



Bulletin Number: 408

**SYMMETRY ANTIMICROBIAL FOAMING  
HANDWASH  
with 0.3% PCMX  
Technical Data**

**Physical Properties**

**Active Ingredient:** Chloroxylenol (PCMX) 0.3%

**Appearance:** Clear, Amber Solution

**Fragrance:** Floral

**Form:** Liquid

**pH:** 8.9 ± 0.5

**Preservative Testing**

<b>Objective:</b>	Determination of the effectiveness of the preservative system against repeated bacterial, yeast, and mold challenges.
<b>Test Method:</b>	United States Pharmacopeia/ National Formulary Antimicrobial Effectiveness (Preservative) Test <51>
<b>Description of Test:</b>	Samples of product are inoculated with high levels of bacteria, yeast, and mold to confirm the preservative system will kill these contaminants. The USP/NF protocol was modified to include repeat challenges. The study included all appropriate sterility and neutralization controls.
<b>Test Organisms:</b>	Staphylococcus aureus ATCC 6538 Escherichia coli ATCC 8739 Pseudomonas aeruginosa ATCC 9027 Candida albicans ATCC 10231 Aspergillus niger ATCC 16404
<b>Independent Laboratory:</b>	Clinical Research Laboratories, Inc. (Piscataway, NJ)
<b>Results:</b>	Met and exceeded USP/NF performance requirements after each challenge.

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## **Symmetry Antimicrobial Foaming Handwash with 0.3% PCMX Technical Data – (Continued)**

### **Repeat Insult Patch Test**

<b>Objective:</b>	Determination of potential for dermal irritation or sensitization.
<b>Test Method:</b>	Repeat Insult Patch Test – Shelanski Method
<b>Description of Test:</b>	Nine applications of product were conducted during the Induction Phase. Applications included applying the product to the same skin site of at least 50 human subjects for 24 hours. Sites were evaluated for irritation throughout the study. After a 10-14 day rest period, product application was repeated on a new skin area to assess the potential for sensitization.
<b>Independent Laboratory:</b>	Clinical Research Laboratories, Inc. (Piscataway, NJ)
<b>Results:</b>	No irritation or sensitization reactions were observed throughout the study.

### **Antimicrobial Effectiveness Studies**

<b>Objective:</b>	Evaluation of antimicrobial effectiveness when challenged with a broad spectrum of microorganisms.
<b>Test Method:</b>	American Society of Testing & Materials E2315 Standard Guide for Assessment of Microbiocidal Activity Using a Time-Kill Procedure
<b>Description of Test:</b>	Samples of product are inoculated with high levels of microorganisms to confirm kill rates after 15 and 30 second contact. Studies included all appropriate sterility and neutralization controls.
<b>Laboratory:</b>	Independent Laboratory

**Symmetry Antimicrobial Foaming Handwash with 0.3% PCMX  
Technical Data – (Continued)**

Microorganism	Identification No.	Percent Reduction	
		15 Seconds	30 Seconds
Acinetobacter baumannii	ATCC 19606	>99.9999	>99.9999
Clostridium difficile (vegetative)	ATCC 9689	>99.9489	>99.9489
Enterococcus faecalis	ATCC 29212	99.7135	99.9912
Enterococcus faecalis Vancomycin resistant (VRE) <sup>[1]</sup>	ATCC 51299	99.4928	99.9275
Escherichia coli	ATCC 11229	94.9541	98.9174
Haemophilus influenzae	ATCC 10211	>99.9999	>99.9999
Listeria monocytogenes	ATCC 19117	99.5060	99.9540
Pseudomonas aeruginosa	ATCC 15442	99.9936	>99.9998
Salmonella typhimurium	ATCC 14028	98.2759	99.7655
Staphylococcus aureus MRSA <sup>[2]</sup>	ATCC 33592	99.8430	99.8605
Staphylococcus aureus CA- MRSA <sup>[3]</sup> (Community Acquired MRSA)	NARSA NRS123 (USA400)	99.3237	99.0751
Streptococcus pneumoniae PRSP	ATCC 700677	>99.0654	>99.0654
Streptococcus pyogenes (Group A)	ATCC 19615	>99.9999	>99.9999

ATCC - American Type Culture Collection

NARSA - Network on Antimicrobial Resistance in *Staphylococcus aureus* repository

[1] This test strain was confirmed resistant to Vancomycin, Quinupristin and Dalfopristin.

[2] This test strain was confirmed resistant to Methicillin, Clindamycin, Erythromycin, Oxacillin, Penicillin, and Tetracycline.

[3] This test strain was confirmed resistant to Methicillin, Oxacillin, and Penicillin.

**Test Method:** American Society of Testing & Materials E1052  
Standard Test Method for Efficacy of Antimicrobial  
Agents Against Viruses in Suspension

**Description of Test:** Samples of product are inoculated with high levels of  
microorganisms to confirm kill rates after 15 and 30  
second contact. Studies included all appropriate  
sterility and neutralization controls.

**Laboratory:** Independent Laboratory  
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**Symmetry Antimicrobial Foaming Handwash with 0.3% PCMX  
Technical Data – (Continued)**

Microorganism	Identification No.	Percent Reduction	
		15 Seconds	30 Seconds
Herpes Simplex Virus Type 1	ATCC VR-733	≥99.9982	≥99.999
HIV-1	HTLV-III <sub>B</sub> Strain*	≥99.99	≥99.9437
Influenza A/Hong Kong	ATCC VR-544	≥99.99	≥99.9968
Respiratory Syncytial Virus (RSV)	ATCC VR-26	≥99.9	≥99.9822
Rotavirus	WA Strain**	≥99.99	≥99.9822
Swine Influenza A (H1N1) virus	ATCC VR-333	≥99.9	≥99.9

ATCC - American Type Culture Collection

\*Advanced Biotechnologies, Columbia, MD

\*\*University of Ottawa

ISSUED: 6/10/09  
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