



From *Spraying Systems Co.*

## KLARION SANITIZER EFFICACY

Solutions produced by the Klarion system are just as effective as — or more effective than — traditional chemicals.

### Sanitizer Effectiveness: Time Kill Assay for Antimicrobial Agents, 10 to 60 Second Contact Time

TARGET ORGANISMS	CONTACT TIME	FREE AVAILABLE CHLORINE CONCENTRATION	SURFACE
Campylobacter jejuni	10 seconds	200 PPM	Pre-cleaned, hard, non-porous surface
Listeria monocytogenes			
Salmonella enterica			
Pseudomonas aeruginosa			
Methicillin Resistant Staphylococcus aureus (MRSA)			
Feline calicivirus (norovirus surrogate)	30 seconds		
Clostridium perfringens	60 seconds		

### Sanitizer Effectiveness: Time Kill Assay for Antimicrobial Agents, Contact Time Based on EPA Standards

TARGET ORGANISMS	SIGNIFICANCE OF TEST	METHOD	CONTACT TIME	FREE AVAILABLE CHLORINE CONCENTRATION	SURFACE	
Bovine Viral Diarrhea virus (Hepatitis C surrogate)	EPA recognized efficacy claims against various viruses.	AOAC Use-Dilution Method	10 minutes	200 PPM	Pre-cleaned, hard, non-porous surface	
Campylobacter jejuni	This organism is second to salmonella in terms of food spoilage.					
Salmonella enterica	Efficacy against these organisms are required by the EPA for food contact surface sanitizers.	AOAC Available Chlorine in Disinfectants	1 minute	165 PPM	Pre-cleaned hard nonporous	
Staphylococcus aureus						
Salmonella enterica	Efficacy against these organisms are required by the EPA for broad spectrum hospital disinfectants.	AOAC Use-Dilution Method 961.02	10 minutes			
Staphylococcus aureus						
Pseudomonas aeruginosa						
Listeria monocytogenes	Efficacy demonstrated against additional organisms. Many organisms are antibiotic resistant and known to cause different kinds of infections.	AOAC Use-Dilution Method with 5% soil load	10 minutes		165 PPM	Hard non-porous
Burkholderia cepacia						
Methicillin Resistant Staphylococcus aureus - MRSA						
Vancomycin Resistant Enterococcus faecalis - VRE						
New Delhi metallo-beta-lactamase 1 (NDM-1) producing Klebsiella pneumoniae						
Legionella pneumophila						
Escherichia coli						

## Cleaning Effectiveness: Time Kill Assay for Antimicrobial Agents, Contact Time Based on EPA Standards

TARGET ORGANISMS	SIGNIFICANCE OF TEST	METHOD	CONTACT TIME	FREE AVAILABLE CHLORINE CONCENTRATION	SURFACE
Trichophyton mentagrophytes	Efficacy is required by the EPA against this fungus for claims against pathogenic fungi.	AOAC Fungicidal Use-Dilution Method with 5% soil load	10 minutes	165 PPM	Hard non-porous
<b>Non-Enveloped</b>	EPA recognized efficacy claims against various viruses.	AOAC Use-Dilution Method with 5% soil load	10 minutes	165 PPM	Hard non-porous
Poliovirus type 1					
Feline Calicivirus (norovirus surrogate)					
<b>Enveloped</b>		AOAC Use-Dilution Method		200 PPM	Pre-cleaned, hard, non-porous surface
Bovine Viral Diarrhea virus (Hepatitis C surrogate)					
Human Immunodeficiency virus type 1 (HIV-1)		AOAC Use-Dilution Method with 5% soil load		165 PPM	Hard non-porous
Influenza A (H1N1) virus					
2009-H1N1 Influenza A virus (Novel H1N1)					
Herpes simplex virus type 2					
Avian Influenza A (H7N9) virus					

Method requirements from Environmental Protection Agency (EPA) Product Performance Test Guidelines OSCPP 810.2200

The Klarion Cleaning and Sanitizing System is regulated as a pesticide device manufactured at EPA establishment number 88161-IL-002.



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