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Project No.: GR2567

3/30/2009 Page 1 of 14

EDUCATION: Ph.D. Supervised
EXPERIENCE: Serving since 1970
EXTRAORDINARY: Upstream QA™
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Study Title

AOAC 18th Edition Broad Spectrum Use-Dilution Test on "Perasan C-5"

Product Identity

"Perasan C-5"

MRID

Data Requirement

EPA Pesticide Assessment Guidelines Subdivision G, 1992 Product Performance 91-2 (d) (p.53)

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Study Completion Date

04/01/2009

Testing Facility

Gibraltar Laboratories, Inc.

16 Montesano Road

Fairfield, NJ 07004

Laboratory Project Number (Study File)

GBL Study # GR 2567



STUDY METHOD

PREPARATION OF TEST SUBSTANCE AND METHOD

Three mL of the test substance was added to 795 mL of 400 ppm AOAC hard water (volume to volume) or five mL of the test substance was added to 1325 mL of 400 ppm AOAC hard water (volume to volume). The biologically screened stainless steel penicylinders (8 ± 1 mm o.d. x 6 ± 1 mm i.d. x 10 ± 1 mm length) were soaked overnight (approximately 12 hours) in 1N NaOH. The penicylinders were then rinsed several times with tap water and sterilized at 121C and 15 psi in deionized water. The carriers were soaked for 15 minutes in the 48 hours culture broth containing 5% serum. The carriers were then dried at 36 ± 1 C for 40 minutes in a petri dish with sterile filter paper. The product at its use-dilution was distributed into 25 x 150 mm glass disposable test tubes in 10 mL quantities. The samples were brought to 20 ± 1 C in a water bath at the same temperature. The contaminated and dried carriers were transferred with a wire hook into the disinfectant for 10 minutes exposure at 30 second staggered intervals.

PREPARATION OF TEST SYSTEM/STRAINS

Staphylococcus aureus was prepared according to the AOAC 18th Edition Official Method 955.15 Testing Disinfectants against *Staphylococcus aureus* Use-Dilution Method.

Salmonella entericia was prepared according to the AOAC 18th Edition Official Method 955.14 Testing Disinfectants against *Salmonella entericia* Use-Dilution Method.

EXPOSURE CONDITIONS

Contact Time: 10 minutes

Organic Soil: 5% Bovine Serum in the Inoculum

Test Dilution: 2.4 ounces / 5 gallons (1:266)

Diluent: sterile 400 ppm AOAC synthetic hard water

Test Temperature: 20 ± 1 C

TEST SYSTEM RECOVERY

After 10 minutes contact time the carriers were transferred into the recovery medium (AOAC Lethen Broth containing catalase); 10 mL in a 20 x 150 mm test tube for subculture recovery from medicated carrier). The recovery medium tubes (with carriers) were incubated for 48 ± 2 hours at 36 ± 1 C in an incubator. Results were recorded as "+" for growth and "0" for no growth. Any positive recovery broth tubes containing carriers were subcultured to appropriate selective/differential agar to confirm the presence of the test system.

PROTOCOL CHANGES

PROTOCOL AMENDMENTS

None

PROTOCOL DEVIATIONS

None



Table 1: Test Results

Test Organism	Lot #	# Positive/# Tested
<i>Staphylococcus aureus</i>	843-8-1203-1	0/60
<i>Salmonella enterica</i>		0/60
<i>Staphylococcus aureus</i>	843-8-1203-2	0/60
<i>Salmonella enterica</i>		0/60
<i>Staphylococcus aureus</i>	843-8-1003-1	0/60
<i>Salmonella enterica</i>		0/60

Table 2: Carrier Control Results

Test Organism	Date Performed	Result (cfu/carrier)	(cfu/carrier)*	Total average (cfu/carrier)	Qualitative Control
<i>Salmonella enterica</i>	03/12/2009	7.1 x 10 ⁵	6.1 x 10 ⁵	4.0 x 10 ⁵	+, +
		5.5 x 10 ⁵			
		5.6 x 10 ⁵			
		4.3 x 10 ⁵	4.3 x 10 ⁵		+, +
		5.9 x 10 ⁵			
		2.6 x 10 ⁵			
		1.3 x 10 ⁵	1.5 x 10 ⁵		+, +
		1.6 x 10 ⁵			
1.6 x 10 ⁵					
<i>Salmonella enterica</i>	03/12/2009	1.2 x 10 ⁵	1.1 x 10 ⁵	3.2 x 10 ⁵	+, +
		9.5 x 10 ⁴			
		1.0 x 10 ⁵	3.5 x 10 ⁵		+, +
		2.3 x 10 ⁵			
		1.8 x 10 ⁵			
		6.4 x 10 ⁵	4.9 x 10 ⁵		+, +
		4.4 x 10 ⁵			
		5.7 x 10 ⁵			
4.7 x 10 ⁵					

Legend: + = Typical growth; * = average of three carriers; cfu = colony forming units