

DISINFECTANT - CLEANER CONCENTRATE
STAPHYLOCIDAL - PSEUDOMONACIDAL - SALMONELLACIDAL
PERGILLOCIDAL - TUBERCULOCIDAL - VIRUCIDAL -
FUNGICIDAL - MILDEWCIDAL - DEODORANT

1380 W. Marietta St. N.W., Atlanta, GA 30318

I. PRODUCT DESCRIPTION

TEK-TROL Disinfectant-Cleaner is a synthetic detergent concentrate combined with a highpowered 26% multiple chlorophenolic disinfectant, with a use dilution of one-half (1/2) ounce per gallon of water (1:256). TEK-TROL has a broad spectrum kill of gram positive and gram negative micro-organisms. TEK-TROL is Staphylocidal, Pseudomonacidal, Salmonellacidal, Aspergilloidal, Tuberculocidal, Virucidal, Fungicidal, and Mildewcidal. There is some controversy over the efficacy of phenols with nonenveloped viruses, however, Tek-Trol has total of eight EPA registered claims on nonenveloped viruses.

TEK-TROL is ideally suited for use in Poultry and Turkey Barns, Hatcheries, Pork Producing Facilities, Equine Facilities, Animal Care Facilities, Hospitals, and Health Care Institutions.

TEK-TROL is also recommended for use in fogging (wet misting) systems to reduce airborne contaminants.

TEK-TROL is a HIGH FOAMING Disinfectant- Cleaner and can be applied through the use of high or low pressure spraying equipment, sponge or mop applications, foaming apparatus, or any other conventional cleaning methods.

II. MICROBIOLOGICAL AND VIRUCIDAL TEST WORK

The requirements of the E.P.A. (Environmental Protection Agency) recognizes the test methods of the A.O.A.C. (Association of Official Analytical Chemists) as being the official testing procedures. Using these TEST METHODS (14th) Edition, 1985), TEK-TROL has been proven effective against a broad spectrum of HIGHLY RESISTANT ORGANISMS including:

Adenovirus, avian - canine	Mycoplasma gallisepticum	Rotavirus, avian - swine
Aspergillus	Mycoplasma synoviae	Salmonella arizonae
Alcaligenes	Mouse hepatitis	Salmonella choleraesius, Kunzendorf strain
Avian influenza	Newcastle disease	Salmonella enteriditis
Feline Calicivirus	Parvovirus	Sendai virus
Canine Coronavirus	Pasteurella anatipestifer	Staph hyicus (greasy pig)
E. coli	Pasteurella multocida	Streptococcus equi
Equine viral arteritis	Pseudorabies	Streptococcus suis, Type II
Infectious bronchitis	Reovirus	TGE
Klebsiella	Rhodacoccus equi	see following pages for complete list!
Laryngotracheitis (LT)	Rhinopneumonitis	
	Rhinotracheitis	

*All microbiological testing has been done in the presence of 10% horse serum (as organic soil) and 1000 ppm CaCO₃ (as hard water). These levels are DOUBLE today's current E.P.A. registration requirements. No other disinfectant product has been tested and passed at these levels.

III. RESIDUAL GERMICIDAL ACTIVITY

TEK-TROL is the only disinfectant to provide registered label claims for "residual control of odor causing bacteria..." and has exhibited up to 92% reduction in salmonella choleraesuis after a (7) day test period (see enclosed testing).

