



# CLNLEMON LEMON-QUAT

One Step Disinfectant Germicidal  
Detergent and Deodorant

## DESCRIPTION

This product is a one-step disinfectant cleaner and deodorant designed for general cleaning, disinfecting, deodorizing, and controlling mold and mildew on hard, non-porous environmental surfaces. It cleans quickly, removing dirt, grime, mold, mildew, body oils and other common soils found in hospitals, nursing homes, schools and colleges, day care centers, medical offices, funeral homes, veterinary clinics, pet shops, animal life science laboratories, hotels, motels, public areas and restrooms. It (also) eliminates odors leaving (restroom) surfaces smelling clean and fresh. Use where odors are a problem. This product may be used on washable hard, non-porous surfaces such as: floors, walls, glass, laminated surfaces, metal, stainless steel, glazed porcelain, plastic, chrome, vinyl, enameled surfaces, painted woodwork.

## PRODUCT FEATURES / BENEFITS

- Pleasantly fragranced / Leaves behind a pleasant lemon fragrance
- Multiple surface compatibility / Safe to use on any water washable surface
- Broad spectrum bactericidal activity / Effectively kills disease causing pathogenic organisms
- Neutral range pH / Use for daily maintenance of finished floors without affecting gloss
- Cleans, disinfects, and deodorizes in one operation / Easy one-step operation saves time and reduces inventory

## SPECIFICATIONS

Active Ingredients .....	Dual Quaternary
Color .....	Yellow
Odor .....	Lemon
pH (Concentrate).....	7.0 ± 0.3
pH (Use Dilution).....	7.0 ± 0.5
Specific Gravity (g/cc) .....	0.999 ± 0.002

## EFFICACY CLAIMS

### VIRUCIDAL CLAIMS

- Hepatitis B Virus
- Hepatitis C Virus
- Herpes simplex Virus Type 1 ATCC VR-773
- Herpes Simplex Virus Type 2 ATCC VR-734
- Human Coronavirus
- Human Immunodeficiency virus type 1 (HIV 1)
- Influenza A virus ATCC VR-544
- Respiratory syncytial virus ATCC VR-26
- Canine Parvovirus (CPV) at 8 oz. per gallon
- Canine Distemper virus ATCC VR-128
- Feline Picornavirus ATCC VR-649
- Infectious Bovine Rhinotracheitis virus A
- TCC VR-188, Pseudorabies virus ATCC VR-135
- Transmissible Gastroenteritis virus
- Vaccinia virus ATCC VR-119

### FUNGICIDAL CLAIM

- Aspergillus niger ATCC 16404
- Candida albicans ATCC 10231
- Trichophyton mentagrophytes ATCC#9533

### BACTERIOCIDAL CLAIMS

- Bordetella bronchiseptica ATCC 10580
- Chlamydia psittaci ATCC VR-125
- Clostridium difficile-vegetative ATCC 9689
- Enterobacter aerogenes ATCC 13048
- Enterobacter cloacae ATCC 13047
- Escherichia coli ATCC 11229
- Fusobacterium necrophorum ATCC 27852
- Klebsiella pneumoniae ATCC 13883
- Listeria monocytogenes ATCC 19117
- Pasturella multocida ATCC 12947
- Proteus vulgaris ATCC 9920
- Pseudomonas aeruginosa ATCC 15442
- Salmonella enterica serotype pullorum ATCC 19945
- Salmonella enterica ATCC 4931
- Salmonella typhi ATCC 6539
- Salmonella typhimurium ATCC 23564
- Serratia marcescens ATCC 9103
- Shigella flexneri ATCC 9380
- Shigella sonnei ATCC 25931
- Staphylococcus aureus ATCC 6538
- Methicillin Resistant Staphylococcus aureus (MRSA) ATCC 33592
- Staphylococcus epidermidis ATCC 14990
- Streptococcus pyogenes ATCC 19615
- Vancomycin Resistant Enterococcus faecalis (VRE) ATCC 51299
- Vancomycin Intermediate Resistant Staphylococcus aureus (VISA) ATCC 5836

## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. This product is not for use on critical or semi-critical medical device surfaces.

