



## EFFICACY SUMMARY

### POWDERED DETERGENT/DISINFECTANT

CLEANER • DEODORIZER • DISINFECTANT  
MILDEWSTAT (on hard inanimate surfaces)  
FUNGICIDE (against pathogenic fungi)  
DETERGENT • VIRUCIDE

EPA REG.NO.1839-93-3640

EPA EST. NO. 3640-WI-01



**Powdered Detergent/Disinfectant**

ST-794, 90 x 0.5 wt. oz.

Stearns Powdered Detergent/Disinfectant is a premeasured, phosphate-free, dual-quaternary detergent/disinfectant concentrate that cleans and deodorizes in one step. It provides the disinfection strength sought by infection control management in hospitals, nursing homes, and other health care facilities where housekeeping is of prime importance. Powdered Detergent/Disinfectant controls the hazards of cross-contamination.

When used at the use dilution of 1/2 oz. per gallon of water, Powdered Detergent/Disinfectant will disinfect hard, inanimate surfaces such as tables, chairs, walls, floors, and sink tops. For larger areas, such as operating rooms, patient care facilities, and restrooms, Powdered Detergent/Disinfectant provides general cleaning and disinfection.

Deodorizing diaper bins, garbage pails, and other refuse storage areas is easy since Powdered Detergent/Disinfectant eliminates odors caused by microorganisms and controls the growth of mold and mildew. The unique odor counteractant system built into the formula has time-proven capabilities in controlling odors.

Powdered Detergent/Disinfectant provides antimicrobial activity and professional strength cleaning. Powdered Detergent/Disinfectant has been exhaustively tested by independent laboratory microbiologists using the Association of Official Analytical Chemists (AOAC) Use Dilution Method. This testing protocol confirms broad-spectrum antimicrobial activity against gram positive and gram negative bacteria, pathogenic fungi, and viruses and has been registered with the United States Environmental Protection Agency (US EPA).

Of prime concern in today's health care environment is eliminating the risk of exposure to the HIV-1 virus that causes AIDS. Powdered Detergent/Disinfectant kills HIV-1 on pre-cleaned environmental surfaces and objects previously soiled with blood or body fluids. This minimizes the risks of transmission of HIV-1 since Powdered Detergent/Disinfectant has been laboratory-proven effective as a virucide, fungicide, and bactericide even in the presence of organic soil (5% blood serum).

# EFFICACY SUMMARY FOR POWDERED DETERGENT/ DISINFECTANT



## DISINFECTION DATA:

**Test Method:** AOAC Use Dilution

**Test Conditions:** 0.5 ounce / gallon dilution (deionized water), 5% blood serum, 10 minute contact time, stainless steel carrier substrates, 20 degree C. exposure temperature.

