



Standard Test Method for Assessing the Ability of Pre-wetted Towelettes to Remove and Transfer Bacterial Contamination on Hard, Non-Porous Environmental Surfaces Using the Wiperator¹

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INTRODUCTION

‘High-touch’ environmental surfaces (HITES) are increasingly being recognized as potential vehicles for infectious agents (1-3).² Decontamination of such surfaces is almost always by either a disinfectant-spray-and-wipe procedure or, more commonly, by wiping with an applicator or towelette prewetted with a disinfectant (4). In either case, the microbicidal action of the disinfectant is combined with the physical action of wiping (mechanical removal). This standard, formulated after a critical review of available wipe test methods (5-8) and published standards, is based on the use of a mechanical device (the Wiperator; Appendix X1) designed to wipe HITES under controlled conditions and also to test the transfer of acquired microbial contamination to clean surfaces.

1. Scope

1.1 This standard is designed for use with a mechanized device (the Wiperator; Appendix X1) to test pre-wetted towelettes.

1.2 Two species of vegetative bacteria, one Gram-positive coccus (*Staphylococcus aureus*) and one Gram-negative bacillus (*Acinetobacter baumannii*), representing important nosocomial pathogens, are used to separately contaminate disks of magnetized and brushed stainless steel in order to test the towelettes for their relative ability to:

1.2.1 Decontaminate non-porous environmental surfaces experimentally-contaminated with vegetative bacteria; and

1.2.2 Transfer any acquired bacterial contamination on the towelettes to clean surfaces.

1.3 This test method is not meant for use with towelettes for decontamination of skin.

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses, if any, are for information only.

1.5 This test method should be performed by persons with training in microbiology in facilities designed and equipped for work with infectious agents at the appropriate biosafety level.

1.6 It is the responsibility of the investigator to determine whether Good Laboratory Practice (GLP) regulations are required and to follow them where appropriate.

1.7 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards*:³

D1129 Terminology Relating to Water

D1193 Specification for Reagent Water

E1054 Test Methods for Evaluation of Inactivators of Antimicrobial Agents

E2197 Quantitative Disk Carrier Test Method for Determining Bactericidal, Virucidal, Fungicidal, Mycobactericidal, and Sporocidal Activities of Chemicals

E2362 Practice for Evaluation of Pre-saturated or Impregnated Towelettes for Hard Surface Disinfection

E2756 Terminology Relating to Antimicrobial and Antiviral Agents

E2896 Test Method for Quantitative Petri Plate Method (QPM) for Determining the Effectiveness of Antimicrobial Towelettes

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² The boldface numbers in parentheses refer to the list of references at the end of this standard.

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.