



Designation: E1874 – 22^{ε1}

Standard Practice for Recovery of Microorganisms From Skin using the Cup Scrub Technique¹

This standard is issued under the fixed designation E1874; 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.

^{ε1} NOTE—The standard type was editorially corrected in April 2023.

1. Scope

1.1 This practice is designed to recover microorganisms from the skin of human subjects or human subject surrogates (animal skin, isolated porcine skin, human skin equivalents, and other such surfaces).

1.2 Knowledge of microbiological techniques is required for these procedures.

1.3 It is the responsibility of the investigator to determine if Good Laboratory Practice (GLP) and Good Clinical Practice (GCP) is required.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

E1054 Practices for Evaluation of Inactivators of Antimicrobial Agents

¹ This practice 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 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.

E2752 Guide for Evaluation of Residual Effectiveness of Antibacterial Personal Cleansing Products
E2756 Terminology Relating to Antimicrobial and Antiviral Agents

2.2 Federal Document:³

CFR Parts 50 and 56 Code of Federal Regulations: Protection of Human Subjects; Institutional Review Boards

3. Terminology

3.1 *Definitions*—For definitions of terms used in this document, see Terminology **E2756**.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *contralateral, adj*—on or relating to the opposite side (of the body).

3.2.2 *scrub cups, n*—sterile cylinders of suitable composition (that is, glass, ceramic, stainless steel, plastic, etc.) used to isolate a sample area of skin (or skin equivalent) and confine a aliquot of liquid which is used to facilitate the scrubbing of the skin and removal of microorganisms from the skin surface by pipetting.

4. Summary of Practice

4.1 This practice describes a technique suitable for the recovery of resident and transient microorganisms from human or animal skin; the technique may be used in situ within clinical protocols or *in vitro* for studies using isolated skin or skin equivalents.

4.2 Resident and transient microorganisms and/or surrogate microorganisms (previously applied to a test site) are recovered from the site by pressing a rigid cylinder against the skin with sufficient pressure to form a seal and instilling recovery liquid into the cylinder. The surface of the skin is then mechanically ‘scrubbed’ with a polished glass rod, rubber policeman, or some other suitable device for a prescribed period of time. The fluid is pipetted from the cylinder into a test tube, or other suitable receptacle, for further analysis.

³ Available from DLA Document Services, Building 4/D, 700 Robbins Ave., Philadelphia, PA 19111-5094, <http://quicksearch.dla.mil>.