



Bulletin Number: 508

**SYMMETRY FOAMING HAND SANITIZER
with Aloe & Vitamin E
Technical Data**

Physical Properties

Active Ingredient: Ethyl Alcohol 62%

Appearance: Clear, Colorless Solution

Fragrance: Floral

Form: Liquid

pH: 7.8 ± 0.5

Preservative Testing

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

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Symmetry Foaming Hand Sanitizer with Aloe & Vitamin E Technical Data – (Continued)

Repeat Insult Patch Test

Objective:	Determination of potential for dermal irritation or sensitization.
Test Method:	Repeat Insult Patch Test – Shelanski Method
Description of Test:	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.
Independent Laboratory:	Clinical Research Laboratories, Inc. (Piscataway, NJ)
Results:	No irritation or sensitization reactions were observed throughout the study.

Antimicrobial Effectiveness Studies

Objective:	Evaluation of antimicrobial effectiveness when challenged with a broad spectrum of microorganisms.
Test Method:	American Society of Testing & Materials E2315 Standard Guide for Assessment of Microbiocidal Activity Using a Time-Kill Procedure
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

**Symmetry Foaming Hand Sanitizer with Aloe & Vitamin E
Technical Data – (Continued)**

Microorganism	Identification No.	Percent Reduction	
		15 Seconds	30 Seconds
Acinetobacter baumannii	ATCC 19606	>99.9998	>99.9998
Clostridium difficile (vegetative)	ATCC 9689	>99.96	>99.96
Enterobacter aerogenes	ATCC 13048	>99.9999	>99.9999
Enterococcus faecalis Vancomycin resistant (VRE) ^[1]	ATCC 51299	>99.9998	>99.9998
Enterococcus faecium	ATCC 6569	>99.9993	>99.9993
Escherichia coli	ATCC 11229	>99.9999	>99.9999
Escherichia coli O157:H7	ATCC 35150	>99.9997	>99.9997
Klebsiella pneumoniae	ATCC 13883	>99.9997	>99.9997
Listeria monocytogenes	ATCC 19117	>99.9998	>99.9998
Proteus mirabilis	ATCC 9240	>99.9998	>99.9998
Pseudomonas aeruginosa	ATCC 15442	>99.9999	>99.9999
Salmonella enteritidis	ATCC 4931	>99.9996	>99.9996
Salmonella typhimurium	ATCC 14028	>99.9999	>99.9999
Serratia marcescens	ATCC 14756	>99.9998	>99.9998
Shigella dysenteriae	ATCC 13313	>99.9998	>99.9998
Shigella sonnei	ATCC 25931	>99.9999	>99.9999
Staphylococcus aureus MRSA ^[2]	ATCC 33592	>99.9999	>99.9999
Staphylococcus aureus CA-MRSA ^[3] (Community Acquired MRSA)	NARSA NRS123 (USA400)	>99.9998	>99.9998
Staphylococcus aureus VRSA	NARSA VRS1	>99.9998	>99.9998
Staphylococcus epidermidis	ATCC 12228	>99.9993	>99.9993
Streptococcus pneumoniae PRSP	ATCC 700677	>99.6666	>99.6666
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, Streptomycin, Quinupristin and Dalfopristin.

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

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

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Symmetry Foaming Hand Sanitizer with Aloe & Vitamin E Technical Data – (Continued)

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

Microorganism	Identification No.	Percent Reduction	
		15 Seconds	30 Seconds
Herpes Simplex Virus Type 1	ATCC VR-733	≥99.9997	≥99.9994
HIV-1	HTLV-III _B Strain*	≥99.9	≥99.9683
Influenza A/Hong Kong	ATCC VR-544	≥99.9998	≥99.9994
Swine Influenza A (H1N1) virus	ATCC VR-333	≥99.999	≥99.9997

ATCC - American Type Culture Collection

*Advanced Biotechnologies, Columbia, MD

ISSUED: 6/10/09

Supersedes: 6/23/08