**Results:**

| Test Organism                                     | SAMPLE | NUMBER OF CARRIERS |          | PHENOL RESISTANCE |                                    |    |    |
|---|--------|--------------------|----------|-------------------|------------------------------------|----|----|
|   |        | EXPOSED            | POSITIVE | DILUTION          | EXPOSURE TIME (MIN.)<br>VS. GROWTH |    |    |
|   |        |                    |          |                   | 5                                  | 10 | 15 |
| <i>Brevibacterium ammoniagenes</i><br>(ATCC 6871) | A      | 10                 | 0        | 1:110             | +                                  | 0  | 0  |
|   | B      | 10                 | 0        | 1:120             | +                                  | +  | +  |
| <i>Enterobacter aerogenes</i><br>(ATCC 13048)     | A      | 10                 | 0        | 1:90              | +                                  | 0  | 0  |
|   | B      | 10                 | 0        | 1:100             | +                                  | +  | +  |
| <i>Escherichia coli</i><br>(ATCC 11229)           | A      | 10                 | 0        | 1:90              | +                                  | 0  | 0  |
|   | B      | 10                 | 0        | 1:100             | +                                  | +  | 0  |
| <i>Klebsiella pneumoniae</i><br>(ATCC 4352)       | A      | 10                 | 0        | 1:60              | +                                  | 0  | 0  |
|   | B      | 10                 | 0        | 1:70              | +                                  | +  | +  |
| <i>Pseudomonas aeruginosa</i><br>(ATCC 15442)     | A      | 60                 | 1        | 1:80              | +                                  | 0  | 0  |
|   | B      | 60                 | 1        | 1:90              | +                                  | +  | +  |
|   | C      | 60                 | 0        | --                | --                                 | -- | -- |
| <i>Salmonella choleraesuis</i><br>(ATCC 10708)    | A      | 60                 | 0        | 1:90              | +                                  | 0  | 0  |
|   | B      | 60                 | 0        | 1:100             | +                                  | +  | +  |
|   | C      | 60                 | 0        | --                | --                                 | -- | -- |
| <i>Salmonella schottmuelleri</i><br>(ATCC 8759)   | A      | 10                 | 0        | 1:80              | +                                  | 0  | 0  |
|   | B      | 10                 | 0        | 1:90              | +                                  | +  | +  |
| <i>Shigella dysenteriae</i><br>(ATCC 12180)       | A      | 10                 | 0        | 1:90              | +                                  | 0  | 0  |
|   | B      | 10                 | 0        | 1:100             | +                                  | +  | +  |
| <i>Staphylococcus aureus</i><br>(ATCC 6538)       | A      | 60                 | 0        | 1:60              | +                                  | 0  | 0  |
|   | B      | 60                 | 0        | 1:70              | +                                  | +  | +  |
|   | C      | 60                 | 0        | --                | --                                 | -- | -- |
| <i>Streptococcus faecalis</i><br>(ATCC 10541)     | A      | 10                 | 0        | 1:60              | +                                  | 0  | 0  |
|   | B      | 10                 | 0        | 1:70              | +                                  | +  | +  |

**Conclusion:**

Under the conditions of these investigations, Powdered Detergent / Disinfectant demonstrated **disinfectant** activity against *Brevibacterium ammoniagenes*, *Enterobacter aerogenes*, *Escheria coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Salmonella choleraesuis*, *Salmonella schottmuelleri*, *Shigela dysenteriae*, *Staphylococcus aureus*, and *Streptococcus faecalis* according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a bactericide.

## VIRUCIDAL DATA:

**Test Methods:** US EPA Pesticide Assessment Guidelines, Subdivision G: Product Performance, 1982, Section 91-30, pp. 72-76.  
**Test Conditions:** 0.5 ounce / gallon dilution (deionized water), 10 minute contact time tested in the presence of organic soil load glass petri dish substrates.

**Results:**

| Test Organism   |             | SAMPLE | LOG REDUCTION          |
|---|-------------|--------|------------------------|
| Canine Distemper  | ATCC VR-128 | A      | ≥4.0 Log <sub>10</sub> |
|   |             | B      | ≥4.0 Log <sub>10</sub> |
| Feline Pneumonitis  | ATCC VR-120 | A      | ≥4.0 Log <sub>10</sub> |
|   |             | B      | ≥4.0 Log <sub>10</sub> |
| Herpes Simplex Type 1   | ATCC VR-260 | A      | ≥4.0 Log <sub>10</sub> |
|   |             | B      | ≥4.0 Log <sub>10</sub> |
| Human Immunodeficiency Virus, HTLV-III <sub>RF</sub> , strain of HIV-1 (associated with AIDS) |             | A      | ≥3.0 Log <sub>10</sub> |
|   |             | B      | ≥3.0 Log <sub>10</sub> |
| Influenza A <sub>2</sub>  |             | A      | ≥5.3 Log <sub>10</sub> |
|   |             | B      | ≥5.3 Log <sub>10</sub> |
| Parainfluenza Type 1 (Sendai)   | ATCC VR-105 | A      | ≥4.0 Log <sub>10</sub> |
|   |             | B      | ≥4.0 Log <sub>10</sub> |
| Vaccinia virus  | ATCC VR-156 | A      | ≥3.0 Log <sub>10</sub> |
|   |             | B      | ≥3.0 Log <sub>10</sub> |

**Conclusion:**

Under the conditions of this investigation, Powdered Detergent / Disinfectant was **virucidal** for Canine Distemper, Feline Pneumonitis, Human Immunodeficiency Virus (HIV), Herpes Simplex 1, Influenza A<sub>2</sub>, Parainfluenza Type 1 (Sendai) and Vaccinia according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a virucide.

