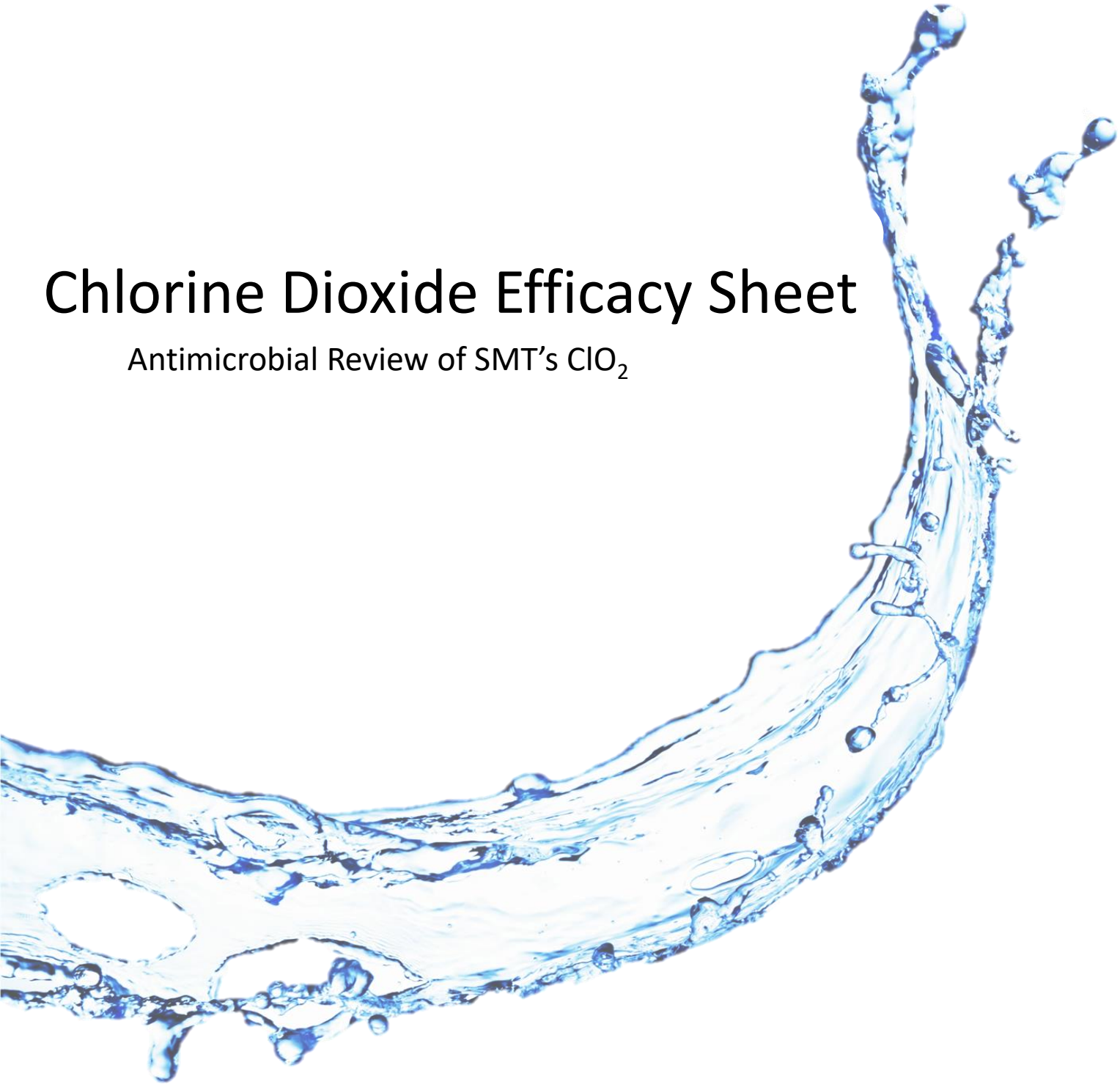
Chlorine Dioxide Efficacy Sheet

Antimicrobial Review of SMT's ClO_2



Selective Micro Technologies

Chlorine Dioxide Efficacy Sheet

Chlorine Dioxide has proven to be effective against a range of microbial pathogens. The following is a list of studies demonstrating the antimicrobial capabilities of chlorine dioxide against a range of organisms. These entries are sorted by name and pathogen classification (bacteria, virus, algae/fungi/mold/yeast, bacterial spores, dangerous chemicals, beta lactams, protozoa, or microsporidia). Please note that although no organism has ever proven to be resistant to chlorine dioxide, this list is not a comprehensive reference of chlorine dioxide's full pathogenic capabilities. For further information chlorine dioxide's biocidal efficacy against organisms not listed here, please reach out to us at inquiry@selectivemicro.com or 855.256.8299.

