199-08
- Nerandzic MM, Fisher CW, Donskey CJ. Sorting through the wealth of options: comparative evaluation of two ultraviolet disinfection systems. *PLoS One*. 2014;9(9):e107444. Published 2014 Sep 23. doi:10.1371/journal.pone.0107444
- Kim DK, Kang DH. Elevated Inactivation Efficacy of a Pulsed UVC Light-Emitting Diode System for Foodborne Pathogens on Selective Media and Food Surfaces. *Appl Environ Microbiol*. 2018;84(20):e01340-18. Published 2018 Oct 1. doi:10.1128/AEM.01340-18
- Nishisaka-Nonaka R, Mawatari K, Yamamoto T, et al. Irradiation by ultraviolet light-emitting diodes inactivates influenza A viruses by inhibiting replication and transcription of viral RNA in host cells. *J Photochem Photobiol B*. 2018;189:193-200. doi:10.1016/j.jphotobiol.2018.10.017
- Eickmann M, Gravemann U, Handke W, et al. Inactivation of Ebola virus and Middle East respiratory syndrome coronavirus in platelet concentrates and plasma by ultraviolet C light and methylene blue plus visible light, respectively. *Transfusion*. 2018;58(9):2202-2207. doi:10.1111/trf.14652
- Li X, Cai M, Wang L, Niu F, Yang D, Zhang G. Evaluation survey of microbial disinfection methods in UV-LED water treatment systems. *Sci Total Environ*. 2019;659:1415-1427. doi:10.1016/j.scitotenv.2018.12.344
- Anderson DJ, Moehring RW, Weber DJ, et al. Effectiveness of targeted enhanced terminal room disinfection on hospital-wide acquisition and infection with multidrug-resistant organisms and *Clostridium difficile*: a secondary analysis of a multicentre cluster randomised controlled trial with crossover design (BETR Disinfection). *Lancet Infect Dis*. 2018;18(8):845-853. doi:10.1016/S1473-3099(18)30278-0
- Jelden KC, Gibbs SG, Smith PW, et al. Comparison of hospital room surface disinfection using a novel ultraviolet germicidal irradiation (UVGI) generator. *J Occup Environ Hyg*. 2016;13(9):690-698. doi:10.1080/15459624.2016.1166369
- Beck SE, Wright HB, Hargy TM, Larason TC, Linden KG. Action spectra for validation of pathogen disinfection in medium-pressure ultraviolet (UV) systems. *Water Res*. 2015;70:27-37. doi:10.1016/j.watres.2014.11.028

Fagron BV  
Lichtenauerlaan 182  
3062 ME Rotterdam  
The Netherlands

T +31 88 33 11 288  
F +31 88 33 11 210  
www.fagron.com

**Fagron**  
personalizing  
medicine