**DISINFECTION** General Disinfectant-Non-medical (schools, restaurants, food services, dairies, farm, beverage and food processing plants): Add 4 ounces of this product to gallon of water. This product is not to be used as a disinfectant on glassware, dishes or interior surfaces of appliances.

**CLEANING AND DISINFECTION:** For heavily soiled areas, a precleaning step is required. For all general cleaning and disinfection, use 4 ounces of this product per one gallon of water (1:32 solution). Apply this product using a cloth, mop or pressure sprayer so as to thoroughly wet surface to be cleaned (disinfected). For sprayer applications, use a coarse spray device. Allow surfaces to remain wet for 10 minutes and then let air dry. Prepare a fresh solution at least daily or when solution becomes visibly dirty or diluted. Note: All food contact surfaces such as appliances and kitchen countertops must be rinsed with potable water. Do not use this product to clean or disinfect glassware, utensils, dishes or interior surfaces of appliances. For Disinfecting Hard, Non-Porous Surfaces Against Avian Influenza A: For use in homes, hospitals, hotels, motels, schools the directions for use for hospital disinfection must be followed using a rate of 4 oz per gallon of water. For use in animal housing facilities follow the animal premise directions.

**NON-ACID TOILET BOWL & URINAL DISINFECTANT CLEANER DIRECTIONS** Remove gross filth prior to disinfection. From Concentrate: Add 3 ounces to the toilet bowl and mix. Brush thoroughly over exposed surfaces and under the rim. Repeat and allow solution to stand for 10 minutes and flush. From Use Solution: Preclean. Empty toilet bowl or urinal and apply 4 ounces per gallon (32 milliliters per liter) use solution (or equivalent use dilution) to exposed surfaces, including under the rim with a cloth, mop, sponge or sprayer. Allow solution to stand for 10 minutes and flush. For sprayer applications, use a coarse spray device and swab all areas after spraying.

**FUNGICIDAL DIRECTIONS:** For use in areas such as locker rooms, dressing rooms, shower and bath areas and exercise facilities. Apply to hard, non-porous surfaces at a 1:64 dilution (2 ounces per gallon of water) (or equivalent use dilution), thoroughly wetting all surfaces for a contact time of at least 10 minutes. Wipe surfaces or let air dry. Mold and mildew control: To control the growth of mold and mildew and their odors, use at a rate of 2 ounces per gallon of water on hard, non-porous surfaces, apply use solution to thoroughly wet all treated surfaces completely. Let air dry. Repeat application weekly or when growth or odor reappears. Allow surface to remain wet for 10 minutes.

\*KILLS HIV, HBV AND HCV ON PRECLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS in health care settings or other settings in which there is an expected likelihood of soiling on inanimate surfaces/objects with blood or body fluids and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type 1, (HIV-1), Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV).

**SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HBV AND HCV ON SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS.**

**Personal Protection:** Clean up should always be done wearing protective latex gloves, gowns, masks and eye protection. **Cleaning Procedure:** Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of this product. **Contact Time:** Leave surface wet for 10 minutes with 2 ounces per gallon (16 milliliters per liter) use solution (or equivalent use dilution). **Disposal of Infectious Materials:** Blood, body fluids, cleaning materials and clothing should be autoclaved and disposed of according to federal, state and local regulations for infectious waste disposal.

**Veterinary Clinics/Animal Life Science Laboratory/Zoos/Pet Shop/Kennels/Breeding and grooming Establishment/ Tack Shops Disinfection Directions:** For cleaning and disinfecting the following hard, non-porous surfaces: equipment, utensils, instruments, cages, kennels, stables, stalls and catteries. Remove all animals and feeds from premises, animal transportation vehicles, crates etc. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or traversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 2 ounces per gallon of water (8 oz per gallon of water against CPV and Porcine Parvovirus) of water for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure. Ventilate buildings and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, automatic feeders, waterers and other equipment that dispenses food or water with soap or detergent, and rinse with potable water before reuse.

