

Microcide TB TECHNICAL BULLETIN

Cleaner
Deodorizer
Disinfectant
Virucide
Tuberculocidal
Fungicide
Mildewstat
Fast Kill Times

Proven Effective Against:

CA-MRSA,
MRSA,
VRE,
VISA,
MRSE,
HIV-1,
HAV,
HBV & HCV,
TB,
SARS,
Canine Parvovirus,
Norovirus,
(and many others, see inside for details)



Multi-Clean Microcide TB Disinfectant Cleaner (EPA registration No. 1839-83-5449) has demonstrated effectiveness against viruses similar to the 2019 Novel Coronavirus (SARS-CoV-2, the cause of COVID-19) on hard, non-porous surfaces. Therefore, **Multi-Clean Microcide TB Disinfectant Cleaner** can be used against the 2019 Novel Coronavirus (SARS-CoV-2, the cause of COVID-19) when used in accordance with directions for use against Norovirus on hard, non-porous surfaces. For more information about the 2019 Novel Coronavirus (SARS-CoV-2, the cause of COVID-19), refer to the CDC website <https://www.cdc.gov/coronavirus/2019-ncov/index.html> for additional information.

SPECIFICATIONS FOR MICROCID TB

Appearance Clear Blue Liquid
Fragrance Citrus
Density lbs./US gal.(g/ml)....8.38 (1.01)
pH 11.7
Contact time:.....30 Seconds to 10 minutes
(see label for specific instructions)
Viscosity cps @ 25°C.....< 100
Flashpoint SETA °C (°F)...> 94 (>201)
RVOC, US EPA%0
Phosphate (%).....0
EPA Number1839-83-5449
EPA Est. Number.....8155-OH-1

Meets OSHA Bloodborne Pathogen
Standard for HIV, HBV & HCV.

EPA Registration Number
1839-83-5449

EPA Establishment Number
8155-OH-1

US Patent No. 5,444,094

Microcide TB Disinfectant Cleaner

Microcide TB Disinfectant Cleaner is designed specifically as a non-acid, intermediate level, ready-to-use disinfectant and cleaner for use in hospitals, nursing homes, patient rooms, shower rooms, locker rooms, public restrooms, schools, office buildings, and athletic/recreational facilities.

Microcide TB is formulated to disinfect hard, non-porous, inanimate environmental surfaces: floors, walls, stainless steel surfaces, glazed porcelain, glazed ceramic tile, plastic surfaces, chrome, brass, copper, laminated surfaces, bathrooms, shower stalls, bathtubs, and cabinets. For plastic and painted surfaces, spot test on an inconspicuous area before use.

Microcide TB is an intermediate level disinfectant, meaning it has a claim against TB (*Mycobacterium bovis*). In addition to this claim, Microcide TB also has claims for several non-enveloped viruses.

Non-Enveloped Viruses:

Non-enveloped viruses differ from the more common enveloped viruses in their method of transmission between cells. These differences contribute to non-enveloped viruses being much more difficult to eliminate than enveloped viruses, in terms of cleaning and disinfecting. Standard disinfecting products and procedures sometimes do not efficiently disinfect against non-enveloped viruses.

Microcide TB meets the CDC criteria for disinfectant products with label claims for non-enveloped viruses: Norovirus, Adenovirus Type 2.

Microcide TB is intended for use on hard, non-porous surfaces, follow label instructions for non-enveloped viruses.

Microcide TB has claims against the following tough-to-eliminate non-enveloped viruses:

- **Canine Parvovirus** is a highly contagious virus that affects dogs and is therefore of high concern in veterinary facilities. Treatment often requires hospitalization, and mortality rates can reach up to 91% in untreated cases.
- **Norovirus** is a highly contagious virus that causes nausea, vomiting, and diarrhea. This is often called “stomach flu” or “the cruise ship virus.” Although severe illness is rare, this virus can run rampant when an infected person is in contact with many others, such as on cruise ships or in schools.
- **Rhinovirus** is one of the most common infectious agents among humans, a cause of the common cold. Symptoms vary and include nausea, headache, cough, sore throat, and fever.
- **Rotavirus** is particularly concerning among children, and can often lead to hospitalization due to dehydration. Symptoms include fever, vomiting, and diarrhea.

Dwell Times: Microcide TB has rapid kill times for a number of pathogens, including: MRSA, VRE, and VISA (3 minutes), Influenza (2 minutes), and Norovirus (30 seconds).

Efficacy Data for Microcide TB Disinfectant Cleaner

TUBERCULOCIDAL DATA:

Test Method: AOAC Confirmative In Vitro Test for Determining Tuberculocidal Activity

Test Organism: *Mycobacterium bovis* BCG

Test Conditions: Ready-to-Use (RTU), organic soil load, 5 minute contact time, glass slide carrier substrates.

