

ANTIMICROBIAL TEST LABORATORIES

Germicidal Spray Test Study Report NG6341

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Client Information

Company Name: Frontier Pharmaceutical Sponsor: Howard Alliger
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Test Information

Test(s) Performed: AOAC Germicidal Spray Test Modified for Fungi (Study ID NG6341)
ATL SOP Number: Testing Facility Operation 019.3 Performed by: E. Cuellar

Sample Information

Sample(s) Received: 07AUG2015 Number of samples: 1
Test Substance ID: DioxiGuard 60FV for Fungus and Virus

Parameters

Microorganism(s): *T. mentagrophytes* ATCC 9533 (spores)
Growth Medium: Glucose Agar Spray Application: 4 sprays, 6 - 8 Inches at a 45° angle
"Soil" Type and Conc: 5% Fetal Bovine Serum (FBS) Neutralizer: 20mL Mod. Lethen Broth
Carriers Tested: 10 + 0.1% Sodium Thiosulfate
Type of Carrier: Sterile 18x36x1mm glass slides Incubation Time: 10 days
Contact Time: 1, 2 Minutes Incubation Temp.: 30.0 ± 2°C

Controls

Growth Control: Passed Neutralization: Passed
Broth Sterility: Passed Agar Sterility: Passed
Soil Sterility: Passed Carrier Sterility: Passed

Notes: The USEPA requires products making fungicidal claims to demonstrate disinfectant efficacy Against *Trichophyton mentagrophytes*, also known as "T. ment". *Trichophyton* species are associated with public health related infections including ring worm and Athlete's Foot. Applied to tests as a spore, this fungi poses a formidable challenge for disinfectant products such that disinfectant products have an EPA stated maximum allowable contact time of 10 minutes to demonstrate total kill. The product tested in this study demonstrated total kill of the test microorganism at contact times of both 1 and 2 minutes.

Test(s) Completed: 14 SEP 2015 Report Sent: 15 SEP 2015

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T. mentagrophytes ATCC 9533

Germicidal Spray Test Results

Test Microorganism	Average CFU/Carrier		Geometric Mean CFU/Carrier	Log Density	Average Log Density
	Pre-Test Carriers	Post Test Carriers			
<i>T. mentagrophytes</i> ATCC 9533	Pre-Test Carriers	1.62E+04	1.58E+04	4.21	4.20
	Post Test Carriers	1.53E+04		4.19	

Test Microorganism	Soil Load	Contact Time	Test Substance	Carriers Positive	Carriers Negative
<i>T. mentagrophytes</i> ATCC 9533	5% Fetal Bovine Serum	1 Minute	DioxiGuard 60FV	0	10

Test Microorganism	Soil Load	Contact Time	Test Substance	Carriers Positive	Carriers Negative
<i>T. mentagrophytes</i> ATCC 9533	5% Fetal Bovine Serum	2 Minutes	DioxiGuard 60FV	0	10

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Neutralization Validation

Test Microorganism	Neutralization Validation Counts	Positive/Negative
<i>T. mentagrophytes</i> ATCC 9533	54	Positive
	63	

Summarized Test Procedure

- Carriers were inoculated with 0.010 ml of the appropriate test culture.
- The inoculum was spread over ~1 sq. in. of each carrier and dried for 30 minutes at $36 \pm 1^{\circ}\text{C}$.
- Three carriers were harvested prior to testing and three carriers were harvested after testing, then enumerated to determine the "CFU/Carrier" count. One inoculated carrier was harvested and served as the viability control.
- One sterile carrier was treated similar to the test, eluted with 20 ml of Modified Lethen Broth supplemented with 0.1% Sodium Thiosulfate, and inoculated with approximately 100 CFU of test microorganism.
- 10 carriers were treated according to requested test parameters, allowed to sit for the sponsor approved contact time(s) then placed in tubes containing 20 ml Modified Lethen Broth supplemented with 0.1% Sodium Thiosulfate
- All tubes were incubated at $30 \pm 2^{\circ}\text{C}$ for 10 days.
- After the incubation period, tubes were assessed for the presence (growth) of the target microorganism.

The results of this study apply to the tested substance(s) only. Extrapolation of findings to related materials is the responsibility of the sponsor.

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