

Summary of Antimicrobial Efficacy

The following results were obtained using **O₂XY[™]** active ingredient in Chae Organics, Inc. formularies.

Bacteria

| TEST ORGANISM | CONTACT TIME | CONCENTRATION | RESULT |
|--|--------------|---------------|-----------------|
| Alicyclobacillus acidoterrestris | 10 min | 30 ppm | 99.998% kill |
| Bacillus cereus spores | 5 min | 200 ppm | 99.999% kill |
| Campylobacter jejuni | 30 sec | 30 ppm | 99.9% kill |
| Erwinia carotovora | 60 sec | 50 ppm | 99.999% kill |
| Escherichia coli O157:H7 | 60 sec | 3 ppm | 99.999 % kill |
| Lactobacillus sp. | 60 sec | 20 ppm | 99.999% kill |
| Legionella pneumophila | 60 sec | 25 ppm | 99.999% kill |
| Listeria monocytogenes | 60 sec | 25 ppm | 99.9999% kill |
| Methicillin Resistant Staphylococcus aureus (MRSA) | 10 min | 500 ppm | 100% kill |
| Mycobacterium bovis (tuberculosis) | 10 min | 500 ppm | 99.9999% kill |
| Pediococcus sp. | 60 sec | 20 ppm | 99.999% kill |
| Proteus mirabilis | 60 sec | 100 ppm | 99.999999% kill |
| Pseudomonas aeruginosa | 60 sec | 5 ppm | 99.9999% kill |
| Salmonella typhimurium | 60 sec | 100 ppm | 99.999% kill |
| Staphylococcus aureus | 60 sec | 30 ppm | 99.999% kill |
| Streptococcus faecalis | 60 sec | 100 ppm | 99.99999% kill |
| Streptococcus faecium | 60 sec | 100 ppm | 99.9999% kill |
| Vancomycin Resistant Enterococcus faecalis (VRE) | 10 min | 500 ppm | 100% kill |

Fungi

| TEST ORGANISM | CONTACT TIME | CONCENTRATION | RESULT |
|------------------------------|--------------|---------------|----------------|
| Aspergillus fumigatus spores | 60 sec | 100 ppm | 99.9999% kill |
| Aspergillus niger | 60 sec | 100 ppm | 99.9999% kill |
| Candida albicans | 60 sec | 100 ppm | 99.99999% kill |
| Cladosporium | 30 sec | 500 ppm | 99.999% kill |
| Mucor sp | 30 sec | 500 ppm | 99.999% kill |
| Penicillium | 60 sec | 100 ppm | 99.999% kill |
| Penicillium roquefortii | 60 sec | 500 ppm | 100% kill |
| Saccharomyces cerevisiae | 60 sec | 30 ppm | 99.999% kill |
| Stachybotrys chartarum | 60 sec | 100 ppm | 99.997% Kill |
| Trichophyton mentagrophytes | 5 min | 500 ppm | 100% kill |

Viruses

| TEST ORGANISM | CONTACT TIME | CONCENTRATION | RESULT |
|-------------------------------|--------------|---------------|----------------|
| African Swine Fever Virus | 5 min | 500 ppm | 100% virucidal |
| Avian Influenza A virus | 10 min | 500 ppm | 100% virucidal |
| Canine Parvovirus | 10 min | 500 ppm | 100% virucidal |
| Coxsackie Virus | 5 min | 550 ppm | 99.9% kill |
| Foot & Mouth Disease Virus | 5 min | 500 ppm | 100% virucidal |
| Hepatitis C | 10 min | 500 ppm | 100% virucidal |
| Herpes Simplex Virus Type 1 | 5 min | 550 ppm | 99.9% kill |
| Newcastle Disease virus | 10 min | 500 ppm | 100% kill |
| HIV Virus Type 1 (HIV 1) | 10 min | 500 ppm | 100% virucidal |
| Polio Virus Type 2 | 5 min | 550 ppm | 99.9% kill |
| PRRS virus | 60 sec | 312 ppm | 100% virucidal |
| Pseudorabies virus | 10 min | 500 ppm | 100% virucidal |
| Rhino Virus | 5 min | 550 ppm | 99.9% kill |
| Swine Vesicular Disease Virus | 5 min | 500 ppm | 100% virucidal |