## SAFETY INFORMATION

**DANGER. KEEP OUT OF REACH OF CHILDREN.** Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield, rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash clothing before reuse.

**FIRST AID:** Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. **IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

Registered with the Environmental Protection Agency



DISINFECTANT

HMIS HAZARD CODE	
1	HEALTH
0	FLAMMABILITY
0	PHYSICAL HAZARD



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TDS-0235-0413





Efficacy Data for

LEMON-QUAT One Step Disinfectant  
Germicidal Detergent and Deodorant  
(#0235)

EPA Reg. No: 2296-112 EPA Est. No.: 2296-PA-1

Overview

LEMON-QUAT One Step Disinfectant Germicidal Detergent And Deodorant is a concentrated 4 ounce per gallon neutral hospital disinfectant that utilizes the highly efficacious quaternary, MAQUAT 2420. MAQUAT 2420 is a blend of a Dialkyl quat with the first generation ADBAC quat, commonly referred to as the 5th Generation quat. This synergistic quat blend used in LEMON-QUAT One Step Disinfectant Germicidal Detergent And Deodorant exhibits high soil and hard water tolerance with mixed micelle soil removal performance that translates into a real world performance where conditions that breed microbial pathogens are seldom controlled.

Now with Swine Influenza A (H1N1) virus and Influenza A (H1N1) virus

Uses

Disinfectant, Non-Food Contact Sanitizer, Cleaner, Mildewstat, Fungicide, Virucide\*, Deodorizer (Odor Counteractant) (Odor Neutralizer) for Hospitals, Nursing Homes, Whirlpool, Households, Food Service, Commercial, Institutional, and Industrial Use (Only) (Suitable) For Use in Meat and Poultry Plants, Schools, Dairy, Equine, Poultry/Turkey Farm, Veterinary, Restaurant, Food Handling and Process Areas.

Effective in hard water up to 400 ppm hardness (Calculated as CaCO3) in the presence of 5% serum contamination. Non-Dulling to Floors (Floor Finishes).

Athletic Surface Disinfectant.

(Product of USA) (Made in the USA)

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

Use	Dilutions	Quat Active	Hard Water
Hospital disinfectant	4 oz per gal of water	660 ppm	400 ppm
Virucidal	4 oz per gal of water	660 ppm	400 ppm
Fungicidal	4 oz per gal of water	660 ppm	400 ppm
Mold and Mildew	4 oz per gal of water	660 ppm	400 ppm
Sanitization (non-food contact)	4 oz per gal of water	660 ppm	400 ppm

Efficacy Hospital Disinfection (at 4 ounces per gallon)

LEMON-QUAT One Step Disinfectant Germicidal Detergent And Deodorant is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum and 400 ppm hard water at 4 ounces of this product per gallon of water (660 ppm active) Treated surfaces must remain wet for 10 minutes (Testing is performed per the AOAC UDT/GST method (DIS/TSS-1). Sixty carriers are required on 3 separate lots, one of which must be > 60 days old against Pseudomonas aeruginosa, Salmonella enterica and Staphylococcus aureus. Killing of 59 out of 60 carriers is required (total carriers = 540).)



Organism	Carrier Population	Sample	# Carriers	# Positive
Pseudomonas aeruginosa ATCC #15442	3.9 X 10 <sup>4</sup> CFU/Carrier	A (60 Days Old)	60	0 / 60
		B	60	0 / 60
		C	60	0 / 60
Salmonella enterica ATCC #10708	1.03 X 10 <sup>6</sup> CFU/Carrier	A (60 Days Old)	60	1 / 60
		B	60	1 / 60
		C	60	0 / 60
Staphylococcus aureus ATCC #6538	7.0 X 10 <sup>4</sup> CFU/Carrier	A (60 Days Old)	60	0 / 60
		B	60	0 / 60
		C	60	0 / 60

**Supplemental Organisms**

(Testing is performed per the AOAC UDT/GST method. Ten carriers are required on 2 separate lots against each supplemental organism. Killing of 10 out of 10 carriers is required (total carriers = 20).)

