Designation: D4494 – 95 (Reapproved 2020)

Standard Test Method for Detecting Residual Odor of Drycleaning Grade Perchloroethylene[1]

This standard is issued under the fixed designation D4494; 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.

1. Scope

1.1 This test method covers the detection of a residual odor in drycleaning-grade perchloroethylene.

1.2 The values stated in SI units are to be regarded as standard. The values given in parentheses after SI units are provided for information only and are not considered standard.

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 appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* Specific precautionary statements are given in Section 7.

1.4 *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]

D3844 Guide for Labeling Chlorinated Hydrocarbon Solvent Containers (Withdrawn 2013)[3]

3. Summary of Test Method

3.1 A swatch of conditioned cotton fabric is treated by soaking in drycleaning perchloroethylene, then drained, dried, and steamed. The odor is compared with an untreated swatch. The treated swatch should be no different from the untreated.

4. Significance and Use

4.1 Normally clothes cleaned with perchloroethylene will have a clean cloth odor. If a foreign odor is present, it may be objectionable.

5. Apparatus

5.1 *Two-Glass Beakers,* 1 L.

5.2 *Oven,* forced convection model.

6. Material

6.1 De-sized and bleached cotton fabric weighing from 120 g/m^2 to 135 g/m^2 (3.6 oz/yd^2 to 4.0 oz/yd^2). The fabric shall be clean, dry, and free from foreign odor.

7. Safe Handling Precautions

7.1 Handle perchloroethylene only in a well-ventilated hood for conducting the test. See Guide D3844 for the label information.

8. Procedure

8.1 Condition a swatch, 300 mm by 300 mm (12 in. by 12 in.) size, of test fabric at 60 ± 10 % relative humidity for at least 8 h.

8.2 Soak the test swatch in a beaker with 100 mL of perchloroethylene for 5 min.

8.3 Remove it from the beaker and allow to drain and dry at room temperature for 4 h.

8.4 Dry the treated swatch in a fresh air oven at 60 °C (140 °F) for 30 min.

8.5 Place the treated swatch in the steam vapor from boiling water for 5 s and check the odor of the cloth.

8.6 Compare the odor of the treated swatch with an untreated control swatch, that was subjected to all steps of the test except 8.2 and 8.3.

9. Report

9.1 Report whether the treated sample cloth has a detectable foreign odor or no foreign odor.

[1] This test method is under the jurisdiction of ASTM Committee D26 on Halogenated Organic Solvents and Fire Extinguishing Agents and is the direct responsibility of Subcommittee D26.04 on Test Methods.

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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.

[3] The last approved version of this historical standard is referenced on www.astm.org.