



Standard Guide for Testing Cleaning Performance of Products Intended for Use on Resilient Flooring and Washable Walls¹

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1. Scope

1.1 This guide covers the evaluation of the cleaning performance of products intended for use on resilient flooring or washable walls. Such evaluations specifically exclude windows, mirrors, carpets, ceramic tiles, and laminated counter tops. This guide provides techniques for soiling, cleaning, and evaluating performance of detergent systems under controlled, but practical, hard-surface cleaning conditions.

1.2 Such systems include any detergent intended for cleaning hard surfaces such as resilient flooring, washable wall surfaces, and other hard surfaces, but excluding glass, ceramic, or other glossy surfaces. They may consist of solutions of soluble powdered detergent, dilutions of concentrated liquid detergent, or products intended to be used full strength, for example, foams, sprays, liquid, or paste.

1.3 There is no universal soil/substrate combination that is representative of the many soil-removal tasks required of this type of cleaner in actual use conditions. Choice of soil/substrate and cleaning conditions should be by agreement between the testing laboratory and those using the data to evaluate cleaning performance relative to user experience.

1.4 *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.* Material Safety Data Sheets are available for reagents. Review them for hazards prior to usage. Specific precautionary statements are given in Note A3.2.

2. Terminology

2.1 Definitions of Terms Specific to This Standard:

2.1.1 *soil*—in hard surface cleaning, foreign matter on a hard surface.

2.1.2 *substrate*—the soiled surface that is being cleaned.

3. Summary of Guide

3.1 Soils are artificially applied in a standardized manner to specified floor or wall substrates. The soiled surfaces are

cleaned using a straight-line washability apparatus, and the cleaned substrates are evaluated instrumentally or visually by a panel of judges.

4. Significance and Use

4.1 This guide suggests methodology for cleaning tests. Soil/substrate combinations are generally designed to be analogous to soiled surfaces commonly encountered. This methodology can be used with most soil/substrate combinations. Some example test methods that have worked well in other labs are provided in the annexes. There is no requirement for using the soils listed in the annexes. It is the responsibility of the user to select the appropriate battery of tests for the desired end results.

4.2 The results of tests based on this guide are regarded as diagnostic screening values useful in formulation studies, quality control, and ingredient raw material qualification. This guide is intended to allow a choice in test conditions and soil/substrate combinations appropriate to the evaluation at hand. For interlaboratory comparisons, exact test conditions must be established before test results are compared.

4.3 This guide is applicable to testing all types of multipurpose household cleaners, whether the detergent is prepared by dissolving a soluble powder, a dilutable liquid, or is a pre-diluted product. It may also be useful for evaluation of products or conditions normally associated with industrial or institutional cleaners.

5. Preparation of Soil/Substrate Combinations

5.1 Cleaning performance of a test product depends on the particular combination of test soil and substrate. Soils and substrates to be cleaned should be selected as pairs. The usual criteria for appropriate soil/substrate combinations are: relative ease of discriminability among cleaners to be tested; reproducibility of the test performed; and correlation of test results with consumer experience.

5.1.1 While it may be reasonable to assume that lab tests using soil/substrate combinations found in normal practice should correlate with actual cleaning experience, no particular soil/substrate combination is sufficiently representative by itself to provide a reliable index of cleaning performance for all cleaning tasks. Also, lab screening systems are usually much more heavily soiled than those found under real-use conditions, in order to optimize discriminability. It is possible, however,

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