



Standard Test Method for Determining the Bacteria-Eliminating Effectiveness of Hygienic Handwash and Handrub Agents Using the Fingerpads of Adults¹

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INTRODUCTION

Hands can spread many types of pathogens directly (**1**)² or by transfer of such organisms to other surfaces and objects during casual contact (**2,3**). Therefore, regular and proper decontamination of hands by caregivers and food-handlers in particular is crucial for infection control. Hygienic hand antisepsis is meant to reduce the load of transient microflora on hands, thereby reducing the risk of disease transmission. Such reduction in the bacterial load may be due to a combination of bacterial inactivation and removal of viable bacteria from the skin. In this method the test bacterial suspension is placed on the thumb- and fingerpads of adults to simulate the contamination of hands with transient microflora, the inoculum on the fingerpads is allowed to dry and is then treated with test and control solutions. Since in each test all ten digits on any given subject can be used, the protocol permits the inclusion of the required controls and several replicates of the test formulation in the same trial.

1. Scope

1.1 This test method is designed to determine the activity of hygienic handwash and handrub (**4**) agents against transient bacterial flora on hands and is not meant for use with surgical hand scrubs or preoperative skin preps.

1.2 Performance of this procedure requires the knowledge of regulations pertaining to the protection of human subjects.³

1.3 The test method should be performed by persons with training in microbiology in facilities designed and equipped for work with infectious agents at biosafety level 2 (**5**).

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 *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.*

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

³ *Federal Register*, Vol 46, No. 17, Jan. 27, 1991.

2. Referenced Documents

2.1 *ASTM Standards*:⁴

D1129 Terminology Relating to Water

E1115 Test Method for Evaluation of Surgical Hand Scrub Formulations

E1173 Test Method for Evaluation of Preoperative, Precatheterization, or Preinjection Skin Preparations

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

E1838 Test Method for Determining the Virus-Eliminating Effectiveness of Hygienic Handwash and Handrub Agents Using the Fingerpads of Adults

E2613 Test Method for Determining Fungus-Eliminating Effectiveness of Hygienic Handwash and Handrub Agents Using Fingerpads of Adults

3. Terminology

3.1 *Definitions*—For definitions of general terms used in this test method, refer to Terminology D1129.

3.2 *Definitions of Terms Specific to This Standard*:

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

⁴ 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.