



KLEEN 64

One-Step Germicidal Cleaner and Deodorant

Efficacy

Hospital Disinfection (at 2 ounces per gallon)

Contact Time: 10 minutes	Water Conditions: 400 ppm CaCO ₃	Organic Soil: 5%
Test Method Official Method of the AOAC, Use-Dilution Method (UDM)	Dilution/Concentration: 2 oz. / gal. (660 ppm)	
Organism	Carrier Population (Log ₁₀)	# Positive Carriers
<i>Pseudomonas aeruginosa</i> ATCC 15442	6.46	3/60
	6.38	6/60
	6.51	4/60
<i>Staphylococcus aureus</i> ATCC 6538	6.11	2/60
	6.36	3/60
	6.53	2/60
<i>Salmonella enterica</i> ATCC 10708	5.11	1/60
		1/60
		0/60
Organism	Carrier Population (Log ₁₀)	# Positive Carriers
<i>Acinetobacter baumannii</i> ATCC 19003	6.71	0/10
		0/10
<i>Acinetobacter lwoffii</i> ATCC 15309	5.76	0/10
		0/10
<i>Bordetella bronchiseptica</i> ATCC 10580	6.97	0/10
		0/10
<i>Chlamydia psittaci</i> ATCC VR-125	7.25	≥6.75
		≥6.75
<i>Citrobacter freundii</i> ATCC 8090	5.59	0/10
		0/10
<i>Enterobacter aerogenes</i> ATCC 13048	7.37	0/10
		0/10
<i>Enterobacter agglomerans</i> ATCC 27155	5.59	0/10
		0/10
<i>Enterobacter cloacae</i> ATCC 13047	7.52	0/10
		0/10
<i>Enterococcus faecalis</i> ATCC 19433	5.79	0/10
		0/10
<i>Enterococcus faecalis</i> VRE ATCC 51299	7.11	0/10
		0/10
<i>Enterococcus hirae</i> ATCC 10541	4.38	0/10
		0/10
<i>Escherichia coli</i> Carbapenem Resistant CDC 81371	5.88	0/10
	5.52	0/10



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Organism	Carrier Population (Log ₁₀)	# Positive Carriers
<i>Escherichia coli</i> ATCC 11229	7.11	0/10 0/10
<i>Escherichia coli</i> ESBL ATCC BAA-196	6.66	0/10 0/10
<i>Escherichia coli</i> Tetracycline Resistant ATCC 47041	5.49	0/10 0/10
<i>Escherichia coli</i> O157:H7 ATCC 35150	6.63	0/10 0/10
<i>Fusobacterium necrophorum</i> ATCC 27852	5.76	0/10 0/10
<i>Klebsiella oxytoca</i> ATCC 13182	5.03	0/10 0/10
<i>Klebsiella pneumoniae</i> NDM-1 positive ATCC BAA-2146	5.98	0/10 0/10
<i>Klebsiella pneumoniae</i> ATCC 13883	6.05	0/10 0/10
<i>Listeria monocytogenes</i> ATCC 19117	6.89	0/10 0/10
<i>Micrococcus luteus</i> ATCC 14452	5.04	0/10 0/10
<i>Pasturella multocida</i> ATCC 12947	7.12	0/10 0/10
<i>Proteus vulgaris</i> ATCC 13315	4.28	0/10 0/10
<i>Pseudomonas aeruginosa</i> Tetracycline Resistant ATCC 27853	6.54	0/10 0/10
<i>Pseudomonas cepacia</i> ATCC 25416	6.21	0/10 0/10
<i>Salmonella enterica</i> ATCC 23564	4.96	0/10 0/10
<i>Salmonella enterica</i> serotype pullorum ATCC 19945	5.85	0/10 0/10
<i>Salmonella enteritidis</i> ATCC 4931	6.18	0/10 0/10
<i>Salmonella typhi</i> ATCC 6539	6.92	0/10 0/10
<i>Salmonella typhimurium</i> ATCC 23564	5.75	0/10 0/10
<i>Serratia marcescens</i> ATCC 14756	6.79	0/10 0/10

