



Standard Test Method for Evaluation of the Effectiveness of Handwash Formulations Using the Paper Towel (Palmar) Method of Hand Contamination¹

This standard is issued under the fixed designation E2784; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the determination of the effectiveness of antimicrobial handwashing agents for the reduction of transient microbial flora when used in a handwashing procedure.

1.2 A knowledge of microbiological techniques is required for these procedures.

1.3 This test method may be used to evaluate topical antimicrobial handwash formulations.

1.4 Performance of this procedure requires the knowledge of regulations pertaining to the protection of human subjects.²

1.5 In this test method, SI units are used for all applications, except for distance in which case inches are used and SI units follow in parentheses.

1.6 *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.* For more specific precautionary statements see 8.5.

2. Referenced Documents

2.1 ASTM Standards:³

E1054 Test Methods for Evaluation of Inactivators of Antimicrobial Agents

E1174 Test Method for Evaluation of the Effectiveness of Health Care Personnel Handwash Formulations

¹ This test method is under the jurisdiction of ASTM Committee E35 on Pesticides, Antimicrobials, and Alternative Control Agents and is the direct responsibility of Subcommittee E35.15 on Antimicrobial Agents.

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² Federal Register, Vol 46, No. 17, Jan 27, 1991.

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.

2.2 Other Standards:

AATCC Test Method 147 Antibacterial Assessment of Textile Materials: Parallel Streak Method⁴

3. Terminology

3.1 Definitions:

3.1.1 *active ingredient, n*—a substance added to a formulation specifically for the inhibition or inactivation of microorganisms.

3.1.2 *cleansing wash, n*—a procedure intended to remove soil or residue. This may also be referred to as a cosmetic wash.

3.1.3 *healthcare personnel handwash, n*—a cleanser or waterless agent intended to reduce transient bacteria on the hands.

3.1.4 *neutralization, n*—the process for inactivating or quenching the activity of a microbiocide. Often achieved through chemical or physical means (for example, filtration or dilution).

3.1.5 *resident microbial skin flora, n*—microorganisms that survive and multiply on the skin, forming a stable population.

3.1.6 *test material, n*—a formulation which incorporates antimicrobial ingredient(s).

3.1.7 *test organism, n*—an applied inoculum of an organism that has characteristics which allow it to be readily identified. The test organism is used to simulate a transient topical microbial contaminant. It may also be referred to as a marker organism, bacterial simulant, or bacterial contaminant.

3.1.8 *transient microbial skin flora, n*—microorganisms that contaminate the skin but do not normally form a stable population.

4. Summary of Test Method

4.1 This test method is conducted on a group of volunteer subjects who have refrained from using topical antimicrobial formulations for at least one week prior to the initiation of the test. Activity of the test material is measured by comparing the

⁴ Technical Manual of the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, North Carolina 27709.