

UV-C and HANDY Efficacy

HANDY Enterprises, LLC manufactures and markets HANDY Hand Sanitizing Solutions, a line of products that use germicidal Ultraviolet-C (UV-C) lighting to virtually eliminate highly contagious, illness-causing germs and bacteria, including the coronavirus that causes COVID-19.1

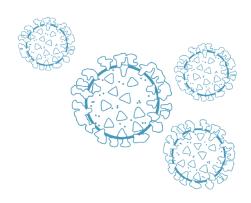
HANDY Sanitizers are the first to use germicidal UV-C for hand sanitizing applications.

HANDY was designed to create germ-killing capability, with the highest impact for efficacy, in the shortest duration—while maintaining safety standards. Independent testing of UV-C and HANDY Hand Sanitizers shows dramatic success in reducing germs.

1SARS-COV-2 surrogate used in testing

UV-C, which is part of the UV spectrum, has been used since the late 1800s to kill microorganisms in multiple applications. Despite its high energy levels, UV-C has extremely poor skin-penetrating ability. It typically only penetrates as deep as the dead skin layer and is proven and safe to effectively reduce the presence of germs.





Over the years, various research and development efforts contributed to the engineering and commercial launch of several products utilizing UV-C in healthcare, manufacturing, food processing, transportation and more—anywhere microbiological contamination is a concern. The coronavirus pandemic advanced this research to include proven effectiveness with COVID-19. Several recent studies and reports support UV-C effectiveness, including research for airlines conducted by Boston University and Honeywell, and a report on its use in food services published by the International Ultraviolet Association.²

HANDY is uniquely engineered to virtually eliminate pathogens on hands and hand-held objects (such as phones, keys, and eyeglasses) in as little as 3-5 seconds.

HANDY targets the germs most nagging and prevalent across various environments, such as healthcare, manufacturing, education, sports, entertainment, businesses, and retail – essentially wherever people gather.



Independent testing by multiple laboratories have validated the efficacy of HANDY and its patent-pending design.

²International Ultraviolet Association Inc - UV Light Technology As an Emerging Tool For Food Safety liuva.orgl UV-C Light Kills SARS-CoV-2, Triggering Novel Lighting Options for Public Spaces | BioSpace How UV Light Helps Clean Air and Surfaces - Explained Ihoneywell.com]



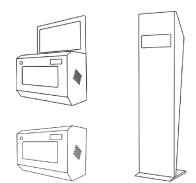
UV-C and HANDY Efficacy

Effectiveness of HANDY Hand Sanitizing Solutions against various pathogens and viruses, as confirmed by various independent testing laboratories:

MICROORGANISM	EFFECTS ON HUMANS	DOSE SECONDS	%REDUCTION
E. coli	Nausea and vomiting, stomach cramps and diarrhea	3	99.999%
Salmonella	Nausea, vomiting, abdominal cramps, diarrhea, accompanied by fever, chills and headache	3	99.999%
K. Pneumoniae	High fever, sweating, chills, chest pain, breathing difficulty, phlegmy cough, and shortness of breath	3	99.998%
A. Baumanii	Chills, fever, headache, breathing problems, muscle pain, chest pain, cough, nausea, rash, urinary tract infections and light sensitivity	3	99.720%
P. Aeruginosa	Fever, chills, difficulty breathing, chest pain, cough, painful urination, ear pain, infections	3	99.930%
E. Faecalis (VRE)	Fever, chills, fatigue, headache, abdominal pain, nausea, vomiting, painful urination, diarrhea, shortness of breath, chest pain, stiff neck, and bleeding gums	3	99.980%
S. Aureus	Staph infections, abscess, cellulitis, boils, blistering rash, scalded skin, nausea, vomiting, dehydration, and diarrhea	3	99.999%
SARS-COV-2 (causes COVID 19)¹	COVID-19, fever, cough, tiredness, shortness of breath, muscle aches, chills, sore throat, headache, chest pain, pink eye, loss of taste or smell	5	99.990%
Norovirus TuV wet	Vomiting, abdominal cramping and pain, diarrhea, low-grade fever, chills, headache, and body aches	7	99.990%
C. Difficile	Diarrhea, stomachache, fever, chills, bloating, abdominal pain, vomiting, cramping, dehydration, blood in stool and weight loss	14	87.050%
MRSA	Drug resistant staph infection with swollen red bumps and boils filled with pus accompanied by fever	3	99.960%

Benefits of HANDY are within your reach!

- Extremely effective against numerous pathogens.
- Microorganisms cannot develop immunity, replicate, or mutate.
- Clean and touchless.
- No drying or cracking of skin.
- No sticky or wet hands.
- No waiting for hands to dry.
- No messy refills.
- No batteries to change.
- Up to 10 years of unattended operation.
- Tremendous long-term savings in operational costs.
- Sanitizes small objects such as phones, keys, glasses and more
 --- not just hands!



In a world in which people fail to correctly wash their hands nearly 97 percent of the time (according to the USDA), HANDY can be an important part of a healthy ecosystem that reduces the spread of dangerous pathogens.

"Clean and sanitized hands have never been more vital to our health and well-being. As testing results show, HANDY works in as little as three seconds to mitigate pathogens that cause infections and foodborne illnesses. As the world continues to grapple with the COVID-19 pandemic, HANDY represents a safe and effective solution as part of our society's efforts to return to normalcy.

"Although HANDY was introduced in a pre-pandemic world, it is reassuring to know that it also can be an effective tool in the fight against coronavirus, in addition to its efficacy against other known pathogens, germs and bacteria that commonly reside on people's hands and devices. Slowing the spread of deadly germs is within our reach with HANDY."

-Dan Zubic, founder, HANDY Enterprises