Bacteria	Reference No.
Blakeslea trispora	2
Bordetella bronchiseptica	8
Brucella suis	30
Burkholderia mallei	36
Burkholdia pseudomallei	36
Campylobacter jejuni	39
Clostridium botulinum	32
Corynebacterium bovis	8
Coxiella burneti	35
E. coli ATCC 11229	3

Bacteria	Reference No.
E. coli ATCC 51739	38
E. coli K12	38
E. coli K12 W3110	44
E. coli O157:H7 13B88	38
E. coli O157:H7 204P	38
E. coli O157:H7 43895	38
E. coli O157:H7 EDL933	13
E. coli O157:H7 G5303	38
E. coli O157:H7 F4546	29
E. coli O157:H7 H1730	29

Bacteria	Reference No.
E. coli O157:H7 E0018	29
E. coli O157:H7 C7927	38
Erwina carotovora	21
Franscicella tularensis	30
Fusarium sambucinum	21
Fusarium solani var. coeruleum	21
Helicobacter pylori	2
Helminthosporium solani	21
Klebsiella pneumoniae	3
Lactobacillus acidophilus NRRM B1910	38
Lactoballus brevis	38
Lactobacillus buchneri	38
Lactobacillus plantarum	5
Legionella	2
Legionella pneumophila	42
Leuconostoc mesenteroides	5
Listeria innocula ATCC 33090	38
Listeria monocytogenes F4248	38

Bacteria	Reference No.
Listeria monocytogenes serotype 4b, F8027	29
Listeria monocytogenes serotype 1/2b F8255	29
Listeria monocytogenes serotype 1/2a, F8369	29
Listeria monocytogenes serotype serotype 4b, G1091	29
Listeria monocytogenes serotype 1/2a, H0222	29
Listeria monocytogenes F5069	19
Listeria monocytogenes LCDC-81-861	38
Listeria monocytogenes LCDC-81-886	19
Listeria monocytogenes Scott A	38
Methicillin-resistant Staphylococcus aureus (MRSA)	3
Multiple Drug-Resistant Salmonella (MDRS)	3
Mycobacterium bovis	28
Mycobacterium fortuitum	42
Pediococcus acidilactici	38
Pediococcus acidilactici AB1	44
Pseudomonas aeruginosa	3
Pseudomonas fluorescens	44

Bacteria	Reference No.
Salmonella spp.	16
Salmonella Agona	38
Salmonella Anatum Group E	38
Salmonella Choleraesins ATCC 13076	38
Salmonella choleraesuis	8
Salmonella Enterica (PT30) BAA-1045	38
Salmonella Gaminara	29
Salmonella Michigan	29
Salmonella Enterica Baildon	29
Salmonella Enterica S. Enteritidis	13
Salmonella Enterica S. Javiana	13
Salmonella Enterica S. Montevideo	13
Salmonella Enteritidis E190-88	38
Salmonella Gaminarum F2712-OJ	44
Salmonella Javiana	38

Bacteria	Reference No.
Salmonella Newport	4
Salmonella Stanley	44
Salmonella Typhimurium C133117	38
Salmonella Anatum Group E	38
Shigella	2
Staphylococcus aureus	23
Staphylococcus aureus ATCC 25923	38
Staphylococcus faecalis ATCC 344	38
Tuberculosis	3
Vancomycin-resistant Enterococcus faecalis	3
Vibrio strain Da-2	37
Vibrio strain Sr-3	37
Yersina enterocolitica	40
Yersina pestis	30
Yersinia ruckerii ATCC 29473	31

Virus	Reference No.
Adenovirus Type 40	6
Calcivirus	42
Canine Parvovirus	1
Coronavirus	3
Feline Calci Virus	3
Foot and Mouth disease	8
Hantavirus	8
Hepititus A Virus	3
Hepititus B Virus	8
Hepititus C Virus	8
Human coronavirus	1
Human Immunodeficiency Virus	3
Human Rotavirus type 2	15
Influenza A	22
Minute Virus of Mouse (Parvovirus) (MVM-i)	8

Virus	Reference No.
Minute Virus of Mouse (Parvovirus) (MVM-p)	8
Mouse Hepatitis Virus (MHV-A59)	8
Mouse Hepatitis Virus (MHV-JHM)	8
Mouse Parvovirus type 1 (MPV-1)	8
Murine Parainfluenza Virus Type 1 (Sendai)	8
Newcastle Disease Virus	8
Norwalk Virus	8
Poliovirus	20
Rotavirus	3
Severe Acute Respiratory Syndrome (SARS) Coronavirus	43
Sialodscryoadenitis Virus (Coronavirus) (SDAV)	8
Simian rotavirus SA-11	15
Theiler's Mouse Encephalomyelitis Virus (TMEV)	8
Vaccinia Virus	10

Algae/Fungi/Mold/Yeast	Reference No.
Alternaria alternate	26
Aspergillus aeneus	2
Aspergillus aurolatus	2
Aspergillus brunneo uniseriatus	2
Aspergillus caespitosus	2
Aspergillus cervinus	2
Aspergillus clavatonanicus	2
Aspergillus clavatus	2
Aspergillus egyptiacus	2
Aspergillus elongatus	2
Aspergillus fischeri	2
Aspergillus fumigatus	2
Aspergillus giganteus	2
Aspergillus longivesica	2
Aspergillus niger	12
Aspergillus ochraceus	2
Aspergillus parvathecius	2
Aspergillus sydowii	2