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Organism	Carrier Population (Log ₁₀)	# Positive Carriers
<i>Shigella flexneri</i> ATCC 12022	4.41	0/10 0/10
<i>Shigella sonnei</i> ATCC 25931	6.02	0/10 0/10
<i>Staphylococcus aureus</i> CA-MRSA NRS 123 Genotype USA400	6.80	0/10 0/10
<i>Staphylococcus aureus</i> CA-MRSA ¹ NARSA NRS384 Genotype USA300	6.23	0/10 0/10
<i>Staphylococcus aureus</i> MRSA ATCC 33592	6.73	0/10 0/10
<i>Staphylococcus aureus</i> VISA HIP 5836	6.51	0/10 0/10
<i>Staphylococcus epidermidis</i> ATCC 14990	6.19	0/10 0/10
<i>Staphylococcus epidermidis</i> (Ampicillin, Cefazolin, Oxacillin, Penicillin Resistant) ATCC 51625	5.93	0/10 0/10
<i>Staphylococcus haemolyticus</i> ATCC 29970	5.98	0/10 0/10
<i>Streptococcus agalactiae</i> ATCC 13813	6.75	0/10 0/10
<i>Streptococcus mutans</i> ATCC 25175	4.11	0/10 0/10
<i>Streptococcus pneumoniae</i> Penicillin Resistant ATCC 51915	4.98	0/10 0/10
<i>Streptococcus pyogenes</i> ATCC 19615	4.67	0/10 0/10
<i>Vibrio cholera</i> ATCC 11623	6.00	0/10 0/10
<i>Yersinia enterocolitica</i> ATCC 23715	7.08	0/10 0/10

Conclusion: All lots of **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** satisfied the established test criteria for disinfection. **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** meets EPA standards (OCSPP 810.2200) for hard surface disinfectant claims that can be used by products sold in hospitals, households, healthcare facilities, schools, institutions and industry when used (diluted) as directed.

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One-Step Germicidal Cleaner and Deodorant

Virucidal against below viruses (at 2 ounces per gallon)

Organism	Virus Population (Log ₁₀)	Log Reduction (Log ₁₀)
Avian Influenza A Virus (H5N1) CDC 2006719965	6.75	≥6.25 ≥6.25
Avian Influenza A Virus (H3N2) ATCC VR-2072	4.75	≥4.25 ≥4.25
Cytomegalovirus AD-169	4.50	≥4.0 ≥4.0
Coronavirus (SARS-associated) CDC 200300592	6.50	≥3.0 ≥3.0
Hepatitis B Virus (HBV) (Duck-surrogate) Clinical Isolate	4.79	≥4.79 ≥4.79
Hepatitis C Virus (HCV) (BVDV-surrogate) Clinical Isolate	5.88	≥5.88 ≥5.88
Herpes Simplex Type 1 Virus VR-733	5.50	≥5.0 ≥5.0
Herpes Simplex Type 2 Virus ATCC VR-734	6.00	≥5.5 ≥5.5
Human Coronavirus ATCC VR-740	4.50	≥4.0 ≥4.0
Human Immunodeficiency Virus Type 1 (AIDS Virus) (Strain III _{RF})	5.25	≥3.75 ≥3.75
Influenza A Virus (H1N1) Strain A/PR/8/34	5.50	≥5.0 ≥5.0
Influenza A2/Hong Kong Virus (H3N2) ATCC VR-544	6.5	≥6.0 ≥6.0
Respiratory Syncytial Virus ATCC VR-26	4.5	≥4.0 ≥4.0
Vaccinia Virus ATCC VR-119	6.72	≥6.25 ≥6.25

Conclusion: All lots of **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** satisfied the established test criteria for a virucide. **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** meets EPA standards (OCSP 810.2200) for hard surface virucidal claims that can be used by products sold in hospitals, healthcare facilities, schools, institutions and industry when used (diluted) as directed.

Complete inactivation of the virus by 2 separate lots, 1 surface each, is required for each claim. If cytotoxicity is present a 3-log₁₀ reduction must be demonstrated.

KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT satisfies the OSHA Blood Borne pathogen directive for neutralizing blood spills.