IV. FREEZE/THAW TESTING, HEAT STABILITY, STORAGE STABILITY, CORROSION AND CONDUCTIVITY TESTING.

- A. FREEZE/THAW TEST - (3) cycles then tested by the A.O.A.C. use-dilution method for germicidal activity. The product passed at 5% horse serum and 1000 ppm water hardness (CaCO₃) against Staphylococcus aureus ATCC #6538.
- B. HEAT STABILITY - After (3) months at 125 F, the product was tested by A.O.A.C. use-dilution method for germicidal activity in 10% horse serum and 1000 ppm water hardness (CaCO₃) against Staphylococcus aureus ATCC #6538.
- C. STORAGE STABILITY - After one year, the product was tested by direct Photometric method as set forth in the methods approved by the E.P.A. for storage stability. The product maintained it's percentage of active ingredients of not less than 26%. In addition, the product was tested for efficacy by the A.O.A.C. use-dilution method for germicidal activity in 10% horse serum and 1000 ppm water hardness (CaCO₃). The product passed against Staphylococcus aureus ATCC #6538.
- D. *CORROSION TEST SUMMARY - Using the ASTM D-930 procedure, samples of anodized aluminum, galvanized metal, and stainless steel were tested at (1) ounce per gallon at 110°F for (8) hours. NO OBSERVABLE ATTACK ON SPECIMENS.

*Samples of aluminum and stainless steel were tested at (1/2) ounce per gallon at 145°F for (24) hours. NO OBSERVABLE ATTACK ON SPECIMENS.

- E. CONDUCTIVITY TEST - TEK-TROL has been tested by Hood-Patterson-Dewar, Electrical Testing Engineers for it's effect on conductive flooring. The method used conforms to the specifications known as NFPA Standard No. 56A published by the National Fire Protection Association, Second Edition, 1987. TEK-TROL meets the requirement of NFPA 56A.



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V. PRODUCT CHEMISTRY

- A. COLOR - varies between dark amber and purple upon aging"; (Color variance has no relationship to efficacy or cleaning ability).

**characteristic of chlorophenols

- B. ODOR - pleasant, clean, lemon;

- C. VISCOSITY - 20.53 CST @100°F;

- D. FLASH POINT - TEK-TROL has the following flash point properties:

CLEVELAND OPEN CUP 96°F

PENSKY MARTEN CLOSED CUP 95°F

VI. TOXICITY TESTING

- A. Acute Oral LD50 Study (using TEK-TROL concentrate)
B. Four Hour Acute Aerosol Inhalation Toxicity Study (using use-dilution of 1:256)
C. Primary Dermal Irritation Study (using use-dilution of 1:256)

All work relating to these studies were done in conformity with FDA. and E.P.A. Good Laboratory Practice Regulations. The studies were inspected during their progress, by a Quality Assurance Specialist according to American Biogenics Corporation Standard Operating Procedure (SOP). Results available upon request.

- D. Primary Eye Irritation (using TEK-TROL concentrate)
E. Acute Dermal Toxicity Limit Test (using use-dilution of 1:256)
F. Guinea Pig Sensitization Test (using TEK-TROL in 1.5% concentrate.

These studies were carried out in compliance with Product Safety Labs Standard Operating Procedures and E.P.A. Good Laboratory Practices Regulations. There were no deviations that impacted the integrity or validity of the study.

- VII. TEK-TROL has been accepted and registered by the Environmental Protection Agency (E.P.A.) and has been assigned E.P.A. Registration number 11725-7.

- VIII. TEK-TROL has been approved by the United States Department of Agriculture (U.S.D.A.) as a floor and wall cleaner for use in official establishments operating under Federal meat, poultry, shell egg grading, and egg products inspection program. It has also been accepted for use in inedible product processing areas, nonprocessing areas, and/or exterior areas of official establishments operating under the Federal Inspection Program.



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TEK-TROL DISINFECTANT Virucidal Testing

The following viruses have been tested in accordance with U.S. Environmental Protection Agency Pesticide Assessment Guidelines on inanimate environmental surfaces. The following viruses have been tested in **10% blood serum [as organic soil] and 1,000 ppm water hardness as calcium carbonate [CaC031]**

