



Standard Practice for Collection of Dislodgeable Pesticide Residues from Floors¹

This standard is issued under the fixed designation D6333; 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 practice covers a procedure for collection of dislodgeable pesticide residues from indoor floor surfaces.

1.2 This practice and the sampling methodology described are applicable to bare floors or covered floor surfaces, for example, carpeting and vinyl flooring.

1.3 This practice and the sampling methodology described are applicable to all pesticides listed in Practice **D4861** whether applied directly to the floor surface or transported there by migration within the room or tracked in from outdoors.

1.4 Floor surfaces for which this practice has been successfully applied include nylon plush carpeting, polypropylene level-loop carpeting, and vinyl flooring.

1.5 Sample analysis will be dependent upon the nature of the pesticides targeted and is beyond the scope of this practice; however, the analytical procedures discussed in Practice **D4861** are applicable to this practice.

1.6 The values stated in SI units are to be regarded as the standard. No other units of measurement are included in this standard.

1.7 *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 its use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D1193 Specification for Reagent Water

D1356 Terminology Relating to Sampling and Analysis of Atmospheres

D4861 Practice for Sampling and Selection of Analytical

Techniques for Pesticides and Polychlorinated Biphenyls in Air

E1 Specification for ASTM Liquid-in-Glass Thermometers
E337 Test Method for Measuring Humidity with a Psychrometer (the Measurement of Wet- and Dry-Bulb Temperatures)

3. Terminology

3.1 *Definitions:* For definitions of terms used in this practice, refer to Terminology **D1356**.

3.1.1 *dislodgeable residue*—that part of the residue of a chemical deposited on a solid surface that may be transferred by direct contact to human skin or clothing (sometimes called *transferable residue*).

3.1.2 *sampling traverse*—the distance from the starting point to the end point over which the sampling media contacts the floor surface for collection of a single sample.

3.1.3 *transfer coefficient*—the ratio of the amount of pesticide residue collected by the sampling media to the area of the surface contacted by the media during a single sampling traverse.

3.1.4 *transfer efficiency*—the ratio of the transfer coefficient to the pesticide surface loading determined by analysis of deposition coupons placed strategically on the test surface before the pesticide application.

4. Summary of Practice

4.1 The sampling method described in this practice is taken from published work (**1,2,3,4**).³

4.2 Dislodgeable pesticide residues from floor surfaces are collected by transfer to an annular ring of polyurethane foam (PUF), which is rolled across the floor at a constant speed and applied pressure.

4.3 The PUF sampling ring is slipped over a cylindrical metal axle that functions as the front wheel of the PUF roller apparatus. The apparatus is typically constructed of aluminum and consists of a frame with two permanent rear wheels and the detachable axle cylinder on the front.

¹ This practice is under the jurisdiction of ASTM Committee **D22** on Air Quality and is the direct responsibility of Subcommittee **D22.05** on Indoor Air.

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