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Virucidal against the following animal viruses (at 2 ounces per gallon)

Contact Time: 10 minutes	Water Conditions: 400 ppm CaCO ₃	Organic Soil: 5%
Test Method Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces	Dilution/Concentration: 2 oz. / gal. (660 ppm)	
Organism	Virus Population (Log ₁₀)	Log Reduction (Log ₁₀)
Avian Infectious Bronchitis Virus Beaudette IB42	6.42	≥5.92 ≥5.92
Avian Influenza A Virus (H5N1)	4.75	≥4.25 ≥4.25
Avian Influenza A Virus (H3N2) ATCC VR-2072	4.75	≥4.25 ≥4.25
Canine Coronavirus Clinical Isolate	4.50	≥4.0 ≥4.0
Canine Distemper Virus ATCC VR-128	6.25	≥5.75 ≥5.75
Feline Picornavirus ATCC VR-649	4.50	≥4.0 ≥4.0
Infectious Bovine Rhinotracheitis Virus ATCC VR-188	4.50	≥4.0 ≥4.0
Pseudorabies Virus ATCC VR-135	6.25	≥5.75 ≥5.75
Swine Influenza A Virus (H1N1) Strain A/Swine/1976/3	5.5	≥5.0 ≥5.0
Transmissible Gastroenteritis Virus Clinical Isolate	4.75	≥4.25 ≥4.25

Virucidal against the following animal viruses (at 9 ounces per gallon)

Contact Time: 10 minutes	Water Conditions: 400 ppm CaCO ₃	Organic Soil: 5%
Test Method Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces	Dilution/Concentration: 9 oz. / gal. (2970 ppm)	
Organism	Virus Population (Log ₁₀)	Log Reduction (Log ₁₀)
Canine Parvovirus Type 2b	6.25	≥3.75 ≥3.75
Rabies Virus Clinical Isolate	5.35	≥3.25 ≥3.25

Conclusion: All lots of **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** satisfied the established test criteria for a virucide. **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** meets EPA standards (OCSP 810.2200) for hard surface virucidal claims that can be used by products sold in kennels, veterinarian facilities, zoos and other facilities that housed animals when used (diluted) as directed.

Complete inactivation of the virus by 2 separate lots, 1 surface each, is required for each claim. If cytotoxicity is present a 3-log₁₀ reduction must be demonstrated.



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One-Step Germicidal Cleaner and Deodorant

Mold and Mildew Control (at 2 ounces per gallon)

Contact Time: 10 minutes		Water Conditions: 400 ppm CaCO ₃	Organic Soil: 5%
Test Method EPA Hard Surface Mildew Fungistatic Test		Dilution/Concentration: 2 oz. / gal. (660 ppm)	
Organism	Tile	Untreated (% Covered)	7 Days Post Treatment (% Covered)
<i>Aspergillus niger</i> ATCC 16404	1	90	0/0
	2	70	0/0
	3	90	0/0

MILDEWSTATIC PERFORMANCE: KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT controls mildew and non-pathogenic fungal growth on indoor, hard, non-porous surfaces when applied at 2 oz. per gal of water (660 ppm active). Thoroughly wet all treated surfaces completely. Let air-dry. Repeat application weekly or when growth or odor reappears.

Fungicidal against (at 2 ounces per gallon)

Contact Time: 10 minutes		Water Conditions: 400 ppm CaCO ₃	Organic Soil: 5%
Test Method Fungicidal Activity		Dilution/Concentration: 2 oz. / gal. (469 ppm)	
Organism	Fungal Population (Log ₁₀)	Result	
<i>Trichophyton mentagrophytes</i> ATCC 9533	4.78	0/10	
		0/10	
<i>Candida albicans</i> ATCC 10231	5.75	0/10	
		0/10	

Conclusion: All lots of **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** satisfied the established test protocol criteria for a fungicide. **KLEEN 64 ONE-STEP GERMICIDAL CLEANER AND DEODORANT** meets EPA standards (OCSP 810.2200) for hard surface fungicidal claims that can be used by products sold by products sold in hospitals, healthcare facilities, schools, locker rooms, dressing rooms, shower and bath areas, and exercise facilities when used (diluted) as directed.