



The PermaSafe System is Effective Against These Microorganisms

STEP 1, PermaSafe CLEAN

- **SARS-COV-2, 2019 Novel Coronavirus***
- Escherichia coli (ATCC 11229)
- Staphylococcus aureus (ATCC 6538)
- Escherichia coli (ATCC 11229)
- Staphylococcus aureus (ATCC 6538)
- S. aureus ATCC 6538
- E. aerogenes ATCC 13048
- Enterobacter aerogenes (ATCC 13048)
- Staphylococcus aureus (ATCC 6538)
- Trichophyton rubrum ATCC MYA
- Trichophyton interdigitale ATCC 9533
- Aspergillus niger ATCC 6275
- Pseudomonas aeruginosa ATCC 15442
- Acinetobacter baumannii ATCC 19606
- Staphylococcus aureus MRSA ATCC 33592
- Listeria monocytogenes ATCC 15313
- Legionella pneumophila ATCC 33153
- Salmonella enterica ATCC 10708
- Staphylococcus aureus ATCC 6538
- Klebsiella pneumoniae (NDM-1) ATCC BAA-2146
- Escherichia Coli ATCC 11229
- Bordetella bronchiseptica ATCC 10580
- Mycobacterium bovis- BCG
- Penicillin - Resistant Streptococcus pneumoniae, ATCC# 700677
- Chlamydia psittaci, Strain 6BC, ATCCVR-125
- Rotavirus, Strain WA
- Hepatitis C Virus Bovine Viral Diarrhea Virus
- Hepatitis B Virus Duck Hepatitis
- Norovirus Feline Calicivirus
- Murine Norovirus (MNV-1)

*PermaSafe CLEAN has been approved by the EPA for use against SARS-COV-2, the coronavirus that causes the Coronavirus Disease 2019 (COVID_19). PermaSafe CLEAN meets the EPA's emerging pathogen requirements for viruses showing efficacy against envelop and non-envelope virus, both large and small.



- Swine Influenza (H1N1)
- Respiratory Syncytial virus, ATCC VR-26
- Human Immunodeficiency Virus (HIV Type 1) Strain HTLV-IIIb
- Influenza B Virus (Strain B/Taiwan/2/62), ATCC VR-1735**
- Hepatitis A Virus ATCC VR-1541
- Hantavirus (Prospect Hill Virus) University of Ontario **
- Canine Distemper Virus, Strain Snyder Hill, ATCC VR
- Adenovirus 1, Strain Adenoid 71, ATCC VR-1
- Canine Parvovirus, Strain Cornell-780916, ATCC VR-2016
- Canine adenovirus 1, Strain Utrecht, ATCC VR-293
- Feline Herpesvirus 1 Strain C-27, ATCC VR-636
- Feline coronavirus, Strain WSU 79-1683, ATCC VR 989
- Canine coronavirus Strain 1-71, ATCC VR-809
- Canine Influenza (H3N8) virus, Strain A/Ca/NY/105913/08, Cornell University
- Feline Infectious Peritonitis Virus, Strain: WSU 79 1146, ATCC# VR-990
- Feline panleukopenia virus, Strain Philips-Roxane, ATCC VR-648
- Rabies Virus, Strain: Flury (HEP), ATCC VR-139
- Avian Influenza (H5N1) Virus (VNH5N1-PR8/CDC-RG), CDC #2006719965
- Herpes Simplex Virus 1 (Human), Strain HF, ATCC VR-260
- Porcine Epidemic Diarrhea Virus, Strain CO 2013, USDA APHIS 025-PDV001

STEP 2, PermaSafe SHIELD

- Aspergillus flares
- Aspergillus flavus
- Aspergillus niger
- Aspergillus sydowii
- Aspergillus terreus
- Aspergillus versicolor
- Aureobasidium pullulans
- Chaetomium globosum
- Cephalosporium fragans
- Gloeophyllum trabeum
- Penicillium chrysogenum
- Penicillium funiculosum
- Penicillium pinophilum
- Penicillium variable
- Poria placenta

- Pullularia pullulans
- Trichoderm sp. madison P-42
- Trichoderma vi ride
- Trichophyton interdigital
- Trichophyton mentagrophytes
- Bacillus sp. (vegetative cell)
- Bacillus subtilis
- Enterococcus sp.
- Micrococcus lutea
- Micrococcus sp.
- Staphylococcus aureus
- Staphylococcus epidermidis
- St reptococcus faecalis
- Streptococcus mutans
- Streptococcus pyogenes
- nclnerwDacrer calcwacencus
- Aerobacter aerogenes
- Aeromonas hydrophila
- Citrobacter deversus
- Citrobacter freundii
- Enterobacter agglomerans
- Enterobacter cloacae
- Escherichia coli
- Klebsiella oxytoca
- Klebsiella pneumoniae
- Morganella morganii
- Mycobacterium tuberculosis
- Proteus mirabilis
- Proteus vulgaris
- Pseudomonas aeruginosa
- Pseudomonas fluorescens
- Pseudomonas putida
- Salmonella choleraesuis
- Salmonella choleraesuis
- Salmonella typhi
- Salmonella typhimurium
- Salmonella typhosa



- *Serratia liquifaciens*
- *Serratia marcescens*
- *Treponema hyodysenteriae*
- *Xanthomonas cBioProtectpestrisa*
- *Candida albicans*
- *Candida pseudotropicalis*
- *Saccharomyces cerevisiae*
- *Anabaena cylindrica*
- Chlorophyta (green) protococcus
- Chlorophyta (green) *selenastrum gracile*
- Chlorophyta (green) sp.
- Chlorophyta (yellow-green) sp.
- Chrysophyta (brown)
- Cyanophyta (blue-green) *anabaena*
- Cyanophyta (blue-green) *oscillatoria*
- Cyanophyta (blue-green) sp.
- *Gonium* sp. (strain LB 9c)
- *Pleurococcus* sp. (strain LB 11)
- *Selenastrum gracile*