Organism	Carrier Population	Sample	# Carriers	# Positive
Acinetobacter baumannii ATCC 19003	5.1 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 10
		B	10	0 / 60
Acinetobacter lwoffii ATCC 15309	5.7 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Acinetobacter lwoffii ATCC 9957	4.0 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Bordetella bronchiseptica ATCC 10580	9.4 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Citrobacter freundii ATCC 8090	3.9 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Enterobacter aerogenes ATCC 13048	2.35 X 10 <sup>7</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Enterobacter agglomerans ATCC 27155	3.9 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Enterobacter cloacae ATCC 13047	3.3 X 10 <sup>7</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60



Organism	Carrier Population	Sample	# Carriers	# Positive
Enterococcus faecalis ATCC 19433	6.2 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Enterococcus faecalis Vancomycin Resistant (VRE) ATCC 51299	1.3 X 10 <sup>7</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Enterococcus hirae ATCC 10541	1.19 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Escherichia coli ATCC 11229	1.3 X 10 <sup>7</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Escherichia coli Spectrum B-Lactamase (ESBL) ATCC BAA-196	4.6 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Escherichia coli O111:H8 ATCC BAA-184	4.3 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Escherichia coli Tetracycline Resistant ATCC 47041	3.1 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Fusobacterium necrophorum ATCC 27852	5.8 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Klebsiella oxytoca ATCC 13182	1.07 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Klebsiella pneumoniae ATCC 13883	1.2 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Listeria monocytogenes ATCC 19117	7.7 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Micrococcus luteus ATCC 14452	1.1 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Micrococcus luteus ATCC 4698	4.8 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Pasturella multocida ATCC 12947	1.32 X 10 <sup>7</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Proteus vulgaris ATCC 13315	1.9 X 10 <sup>4</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Proteus vulgaris ATCC 9920	1.24 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Pseudomonas aeruginosa Tetracycline Resistant ATCC 27853	3.5 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60



Organism	Carrier Population	Sample	# Carriers	# Positive
Pseudomonas cepacia ATCC 25416	1.63 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Salmonella enterica ATCC 23564	9.2 X 10 <sup>4</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Salmonella enterica ATCC 4931	1.3 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Salmonella enterica serotype pullorum ATCC 19945	7.1 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Salmonella typhi ATCC 6539	8.3 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Salmonella typhimurium ATCC 23564	1.5 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
	5.6 X 10 <sup>5</sup> CFU/Carrier	B	10	0 / 60
Serratia marcescens ATCC 14756	6.2 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Serratia marcescens ATCC 9103	6.0 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Shigella flexneri ATCC 12022	2.6 X 10 <sup>4</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Shigella flexneri ATCC 9380	1.99 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Shigella sonnei ATCC 25931	1.04 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus aureus ATCC 14154	9.2 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus aureus ATCC 25923	6.6 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus aureus sub species aureus ATCC 33586	7.2 X 10 <sup>4</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus aureus Methicillin Resistant (MRSA) ATCC 33592	5.4 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus aureus Community Associated Methicillin Resistant (CA-MRSA)	6.3 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60



Organism	Carrier Population	Sample	# Carriers	# Positive
Staphylococcus aureus Community Associated Methicillin Resistant (CA-MRSA) (NARSA NRS384) Genotype USA300)	1.60 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus aureus Vancomycin Intermediate Resistant (VISA) ATCC5836	3.2 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus epidermidis ATCC 14990	1.56 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus epidermidis Antibiotic resistant ATCC51625	8.6 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Staphylococcus haemolyticus ATCC 29970	9.5 X 10 <sup>5</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Streptococcus agalactiae ATCC 13813	5.6 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Streptococcus mutans ATCC 25175	1.02 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
	1.3 X 10 <sup>4</sup> CFU/Carrier	B	10	0 / 60
Streptococcus pneumoniae Penicillin Resistant ATCC 51915	9.6 X 10 <sup>4</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Streptococcus pyogenes ATCC 19615	4.7 X 10 <sup>4</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Vibrio cholera ATCC 11623	1.0 X 10 <sup>6</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60
Yersinia enterocolitica ATCC 23715	1.2 X 10 <sup>7</sup> CFU/Carrier	A	10	0 / 60
		B	10	0 / 60



Virucidal against (at 4 ounces per gallon)

This product was evaluated in the presence of 5% serum and 400 ppm hard water with a 10 minute contact time and found to be effective against the following viruses on hard nonporous environmental surfaces.