Results:

Subculture Media	Sample	No. of Exposed Carriers	No. of Carriers Showing Growth
Modified Proskauer-Beck Medium	A	10	0
	B	10	0
Middlebrook 7H9 Broth	A	10	0
	B	10	0
Kirchners Medium	A	10	0
	B	10	0

Conclusion: Under the conditions of this investigation, Microcide TB demonstrated tuberculocidal activity against *Mycobacterium bovis* (BCG) according to criteria established by the US Environmental Protection Agency for registration and labeling of a disinfectant product as a tuberculocide.

BACTERICIDAL DATA:

Test Method: AOAC Germicidal Spray Products as Disinfectants

Test Conditions: Ready-to-Use (RTU), organic soil load, room temperature, glass slide carrier substrates

Organism	Sample	No. of Carriers		Contact Time
		Exposed	Positive	
<i>Staphylococcus aureus</i> (ATCC 6538)	A	60	0	3 minutes
	B	60	1	
<i>Salmonella (choleraesuis) enterica</i> (ATCC 10708)	A	60	0	3 minutes
	B	60	0	
<i>Pseudomonas aeruginosa</i> (ATCC 15442)	A	60	0	3 minutes
	B	60	0	
Community Associated Methicillin Resistant <i>Staphylococcus aureus</i> (CA-MRSA) (NRS 123) Genotype USA400	A	10	0	3 minutes
	B	10	0	
Community Associated Methicillin Resistant <i>Staphylococcus aureus</i> (CA-MRSA) (NRS 384) Genotype USA300	A	10	0	3 minutes
	B	10	0	
<i>Corynebacterium ammoniagenes</i> (ATCC 6871)	A	10	0	3 minutes
	B	10	0	
<i>Enterococcus faecium</i> (ATCC 6569)	A	10	0	3 minutes
	B	10	0	
<i>Escherichia coli</i> (ATCC 11229)	A	10	0	3 minutes
	B	10	0	
<i>Escherichia coli</i> O157:H7 (ATCC 43895)	A	10	0	3 minutes
	B	10	0	
<i>Listeria monocytogenes</i> (ATCC 35152)	A	10	0	3 minutes
	B	10	0	
Methicillin resistant <i>Staphylococcus aureus</i> (MRSA) (ATCC 33593)	A	10	0	3 minutes
	B	10	0	
Methicillin resistant <i>Staphylococcus epidermidis</i> (MRSE) (ATCC 51625)	A	10	0	3 minutes
	B	10	0	
<i>Salmonella (typhi) enterica</i> (ATCC 6539)	A	10	0	3 minutes
	B	10	0	
<i>Streptococcus pyogenes</i> (Necrotizing Fasciitis-Group A) (VA Medical Center Isolate 04001)	A	10	0	3 minutes
	B	10	0	
Vancomycin resistant <i>Enterococcus faecalis</i> (VRE) (ATCC 51575)	A	10	0	3 minutes
	B	10	0	
Vancomycin intermediate resistant <i>Staphylococcus aureus</i> (VISA) (CDC Isolate 99287)	A	10	0	3 minutes
	B	10	0	
<i>Yersinia enterocolitica</i> (ATCC 23715)	A	10	0	3 minutes
	B	10	0	

Conclusion: Under the conditions of this investigation, Microcide TB was bactericidal for *Staphylococcus aureus*, *Salmonella (choleraesuis) enterica*, *Pseudomonas aeruginosa*, Community Associated Methicillin Resistant *Staphylococcus aureus* (CA-MRSA)(NRS 123) Genotype USA400, Community Associated Methicillin Resistant *Staphylococcus aureus* (CA-MRSA)(NRS 384) Genotype USA300, *Corynebacterium ammoniagenes*, *Enterococcus faecium*, *Escherichia coli*, *Escherichia coli* O157:H7, *Listeria monocytogenes*, Methicillin resistant *Staphylococcus aureus* (MRSA), Methicillin resistant *Staphylococcus epidermidis* (MRSE), *Salmonella (typhi) enterica*, *Streptococcus pyogenes* (Necrotizing Fasciitis-Group A), Vancomycin resistant *Enterococcus faecalis* (VRE), Vancomycin intermediate resistant *Staphylococcus aureus* (VISA) and *Yersinia enterocolitica* according to criteria established by the US Environmental Protection Agency for registration and labeling of a disinfectant product as a bactericide.

VIRUCIDAL DATA:

Test Methods:

- *US EPA Pesticide Assessment Guidelines, Subdivision G: Product Performance, Section 91-2(f), and Section 91-30(d), (e), November, 1982.
- **Protocols for Testing the Efficacy of Disinfectants against Hepatitis B Virus (HBV) (EPA, Federal Register, Vol. 65, No. 166, 8/25/2000, p. 51828).
- †Protocol for Testing Disinfectants against Hepatitis C Virus using Bovine Viral Diarrhea Virus as approved by the US EPA on August 15, 2002.
- ‡Modified US EPA Pesticide Assessment Guidelines, Subdivision G: Product Performance, Section 91-2(f), and Section 91-30 (d), (e), November, 1982.

