



**EFFICACY SUMMARY  
 FOR  
 Oxivir Five 16 Concentrate  
 EPA Reg. No. 70627-58**

<b>Test Organisms</b>	<b>Test Method</b>	<b>Test Conditions</b>	<b>Results</b>
<i>Staphylococcus aureus</i> , (ATCC 6538)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 5% soil load, 22°C, 60 carriers	No positive carriers
<i>Salmonella enterica</i> , (ATCC 10708)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 5% soil load, 22°C, 60 carriers	No positive carriers
<i>Pseudomonas aeruginosa</i> , (ATCC 15422)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 5% soil load, 22°C, 60 carriers	No positive carriers
<i>Acinetobacter baumannii</i> , (ATCC 19606)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Escherichia coli</i> O157:H7, (ATCC 35150)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Klebsiella pneumoniae</i> , (ATCC 4352)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Listeria monocytogenes</i> , (ATCC 19111)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Streptococcus pyogenes</i> , (ATCC 12204)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Shigella dysenteriae</i> , (ATCC 13313)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Staphylococcus epidermidis</i> , Methicillin resistant (MRSE) (ATCC 51625)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Staphylococcus aureus</i> , Methicillin resistant (MRSA) (ATCC 33591)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers

**EFFICACY SUMMARY  
FOR  
Oxivir Five 16 Concentrate  
EPA Reg. No. 70627-58**

<b>Test Organisms</b>	<b>Test Method</b>	<b>Test Conditions</b>	<b>Results</b>
<i>Staphylococcus aureus</i> , Community Associated Methicillin resistant (CA-MRSA) (Clinical Isolate 08005) (Genotype USA400)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Staphylococcus aureus</i> , (Community Associated Methicillin resistant (CA-MRSA) (Clinical Isolate 08001) (Genotype USA300)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Streptococcus pneumoniae</i> , Penicillin resistant (PRSP) (ATCC 700671)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Enterococcus faecium</i> , Vancomycin resistant (VRE) (ATCC 51559)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C, 10 carriers	No positive carriers
<i>Escherichia coli</i> , (Extended Spectrum Beta-lactamase resistance [ESBL]), [CA-MRSA]), (clinical Isolate 08005) (ATCC BAA-196)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C	No growth
<i>Klebsiella pneumoniae</i> , (Carbapenem-resistant [KPC]), [CA-MRSA]), (clinical Isolate 08001) (Genotype USA300) (ATCC BAA-1705)	AOAC Germicidal Spray Test	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% soil load, 22°C	No growth
<i>Trichophyton mentagrophytes</i> , (ATCC 9533)	AOAC Fungicidal Activity Method	1:16 dilution, 10 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	No growth
Herpes Simplex Virus Type 2, Strain G (ATCC VR-734)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥4.0 log <sub>10</sub> reduction
Human Coronavirus, Strain 229E, (ATCC VR-740)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 19°C	≥4.0 log <sub>10</sub> reduction
Influenza A virus, Strain Hong Kong (ATCC VR-544)	EPA Virucidal Test Method	1:128 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥5.5 log <sub>10</sub> reduction
Norovirus (Feline Calicivirus as surrogate) (VR-782)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥5.0 log <sub>10</sub> reduction
Parainfluenza Virus Type 3, Strain C243 (ATCC VR-93)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥6.0 log <sub>10</sub> reduction
Poliovirus Type 1, Strain Bruhnkilde (ATCC VR-1000)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 19°C	≥5.75 log <sub>10</sub> reduction
Respiratory Syncytial Virus, Strain Long (ATCC VR-26)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 19°C	≥4.0 log <sub>10</sub> reduction