(Testing is performed per EPA Guidance (DIS/TSS-7). Two separate lots are tested. Inactivation of virus must be demonstrated at all dilutions when no cytotoxicity is observed or at all dilutions above the cytotoxic level when it is observed. The data must demonstrate a 3-log reduction in viral titer for both lots.) (3 lots and 4-Log reduction for Canada).

Organism	Dried Virus Control	Sample	Result	Log Reduction
Avian Infectious Bronchitis virus Beaudette IB42	6.42 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥5.92 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥5.92 Log <sub>10</sub>
	6.5 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥6.0 Log <sub>10</sub>
Avian Influenza A (H3N2) virus (Avian Reassortant) (ATCC VR-2072)	4.75 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Avian Influenza A (H5N1) virus	6.75 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥6.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥6.25 Log <sub>10</sub>
Canine Coronavirus ATCC VR-809	4.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
	4.75 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Canine Distemper virus ATCC VR-128	6.25 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥5.75 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥5.75 Log <sub>10</sub>
	6.75 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥6.25 Log <sub>10</sub>
Chlamydia psittaci ATCC VR-125	7.25 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥6.75 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥6.75 Log <sub>10</sub>
	4.75 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Cytomegalovirus ATCC VR-538	4.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
		C	≤0.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
Feline Picornavirus	4.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
	5.75 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥5.25 Log <sub>10</sub>
Hantavirus (PHV)	6.23 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.73 Log <sub>10</sub>
		B	≤1.5 Log <sub>10</sub>	≥4.73 Log <sub>10</sub>



Organism	Dried Virus Control	Sample	Result	Log Reduction
Hepatitis B Virus	5.06 Log <sub>10</sub>	A	≤0.27 Log <sub>10</sub>	≥4.79 Log <sub>10</sub>
	5.20 Log <sub>10</sub>	B	≤0.41 Log <sub>10</sub>	≥4.79 Log <sub>10</sub>
	5.06 Log <sub>10</sub>	Confirmatory B	≤0.27 Log <sub>10</sub>	≥4.79 Log <sub>10</sub>
Hepatitis C Virus	6.21 Log <sub>10</sub>	A	≤0.27 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	6.21 Log <sub>10</sub>	B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	6.06 Log <sub>10</sub>	Confirmatory B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Herpes Simplex Virus Type 1 ATCC VR-773	5.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	6.0 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Herpes Simplex Virus Type 2 ATCC VR-734	6.0 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	5.75 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Human Coronavirus ATCC VR-740	4.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	4.5 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Human Immunodeficiency Virus type 1 (HIV 1) HTLV-III B	5.75 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Infectious Bovine Rhinotracheitis virus ATCC VR-188	4.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	4.75 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Influenza A virus ATCC VR-544	6.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	6.0 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Influenza A (H1N1) virus ATCC VR-1469	5.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Pseudorabies virus ATCC VR-135	6.25 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	5.5 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Respiratory syncytial virus	4.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	5.0 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>





Organism	Dried Virus Control	Sample	Result	Log Reduction
SARS Associated Coronavirus	6.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Swine Influenza A (H1N1) Virus ATCC VR-333	5.5 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Transmissible Gastroenteritis virus	4.75 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	6.25 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
Vaccinia virus ATCC VR-119	6.75 Log <sub>10</sub>	A	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
		B	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>
	6.5 Log <sub>10</sub>	C	≤0.5 Log <sub>10</sub>	≥4.25 Log <sub>10</sub>

**Virucidal against (at 16 ounces per gallon)**

This product was evaluated in the presence of 5% serum and 400 ppm hard water with a 10 minute contact time and found to be effective against the following viruses on hard nonporous environmental surfaces.