Test Conditions: Ready-to-Use (RTU), organic soil load, room temperature, glass petri dish substrates.

Results:

Test Organism	Sample	Titer Reduction	Contact Time
*Avian Influenza A Virus (H3N2) (Avian Reassortant) (ATCC VR-2072)	A & B	≥ 3.0 log ₁₀	2 minutes
*Avian Influenza Virus, Type A (Turkey/WIS/66) (H9N2)	A & B	≥ 4.83 log ₁₀	2 minutes
†Bovine Viral Diarrhea Virus (BVDV)	A & B	≥ 3.0 log ₁₀	5 minutes
*Canine Parvovirus (ATCC VR-2017)	A & B	≥ 3.0 log ₁₀	10 minutes
‡Feline Calicivirus (FCV)	A & B	6.48 log ₁₀	30 seconds
*Hepatitis A Virus (HAV)	A & B	≥ 3.0 log ₁₀	10 minutes
**Hepatitis B Virus (HBV) (Duck Hepatitis B Virus-DHBV)	A & B	≥ 3.3 log ₁₀	5 minutes
†Hepatitis C Virus (HCV) (Bovine Viral Diarrhea Virus-BVDV)	A & B	≥ 3.0 log ₁₀	5 minutes
*Human Immunodeficiency Virus, HTLV-III _{RF} , strain of HIV-1 (associated with AIDS)	A & B	≥ 3.5 log ₁₀	1 minute
*Human Coronavirus (ATCC VR-740, strain 229E)	A & B	≥ 3.0 log ₁₀	2 minutes
‡Norovirus (Norwalk Virus)	A & B	6.48 log ₁₀	30 seconds
*Pandemic 2009 H1N1 Influenza A Virus	(Refer to NOTE after Conclusion.)		2 minutes
*Paramyxovirus (Mumps) (ATCC VR-1438)	A & B	≥ 3.0 log ₁₀	3 minutes
*Poliovirus Type 1, strain Brunhilde (ATCC VR-1000)	A & B	≥ 3.25 log ₁₀	10 minutes
*Rabies Virus (attenuated ERA strain, CDC)	A & B	3.0 log ₁₀	30 seconds
*Rhinovirus Type 39 (ATCC VR-340)	A & B	≥ 3.0 log ₁₀	3 minutes
*Rotavirus	A & B	≥ 3.0 log ₁₀	3 minutes
*SARS Associated Coronavirus (ZeptoMetrix)	A & B	4.03 log ₁₀	2 minutes

Conclusion: Under the conditions of this investigation, Microcide TB demonstrated virucidal activity against Avian Influenza A Virus (H3N2), Avian Influenza Virus Type A (H9N2), Bovine Viral Diarrhea Virus (BVDV), Canine Parvovirus, Feline Calicivirus (FCV), Hepatitis A Virus (HAV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Human Immunodeficiency Virus (HIV-1), Human Coronavirus, Norovirus (Norwalk Virus), Pandemic 2009 H1N1 Influenza A Virus, Paramyxovirus (Mumps), Poliovirus Type 1, Rabies, Rhinovirus Type 39, Rotavirus, and SARS Associated Coronavirus according to criteria established by the US Environmental Protection Agency for registration and labeling of a disinfectant product as a virucide.

NOTE: Per the EPA guidance document dated October 21, 2009, disinfectant products that bear label claims against human, avian, or swine Influenza A Virus, and have submitted and received approval of efficacy data to support these label claims, may include a label claim against the Pandemic 2009 H1N1 Influenza A Virus.

FUNGICIDAL DATA:

Test Method: AOAC Germicidal Spray Products as Disinfectants

Test Conditions: Ready-to-Use (RTU), organic soil load, room temperature, glass slide carrier substrates

Results:

Organism	Sample	No. of Carriers		Contact Time
		Exposed	Positive	
Trichophyton mentagrophytes	A	60	0	10 minutes
	B	60	0	
	C	60	0	

Conclusion: Under the conditions of this investigation, Microcide TB demonstrated fungicidal activity against *Trichophyton mentagrophytes* according to criteria established by the US Environmental Protection Agency for registration and labeling of a disinfectant product as a fungicide.

MILDEW FUNGISTATIC DATA:

Test Method: EPA Hard Surface Mildew Fungistatic Test

Test Organism: *Aspergillus niger* (ATCC 6275)

Test Conditions: Glazed ceramic tile substrates

Results:

Sample	No. of Exposed Tiles	No. of Tiles Showing Growth
Microcide TB	10	0
Control	10	10

Conclusion: Under the conditions of this investigation, Microcide TB demonstrated fungistatic activity against *Aspergillus niger* according to criteria established by the US Environmental Protection Agency for registration and labeling of a disinfectant product as a fungistat.



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