



Standard Guide for Evaluating Stain Removal Performance in Home Laundering¹

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1. Scope

1.1 This is a guide for evaluating stain removal performance of home laundry products or home laundering conditions. It provides guidance for the selection, preparation, application, and examination of various types of stains on test fabrics that are subjected to controlled but practical stain removal treatment conditions.

1.2 There is no single combination of stain and fabric that will predict the overall performance of a product or treatment method. A single test, even with a variety of stains/fabrics, can only predict how products or treatment methods compare under the particular conditions chosen for evaluations. A series of assessments is necessary to evaluate the many aspects of stain removal performance and to simulate consumer experience more closely.

1.3 In this guide, the use of both traditional top-loader washing machines as well as front and top-loading high-efficiency washers is addressed.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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.*

2. Referenced Documents

2.1 ASTM Standards:²

D1729 Practice for Visual Appraisal of Colors and Color

¹ This guide is under the jurisdiction of ASTM Committee D12 on Soaps and Other Detergents and is the direct responsibility of Subcommittee D12.15 on Physical Testing.

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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.

Differences of Diffusely-Illuminated Opaque Materials

2.2 AATCC Standard:³

Test Method 130-2010 Soil Release: Oily Stain Release Method

3. Terminology

3.1 Definitions:

3.1.1 *front-loading high-efficiency (HE) washing machine/washer, n*—horizontally or nearly horizontally oriented machine used for laundry that uses varying amounts of water to launder fabrics.

3.1.1.1 *Discussion*—These washers: (1) may not exhibit any visible free water or may show significant quantities of visible free water, (2) may lift and tumble the clothes load, (3) may use both spinning and tumbling in both the washer or rinse processes, (4) may use jet sprays of wash solution or rinse solution, or (5) may use thermal or chemical inputs, or both, to offer sanitation or allergen claims. HE washers use considerably less water and energy than traditional deep-fill washers in the laundering process. HE washers are labeled by the appliance industry and may be recognized by the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) as Energy Star rated machines.

3.1.2 *home laundering, n*—cleaning or conditioning, or both, of textile materials using the washing and drying equipment commonly found in the home.

3.1.3 *pretreaters, n*—usage of a product designed to treat fabric stains not likely to be removed using detergent in wash alone in the normal household laundering process.

3.1.3.1 *Discussion*—Pretreaters can be found in many forms such as sprays and liquids and detergents themselves can be used as a pretreater when applied directly to the stain.

3.1.4 *stain, n*—a local area of undesired foreign matter on a textile material, differing in appearance from the textile substrate.

3.1.5 *top-loading HE washing machine/washer, n*—vertically oriented agitation machine that is used for home

³ Available from American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709, <http://www.aatcc.org>.