(Testing is performed per EPA Guidance (DIS/TSS-7). Two separate lots are tested. Inactivation of virus must be demonstrated at all dilutions when no cytotoxicity is observed or at all dilutions above the cytotoxic level when it is observed. The data must demonstrate a 3-log reduction in viral titer for both lots.) (3 lots and 4-Log reduction for Canada).

Organism	Dried Virus Control	Sample	Result	Log Reduction
Canine Parvovirus Type 2b, Nike Strain	7.5 Log <sub>10</sub>	A	≤3.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
		B	≤3.5 Log <sub>10</sub>	≥4.0 Log <sub>10</sub>
Rabies Virus	5.75 Log <sub>10</sub>	A	≤2.5 Log <sub>10</sub>	≥3.25 Log <sub>10</sub>
		B	≤2.5 Log <sub>10</sub>	≥3.25 Log <sub>10</sub>

**Fungicidal against (at 4 ounces per gallon)**

This product was evaluated in the presence of 5% serum and 400 ppm hard water with a 10 minute contact time and found to be effective against the following fungi on hard nonporous environmental surfaces.

(Testing is performed per the AOAC fungicidal method (DIS/TSS-6). Two separate lots are tested against Trichophyton mentagrophytes in a suspension test. Killing of all fungal spores in 10 minutes is required.)

Organism	Carrier Population	Sample	# Carriers	# Positive
Candida albicans ATCC #10231	1.57 X 10 <sup>5</sup> CFU/Carrier	A	10	0/10
		B	10	0/10
Trichophyton mentagrophytes ATCC #9533	1.10 X 10 <sup>5</sup> CFU/Carrier	A	10	0/10
		B	10	0/10



Mold and Mildew Control (at 4 ounces per gallon)

Use this product to control the growth of mold and mildew and their odors on hard, non-porous surfaces. Thoroughly wet all treated surfaces completely. Let air dry. Repeat application weekly or when growth or odor reappears.

Organism	Tile Number	Untreated After 7 Days	Sample A After 7 Days	Sample B After 7 Days
Aspergillus niger ATCC #16404	1	Growth 90%	No Growth 0%	No Growth 0%
	2	Growth 70%	No Growth 0%	No Growth 0%
	3	Growth 90%	No Growth 0%	No Growth 0%
	4	Growth 80%	No Growth 0%	No Growth 0%
	5	Growth 80%	No Growth 0%	No Growth 0%
	6	Growth 90%	No Growth 0%	No Growth 0%
	7	Growth 80%	No Growth 0%	No Growth 0%
	8	Growth 70%	No Growth 0%	No Growth 0%
	9	Growth 90%	No Growth 0%	No Growth 0%
	10	Growth 70%	No Growth 0%	No Growth 0%

Non-Food Contact Surface Sanitizer

Add 4 ounces of this product to 1 gallon of water to sanitize hard porous and non-porous non-food contact surfaces. Treated surfaces must remain wet for 3 minutes. Then wipe with sponge, mop or cloth or allow to air dry. At this dilution food contact surfaces must be rinsed. Testing is performed per EPA Guidance (DIS/TSS-10). Three lots are required, one of which must be > 60 days old. Testing is performed against Staphylococcus aureus and Klebsiella pneumoniae containing 5% organic load. Enterobacter aerogenes may be substituted for Klebsiella pneumoniae. The results must show a reduction of at least 99.9% (3 Log10) in the number of each test microorganism over the parallel control count within 5 minutes.

Organism	Carrier Population	Sample	3 Minute Kill cfu/Carrier	Percent kill
Klebsiella pneumoniae ATCC 4352	6.04 Log10	A (60 Days Old)	>3.56 Log10	>99.9
		B	>3.56 Log10	>99.9
		C	>3.56 Log10	>99.9
Staphylococcus aureus ATCC #6538	6.69 Log10	A (60 Days Old)	>5.21 Log10	>99.9
		B	>4.82 Log10	>99.9
		C	>5.21 Log10	>99.9