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REPORT No. G-149705

Project No.: GR2048

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EDUCATION *Ph.D. Supervised*
EXPERIENCE *Serving since 1970*
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Study Title

EPA Food Contact Sanitizer Test For Previously Cleaned Food-Contact Surfaces (AOAC Germicidal and Detergent Sanitizing Action of Disinfectant) against *Salmonella choleraesuis* and *Listeria monocytogenes*

Product Identity

Perasan A

Data Requirement

EPA Pesticide Assessment Guidelines Subdivision G, 1982, 91-2

Author

Daniel L. Prince, Ph.D.
President

Study Completion Date

4/21/2005

Testing Facility

Gibraltar Laboratories, Inc.
122 Fairfield Road
Fairfield, NJ 07004

Laboratory Project Number (Study File)

GBL Study # GR 2048



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Table 1: Raw Data Results for *Salmonella choleraesuis*

Test Substance	Concentration in ppm (v/v)	Exposure Time	Flask	Plate Counts (CFU/plate)			
				Number Surviving membrane filtration		Number Controls (10 ⁶) (Microbes Initially Present) Sum of membrane filtration 90 mL + 10 mL	
				90 mL	10 mL	Flask A	Flask B
Perasan A Lot # 35-411021	72.9	30 seconds	Flask A	0	0	86	79
			Flask B	0	0		
		60 seconds	Flask A	0	0		
			Flask B	0	0		
Perasan A Lot # 35-410152	72.9	30 seconds	Flask A	0	0		
			Flask B	0	0		
		60 seconds	Flask A	0	0		
			Flask B	0	0		
						Avg. of Flask A and B 8.3 x 10 ⁷ = 7.92 Log	

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Table 2: Calculated Results for *Salmonella choleraesuis* (cfu/mL) by Lot, Exposure, and Corresponding Percent and Log₁₀ Reduction

Test Substance	Exposure Time	Concentration in ppm (v/v)	Average Number Surviving (cfu/mL)	Microbes Initially Present (cfu/mL)	Microbes Initially Present (Log ₁₀)	Log ₁₀ Reduction	Percent Reduction
Perasan A Lot # 35-411021	30 seconds	72.9	0	8.3 x 10 ⁷	7.92	7.92	>99.999%
Perasan A Lot # 35-410152	30 seconds	72.9	0	8.3 x 10 ⁷	7.92	7.92	>99.999%

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Table 3: Raw Data Results for *Listeria monocytogenes*

Test Substance	Concentration in ppm (v/v)	Exposure Time	Flask	Plate Counts (CFU/plate)			
				Number Surviving membrane filtration		Number Controls (10 ⁻⁶) (Microbes Initially Present) Sum of membrane filtration 90 mL + 10 mL	
				90 mL	10 mL	Flask A	Flask B
Perasan A Lot # 35-411021	72.9	30 seconds	Flask A	0	0	78	80
			Flask B	0	0		
		60 seconds	Flask A	0	0		
			Flask B	0	0		
Perasan A Lot # 35-410152	72.9	30 seconds	Flask A	0	0		
			Flask B	0	0		
		60 seconds	Flask A	0	0		
			Flask B	0	0		
						Avg. of Flask A and B 7.9 x 10 ⁷ = 7.9 Log	



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Table 4: Calculated Results for *Listeria monocytogenes* (cfu/mL) by Lot, Exposure, and Corresponding Percent and Log₁₀ Reduction

Test Substance	Exposure Time	Concentration in ppm (v/v)	Average Number Surviving (cfu/mL)	Microbes Initially Present (cfu/mL)	Microbes Initially Present (Log ₁₀)	Log ₁₀ Reduction	Percent Reduction
Perasan A Lot # 35-411021	30 seconds	72.9	0	7.9 x 10 ⁷	7.9	7.9	>99.999%
Perasan A Lot # 35-410152	30 seconds	72.9	0	7.9 x 10 ⁷	7.9	7.9	>99.999%

Table 5: Neutralization Effectiveness and Neutralization System Toxicity Control Results

Test Substance and Test	<i>Salmonella choleraesuis</i>			<i>Listeria monocytogenes</i>		
	Flask A (cfu)	Flask B (cfu)	Inoculum (cfu)	Flask A (cfu)	Flask B (cfu)	Inoculum (cfu)
Neutralization Effectiveness Control Perasan A Lot # 35-411021	24	22	24	18	17	20
Neutralization System Toxicity Control	21	22		19	16	

Table 6: Sterility Control Results

Reagents and Lot #'s	
AOAC Hard Water Lot # C-1334, 1342	Sterile, Sterile
Phosphate Buffer Dilution Water Lot # C-403, D-122, D-123	Sterile, Sterile, Sterile
Neutralizer Broth (Phosphate Buffer Dilution Water containing 23.8 units catalase / mL and 0.055 Sodium thiosulfate) Lot # C-403, D-122, D123	Sterile, Sterile, Sterile