## FUNGICIDAL DATA:

**Test Method:** Modified AOAC Use Dilution

**Test Organism:** *Tricophyton mentagrophytes* (ATCC 9533)

**Test Conditions:** 0.5 ounce / gallon dilution (deionized water), 5% sterile blood serum, 20 degree C. exposure temperature.

**Results:**

| SAMPLE | NUMBER OF CARRIERS |          | DILUTION | PHENOL RESISTANCE               |               |    |
|--------|--------------------|----------|----------|---------------------------------|---------------|----|
|        | EXPOSED            | POSITIVE |          | EXPOSURE TIME (MIN.) VS. GROWTH |               |    |
|        |                    |          |          | 5                               | 10            | 15 |
| A      | 10                 | 0        | 1:60     | +                               | 0             | 0  |
| B      | 10                 | 0        | 1:70     | +                               | +             | +  |
|        |                    |          |          | + = growth                      | 0 = no growth |    |

**Conclusions:**

Under the conditions of this investigation, Powdered Detergent / Disinfectant was **fungicidal** for *Tricophyton mentagrophytes* according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungicide.

## MILDEW FUNGISTATIC DATA:

**Test Method:** Hard Surface Mildew Fungistatic Test

**Test Organism:** *Aspergillus niger* (ATCC 6275)

**Test Conditions:** 0.5 ounce / gallon dilution (deionized water) tile substrates.

**Results:**

| SAMPLE  | NUMBER OF EXPOSED TILES | NUMBER OF TILES SHOWING GROWTH |
|---------|-------------------------|--------------------------------|
| A       | 10                      | 0                              |
| B       | 10                      | 0                              |
| Control | 10                      | 10                             |

**Conclusion:**

Under the conditions of this investigation, Powdered Detergent / Disinfectant was **fungistatic** for *Aspergillus niger* according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungistat.



**WATER-SOLUBLE • PREMEASURED PACKETS • DISPENSER-FREE**  
**Packaged For Institutional and Industrial Use**

**POWDERED  
DETERGENT/DISINFECTANT**  
CLEANER • DEODORIZER • DISINFECTANT  
MILDEWSTAT (on hard inanimate surfaces)  
FUNGICIDE (against pathogenic fungi)  
DETERGENT • VIRUCIDE



**Cleaning Ability:**

Stearns Powdered Detergent/Disinfectant suspends and emulsifies even hardened and dried-on soils without redeposition. The powerful detergent of Powdered Detergent/Disinfectant removes the soil residues that might otherwise inhibit the disinfection process. This potent combination of detergency and disinfection power protects your staff and patients from the spread of disease. However, a two-step cleaning process is required where blood or body fluids are present.

Powdered Detergent/Disinfectant will not damage tile, grouted floors, or most painted surfaces.

| <b>Stearns Powdered Detergent/Disinfectant Specifications:</b> |   |
|--|---|
| EPA Registration Number:                                       | 1839-93-3640  |
| Use Dilution:  | ½ wt. oz. per gallon of water   |
| Active Ingredients:  | Alkyl dimethyl benzyl ammonium chloride<br>Alkyl dimethyl ethylbenzyl ammonium chloride           |
| Percent Active Quaternary:                                     | 15.9% (in concentrated product)   |
| Activity at Use Dilution:                                      | 621 ppm   |
| Detergent Type:  | Nonionic  |
| pH at Use Dilution:  | 9 – 10  |
| Phosphates:  | None  |
| Appearance:  | Off-white powder  |
| Fragrance:   | Lemon   |
| Packaging:   | ST-794 2 x 90 x 0.5 wt. oz. water-soluble packet<br>ST-803 400 x 0.5 wt. oz. water-soluble packet |

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