Avian infectious bronchitis virus, Beaudette Strain [IB]
Avian reovirus, Strain U. Conn 1133
Avian influenza, Strain A/Turkey/Wisc/68 [AI]
Avian laryngotracheitis, Strain N-7 1851 [LT]
Avian adenovirus, Strain CELO
Avian rotavirus, Strain AVR-1[Nagaraja], Univ. of MN
Canine adenovirus
Canine coronavirus
Canine parvovirus, Strain MLV, Cornell University
Duck enteritis virus, Maple Leaf Farms [DVE]
Equine rotavirus, Texas A&M University
Equine viral arteritis [EVA]
Feline Calicivirus
Feline rhinotracheitis
HIV-1, IIIb Strain [AIDS Virus]*
Herpes simplex, Type 1, Strain MP
Human influenza A, Strain A2/Hong Kong/8/6g
Mouse hepatitis virus, Strain A59
Newcastle disease virus, NJ-Roakin Strain
Parainfluenza 1, Sendai Strain, Type 1
Porcine Reproduction and Respiratory Syndrome Virus (PRRS)
Pseudorabies virus, Aujeszky Strain [PRV]
Porcine rotavirus, Strain OSU
Equine rhinopneumonitis [Equine herpes]
Transmissible gastroenteritis virus, Purdue Strain [TGE]

Tek-Trol DISINFECTANT Mildewcidal Testing

Hard Surface MILDEWCIDAL TEST METHOD: CSMA Method 24 in 10% blood serum [as organic soil] and 1,000 ppm water hardness as calcium carbonate [CaC03].

- Aspergillus niger [Black Mold]
- Penicillium variable [Green Mold]

- Testing completed October 2, 1989 [U.S. E.P.A. Pesticide Assessment Guidelines, Subdivision G: Product Performance, 1982, Section 91-30, PP 72-76] indicates TEK-TROL to be viru- for HI V- 1 [Aids virus] at dilutions of 1:256 in the presence of 10% blood serum and 1, 000 ppm CaC03.

TEK-TROL DISINFECTANT Microbiological Testing

Proven effective as a disinfectant by the following test: A.O.A.C. [use dilution test method] in conformance with the 14th Edition, 1985. All dilutions at 1/2 oz. per gallon [1:256]. The following organisms were tested in **10% blood serum [as organic soil] and 1,000 ppm water hardness as calcium carbonate [CaCO₃]**.

Alcaligenes faecalis	Salmonella arizonae
Alcaligenes faecalis, Georgia Strain	Salmonella choleraesuis
Aspergillus fumigatus	Salmonella choleraesuis, Kunzendorf Strain
Beta streptococcus	Salmonella enteritidis
Bordetella bronchiseptica	Salmonella gallinarum
Candida albicans, AOAC Fungicidal Test	Salmonella pullorum
Enterobacter aerogenes	Salmonella schottmuelleri
Enterococci Group D Species	Salmonella typhimurium
Escherichia coli Haemophilus parasuis Klebsiella pneumoniae	Shigella sonnei
Microsporium canis, AOAC Fungicidal Test	Staphylococcus aureus, Methicillin Resistant [MRSA]
Microsporium gypseum, AOAC Fungicidal Test	Staphylococcus aureus
Mycobacterium bovis [BCG], AOAC Tuberculocidal Test	Staphylococcus epidermis
Mycoplasma gallisepticum	Staphylococcus hyicus [greasy pig]
Mycoplasma synoviae	Streptococcus equi
Mycoplasma hyopneumoniae	Streptococcus pyogenes
Pasteurella anatipestifer	Streptococcus suis, Type 2
Pasteurella multocida [Fowl cholera]	Taylorella equigenitalis [CEM], Kentucky Strain
Proteus vulgaris	Trichophyton equinarum AOAC Fungicidal Test
Pseudomonas aeruginosa	Trichophyton mentagrophytes AOAC Fungicidal Test
Rhodococcus equi	Vancomycin Resistant Enterococcus faecalis [VRE]

PHENOL COEFFICIENT AS SET FORTH IN OFFICIAL METHOD OF ANALYSIS OF THE A.O.A.C., 14th EDITION, 1984, CHAPTER 4: DISINFECTANTS PARAGRAPH 4.001-4.006.

Salmonella typhosa	36.0
Staphylococcus aureus	37.1