**EFFICACY SUMMARY  
FOR  
Oxivir Five 16 Concentrate  
EPA Reg. No. 70627-58**

<b>Test Organisms</b>	<b>Test Method</b>	<b>Test Conditions</b>	<b>Results</b>
Rotavirus, Strain WA	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 19°C	≥4.75 log <sub>10</sub> reduction
Vaccinia virus, Strain WR (ATCC VR-119)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥6.25 log <sub>10</sub> reduction
Hepatitis B Virus (HBV)	EPA Virucidal Test Method - Duck Hepatitis B Virus as surrogate	1:64 dilution, 5 min. contact time, 200 ppm hard water, 100% duck serum, 20°C	≥3.09 log <sub>10</sub> reduction
Hepatitis C Virus (HCV)	EPA Virucidal Test Method - Bovine Viral Diarrhea Virus as surrogate	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% horse serum, 19°C	≥4.38 log <sub>10</sub> reduction
Human Immunodeficiency Virus Type 1 (HIV-1), Strain HTLV-IIIB	USEPA Pesticide Assessment Guidelines, Subdivision G, 1982: Section 91-30	1:128 dilution, 1 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 21°C	≥5.0 log <sub>10</sub> reduction
Avian Influenza A (H3N2) virus, (Avian Reassortant) Strain A/Washington/897/80 X A/Mallard/New York/6750/78 (ATCC VR-2072)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 19°C	≥4.75 log <sub>10</sub> reduction
Canine Parvovirus, Strain Cornell (ATCC VR-2017)	EPA Virucidal Test Method	1:16 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 19°C	≥4.0 log <sub>10</sub> reduction
Adenovirus type 8, (ATCC VR-1368, Strain Trim)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥4.5 log <sub>10</sub> reduction
Influenza A Virus (H1N1) (ATCC VR-1469, Strain A/PR/8/34)	EPA Virucidal Test Method	1:64 dilution, 1 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥5.0 log <sub>10</sub> reduction
Influenza A Virus (H1N1) (ATCC VR-1469, Strain A/PR/8/34)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≥5.5 log <sub>10</sub> reduction
Rhinovirus Type 37, Strain 151-1, (ATCC VR-1147)	EPA Virucidal Test Method	1:64 dilution, 5 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 20°C	≤0.5 log <sub>10</sub> reduction
<i>Aspergillus niger</i> , (ATCC 16404)	EPA Hard Surface Mildew/Fungistatic Test	1:16 dilution, 10 min. contact time, 200 ppm hard water	No growth
<i>Staphylococcus aureus</i> , (ATCC 6538)	AOAC Germicidal Spray Test	RTU 1:16 dilution, 5 min. contact time, 5% soil load, 22°C, 10 carriers	No growth
<i>Pseudomonas aeruginosa</i> , (ATCC 15442)	AOAC Germicidal Spray Test	RTU 1:16 dilution, 5 min. contact time, 5% soil load, 22°C, 10 carriers	No growth
<i>Salmonella enterica</i> , (ATCC 10708)	AOAC Germicidal Spray Test	RTU 1:16 dilution, 5 min. contact time, 5% soil load, 22°C, 10 carriers	No growth
<i>Staphylococcus aureus</i> , (ATCC 6538)	Standard Test Method for Efficacy of Non-Food Contact Surfaces	1:128 dilution, 3 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	>99.9% reduction
<i>Klebsiella pneumonia</i> , (ATCC 4352)	Standard Test Method for Efficacy of Non-Food Contact Surfaces	1:128 dilution, 3 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	>99.9% reduction

**EFFICACY SUMMARY  
FOR  
Oxivir Five 16 Concentrate  
EPA Reg. No. 70627-58**

<i>Escherichia coli</i> , (ATCC 11229)	Standard Test Method for Efficacy of Non-Food Contact Surfaces	1:128 dilution, 3 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	>99.9% reduction
<i>Enterococcus faecalis</i> , (ATCC 29212)	Standard Test Method for Efficacy of Non-Food Contact Surfaces	1:128 dilution, 3 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	>99.9% reduction
<i>Listeria monocytogenes</i> , (ATCC 19111)	Standard Test Method for Efficacy of Non-Food Contact Surfaces	1:128 dilution, 3 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	>99.9% reduction
<i>Pseudomonas aeruginosa</i> , (ATCC 15442)	Standard Test Method for Efficacy of Non-Food Contact Surfaces	1:128 dilution, 3 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	>99.9% reduction
<i>Salmonella enterica</i> , (ATCC 10708)	Standard Test Method for Efficacy of Non-Food Contact Surfaces	1:128 dilution, 3 min. contact time, 200 ppm hard water, 5% fetal bovine serum, 22°C	>99.9% reduction

Conclusion: Under the conditions of these investigations, Oxivir Five 16 Concentrate was found to be bactericidal, virucidal, fungistatic, mildewcidal and a non-food contact sanitizer according to criteria established by the US Environmental Protection Agency for the registration and labeling of a disinfectant product.