



Standard Test Method for Determining the Virus-Eliminating Effectiveness of Liquid Hygienic Handwash and Handrub Agents Using the Fingerpads of Adult Volunteers¹

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INTRODUCTION

Hands play an important role in the spread of many viruses, thus proper and regular handwashing is considered crucial in preventing such spread, particularly in health-care settings, day-care centers, and food-handling establishments. Many viruses that are known to spread through contaminated hands can remain infectious for several hours on human hands, and also may be more resistant than the bacteria commonly used to evaluate the germicidal activity of handwash and handrub agents **(1,2, 3)**.² Contaminated hands also can readily transfer infectious virus to other surfaces **(1,2)**. Hand antisepsis has been shown to interrupt the spread of viral infections **(4)**. Standardized methods to assess the virus-eliminating potential of handwash and handrub agents have not been available and this test method addresses the gap.

1. Scope

1.1 Human skin does not carry viruses as a part of its resident flora. Hands transiently contaminated with viruses, however, can act as vehicles for the spread of many types of viral infections. Hygienic hand washing is meant to reduce the load of viruses and other transient microorganisms on hands, thereby reducing the risk of disease transmission. Such reduction in the virus load may be due to a combination of virus inactivation and removal of infectious virus from the skin.

1.2 Standard test methods to assess the capacity of hygienic handwash and handrub agents to reduce virus levels on hands are not presently available. This test method, therefore, has been designed to determine the comparative virus-eliminating effectiveness of germicidal or non-germicidal formulations. This test method is not meant for use with surgical hand scrubs or preoperative skin preps.

NOTE 1—The test method should be performed by persons with training in virology in facilities designed and equipped for work with infectious agents at biosafety level 2 **(5)**.

1.3 *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 appro-*

priate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 ASTM Standards:

D 1129 Terminology Relating to Water³

E 1115 Test Method for Evaluation of Surgical Hand Scrub Formulation⁴

E 1173 Test Method for Evaluation of a Pre-Operative Skin Preparation⁴

E 1174 Test Method for Evaluation of Health Care Personnel Handwash Formulation⁴

E 2011 Test Method for Evaluation of Handwashing Formulations for Virus-Eliminating Activity Using the Entire Hand⁴

3. Terminology

3.1 *Definitions*—For definitions of general terms used in this test method, refer to Terminology D 1129.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *hygienic (health-care personnel) handwash agents, n*—agents generally used for handwashing by personnel in hospitals, other health-care facilities, day-care centers, nursing homes, and food-handling establishments should be safe for repeated use, nonirritating, fast-acting, and efficient in eliminating transient microorganisms from intact skin.

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

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

³ *Annual Book of ASTM Standards*, Vol 11.01.

⁴ *Annual Book of ASTM Standards*, Vol 11.05.