Algae/Fungi/Mold/Yeast	Reference No.
Aspergillus unguis	2
Aspergillus ustus	2
Aspergillus versicolor	2
Botrytis species	3
Candida spp.	5
Candida albicans	2
Candida dubliniensis	2
Candida maltose	2
Candida parapsilosis	2
Candida sake	2
Candida sojae	2
Candida tropicalis	2
Candida viswanathil	2
Chaetomium globosum	7
Cladosporium cladosporioides	7
Debaryomyces etchellsii	2
Eurotium spp.	5
Fusarium solani	3

Algae/Fungi/Mold/Yeast	Reference No.
Lodderomyces elongisporus	2
Mucor circinelloides	2
Mucor flavus	2
Mucor indicus	2
Mucor mucedo	2
Mucor rademosus	2
Mucor ramosissimus	2
Mucor saturnus	2
Penicillium spp.	5
Penicillium chrysogenum	7
Penicillium digitartum	3
Penicillium herquei	2
Phormidium boneri	2
Pichia pastoris	3
Poitrasia circinans	2
Rhizopus oryzae	2
Roridin A	33
Saccharomyces cerevisiae	3

Algae/Fungi/Mold/Yeast	Reference No.
Stachybotrys chartarum	2
Trichophyton mentagrophytes	2
Verrucarin A	2

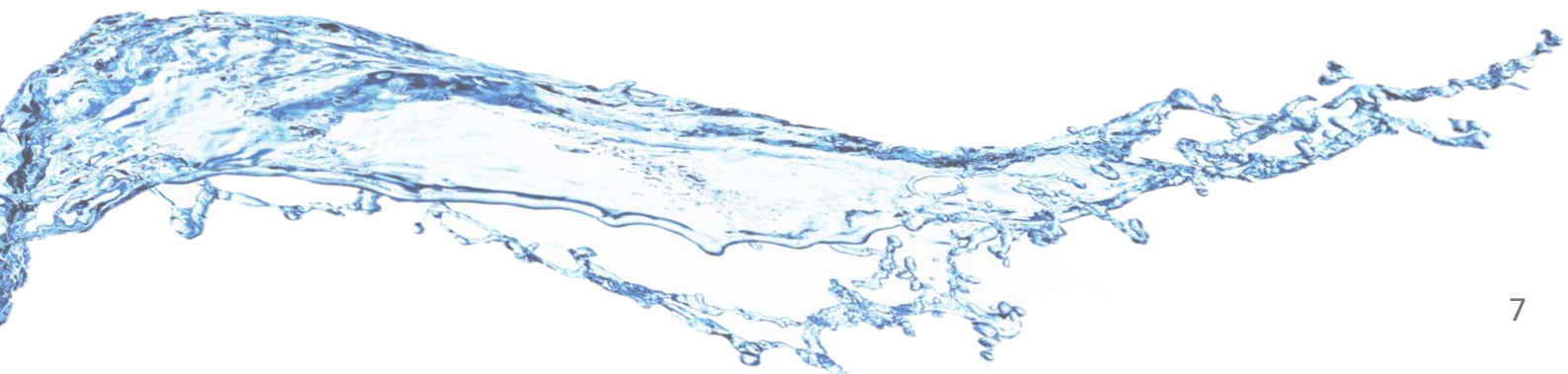
Bacterial Spores	Reference No.
Alicyclobacillus acidoterrestris	12
Bacillus anthracis	30
Bacillus anthracis Ames	14
Bacillus atrophaeus	31
Bacillus atrophaeus ATCC 49337	12
Bacillus cereus 232	44
Bacillus coagulans	12
Bacillus megaterium	12
Bacillus polymyxa	12
Bacillus pumilus ATCC 27142	12
Bacillus pumilus ATCC 27147	11
Bacillus subtillis (globigii) ATCC 9372	11
Bacillus subtillis ATCC 19659	31

Bacterial Spores	Reference No.
Bacillus subtillis 5230	12
Bacillus thuringiensis	18
Clostridium sporogenes ATCC 19404	12
Geobacillus stearothermophilus ATCC 12980	11
Geobacillus stearothermophilus ATCC 7953	31
Geobacillus stearothermophilius VHP	11

Chemical Agents	Reference No.
Ricin Toxin	10
dihydronicotinamide adenini dinucleotide	24
microcystin-LR (MC-LR)	25
cylindrospermopsin (CYN)	25

Beta Lactams	Reference No.
Amoxicillin	2
Amplicillin	2
Cefadroxil	2
Cefazolin	2
Cephalexin	2
Imipenem	2
Penicillin G	2
Penicillin V	2

Protozoa	Reference No.
Chironomid larvae	27
Cryptosporidium	34
Cryptosporidium parvum Oocysts	9
Cyclospora cayetanesis oocysts	41
Giardia	34



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