



# UVC DISINFECTING CABINET

## PUREWORKS

UVC Irradiation Time to Achieve 99.99% Kill Rate for Specific Pathogen				
BACTERIA	30 Seconds	1 Minute	2 Minutes	4 Minutes
Acinetobacter baumannii	x	✓	✓	✓
Bacillus anthracis (Anthrax)	x	✓	✓	✓
Bacillus anthracis spores (Anthrax Spores)	x	x	x	✓
Bacillus megaterium	✓	✓	✓	✓
Bacillus megaterium spores	✓	✓	✓	✓
Bacillus paratyphosus	✓	✓	✓	✓
Bacillus subtilis	x	✓	✓	✓
Bacillus subtilis spores	x	x	✓	✓
Clostridium tetani	x	x	✓	✓
Clostridium difficile (C. Diff) **	x	x	91%**	>91%**
Corynebacterium diphtheriae	✓	✓	✓	✓
Ebertelia typhosa	✓	✓	✓	✓
Escherichia coli (E. Coli)	✓	✓	✓	✓
Leptospiracanicola (Infectious Jaundice)	✓	✓	✓	✓
Micrococcus candidus	x	✓	✓	✓
Micrococcus sphaeroides	✓	✓	✓	✓
Mycobacterium tuberculosis	x	✓	✓	✓
Neisseria catarrhalis	x	✓	✓	✓
Phytomonas tumefaciens	x	✓	✓	✓
Proteus vulgaris	✓	✓	✓	✓
Pseudomonas aeruginosa	x	✓	✓	✓
Pseudomonas fluorescens	✓	✓	✓	✓
Salmonella enteritidis	x	✓	✓	✓
Salmonello paratyphi (Enteric Fever)	✓	✓	✓	✓
Salmonella typhosa (Typhoid Fever)	✓	✓	✓	✓
Salmonella typhimurium	x	x	✓	✓
Sarcina lutea	x	x	x	✓
Serratia marcescens	✓	✓	✓	✓
Shigella dysenteria (Dysentery)	✓	✓	✓	✓
Shigella flexneri (Dysentery)	✓	✓	✓	✓
Shigella paradvsenteriae	✓	✓	✓	✓
Spirillum rubrum	x	✓	✓	✓
Staphylococcus albus	✓	✓	✓	✓
Staphylococcus aureus	✓	✓	✓	✓
Methicillin-resistant Staphylococcus aureus (MRSA)	x	✓	✓	✓
Staphylococcus hemolyticus	✓	✓	✓	✓
Staphylococcus lactis	x	✓	✓	✓
Stenotrophomonas maltophilia	x	x	x	x
Streptococcus viridans	✓	✓	✓	✓
Vancomycin-resistant Enterococci (VRE)	x	✓	✓	✓
Vibrio comma (Cholera)	✓	✓	✓	✓
VIRUS	30 Seconds	1 Minute	2 Minutes	4 Minutes
Bacteriophage	✓	✓	✓	✓
Infectious Hepatitis	x	✓	✓	✓
H1N1 (Influenza)	x	✓	✓	✓
Poliovirus - Poliomyelitis	✓	✓	✓	✓
HCoV-229E (Common Cold)	x	✓	✓	✓
SARS-CoV-2 (COVID-19)	x	✓	✓	✓
Tobacco mosaic	x	x	x	x

<b>MOLD</b>	<b>1 Minute</b>	<b>3 Minutes</b>	<b>10 Minutes</b>	<b>20 Minutes</b>
Aspergillus flavus	x	x	✓	✓
Aspergillus glaucus	x	x	✓	✓
Aspergillus niger	x	x	x	✓
Mucor racemosus A	x	✓	✓	✓
Mucor racemosus B	x	✓	✓	✓
Oospora lactis	✓	✓	✓	✓
Penicillium expansum	x	✓	✓	✓
Penicillium roqueforti	x	✓	✓	✓
Penicillium digitatum	x	x	✓	✓
Rhizopus nigricans	x	x	x	✓
<b>YEAST</b>	<b>1 Minute</b>	<b>3 Minutes</b>	<b>10 Minutes</b>	<b>20 Minutes</b>
Brewers yeast	✓	✓	✓	✓
Candida albicans	✓	✓	✓	✓
Common yeast cake	✓	✓	✓	✓
Saccharomyces cerevisiae	✓	✓	✓	✓
Saccharomyces ellipsoideus	✓	✓	✓	✓
Saccharomyces spores	x	✓	✓	✓
<b>PROTOZOA</b>	<b>1 Minute</b>	<b>3 Minutes</b>	<b>10 Minutes</b>	<b>20 Minutes</b>
Chlorella Vulgaris	x	✓	✓	✓
Nematode Eggs	x	x	✓	✓
Paramecium	x	✓	✓	✓

\*\* Clostridium difficile (C. Diff) 2 min for 91%

## References

- 1 <https://www.americanairandwater.com/uv-facts/uv-dosage.htm>
- 2 <https://www.frontiersin.org/articles/10.3389/fmicb.2019.02718/full>
- 3 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3048910/>
- 4 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2910020/>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3463377/#:~:text=multidrug%2Dresistant%20A.-,baumannii%20cells%20were%20inactivated%20at%20UVC%20exposures%20much%20lower%20than,similar%20effect%20on%20mammalian%20cells.&text=UVC%2Dinduced%20DNA%20lesions%20in,prevent%20combat%2Drelated%20wound%20infections.>
- 5 <https://www.medrxiv.org/content/10.1101/2020.06.05.20123463v2.full-text>
- 6 [https://www.toyoda-gosei.com/upload/news\\_en/255/english.pdf](https://www.toyoda-gosei.com/upload/news_en/255/english.pdf)
- 7 <https://journals.asm.org/doi/full/10.1128/AEM.06960-11>
- 8 <https://ultraviolet.com/microorganisms-deactivated/>
- 9 [https://academic.oup.com/ofid/article/6/Supplement\\_2/S437/5605307](https://academic.oup.com/ofid/article/6/Supplement_2/S437/5605307)
- 10 [https://academic.oup.com/ofid/article/6/Supplement\\_2/S437/5605307](https://academic.oup.com/ofid/article/6/Supplement_2/S437/5605307)

NOTE: Additional times for other pathogens

Tobacco mosaic 35min

PureWorks  
1191 Venture Drive Suite A  
Forest, VA 24551  
434-446-1460  
info@pureworks.us  
www.pureworks.us