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Standard Specification for Wipe Sampling Materials for Lead in Surface Dust[1]

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1. Scope

1.1 This specification covers requirements for wipes that are used to collect settled dusts on surfaces for the subsequent determination of lead.

1.2 *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]

E105 Practice for Probability Sampling of Materials

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

E1605 Terminology Relating to Lead in Buildings

E1613 Test Method for Determination of Lead by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES), Flame Atomic Absorption Spectrometry (FAAS), or Graphite Furnace Atomic Absorption Spectrometry (GFAAS) Techniques

E1644 Practice for Hot Plate Digestion of Dust Wipe Samples for the Determination of Lead

E1728 Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination

E2239 Practice for Record Keeping and Record Preservation for Lead Hazard Activities

F141 Terminology Relating to Resilient Floor Coverings

3. Terminology

3.1 For definitions of terms not listed here, see Terminology E1605.

3.2 *Definitions:*

3.2.1 *lot*, *n*—a finite quantity of a given product manufactured under production conditions that are considered uniform.

3.2.2 *shelf life*, *n*—for dust-wiping sampling, the maximum time interval during which a wipe can be stored in an unopened package and remain suitable for sampling of settled dust.

3.2.3 *vinyl-composite tile*, *n*—a resilient floor covering composed of binder, fillers, and pigments. The binder consists of one or more resins of poly (vinyl chloride) or vinyl cholride copolymers, or both, compounded with suitable plasticizers and stabilizers. Other polymeric resins may be incorporated as part of the binder (See Terminology F141).

3.2.4 *wipe*, *n*—a disposable towellette that is moistened with a wetting agent.

3.2.4.1 *Discussion*—The towellette is used to collect a sample of settled dust on a surface for subsequent lead analysis.

4. Significance and Use

4.1 This specification is intended for use by manufacturers and suppliers to evaluate the performance of wipe sampling materials for lead in surface dust.

4.2 This specification may also be employed by users of wipes to compare the performance of candidate wipes for the sampling of lead in surface dust.

5. Manufacture

5.1 The wipes shall be made from materials using methods that ensure compliance with the requirements of Sections 6 and 8, and shall be clean and free of imperfections that would affect their performance.

6. General Requirements

6.1 Wipes shall conform to the requirements in Paragraphs 6.1.1 to 6.1.8. Test procedures for each requirement are found in Section 8.

6.1.1 *Background Lead*—The mean background lead content per un-spiked wipes tested shall be less than 1.0 µg.

6.1.2 *Lead Recoveries*—The mean lead recoveries from wipes spiked with Certified Reference Materials (CRMs) having 20 µg, 100 µg, and 500 µg (±10%) of lead per sample shall be 100 % ± 20 % of the mean lead recovery from the

[1] This specification is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.23 on Lead Hazards Associated with Buildings.

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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.

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