



Standard Practice for Field Collection of Soil Samples for Subsequent Lead Determination¹

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1. Scope

1.1 This practice covers the collection of soil samples from areas in and around buildings and related structures using coring and scooping methods.

1.2 This practice is not suitable for collection of soil samples from areas that are paved.

1.3 This practice does not address the sampling design criteria (that is, sampling plan that includes the number and location of samples) that are used for risk assessment and other lead hazard activities.

1.4 This practice contains notes that are explanatory and are not part of the mandatory requirements of this practice.

1.5 The values stated in SI units are to be regarded as the standard. The inch-pound units given in parentheses are for information only.

1.6 *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

E 1605 Terminology Relating to Lead in Buildings

E 1613 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

E 2239 Practice for Record Keeping and Record Preservation for Lead Hazard Activities

3. Terminology

3.1 *Definitions*—For definitions of terms not appearing here, see Terminology E 1605.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *soil collection container*—a sealable rigid walled container or a resealable plastic bag for holding and transporting the soil sample from the field to the laboratory.

3.2.1.1 *Discussion*—The volume must be sufficient to hold the entire collected sample.

4. Summary of Practice

4.1 Soil samples are collected using coring or scooping methods.

5. Significance and Use

5.1 Although this practice is intended for the collection of soil samples from areas in and around buildings, this practice may also be used to collect soil samples from other areas and environments.

5.2 This practice limits soil collection to approximately the top 1.5 cm of soil surface.

5.3 These samples are collected in a manner that will permit subsequent digestion and determination of lead using laboratory analysis techniques such as Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) and Flame Atomic Absorption Spectrometry (FAAS) (see Test Method E 1613).

6. Materials and Equipment

6.1 *Soil Coring Tool*, minimum diameter of 2.5 cm, or as agreed upon by the parties requesting and collecting the samples, lead-free, for use in coring.

6.1.1 The coring tool shall be capable of being forced into hard ground without damage to a depth of at least 5 cm (2 in.) and have a mechanism to remove the soil sample from the tool to permit discarding all but the top 1.5 cm (0.6 in.) of the soil core (see Note 1).

NOTE 1—A number of devices can be used or modified for use as soil coring tools. For example: professional stainless steel coring tools equipped with plastic liners, steel pipe, plastic pipe, or small sapling (tree) planters. Removal of the soil core is generally performed using a pair of plungers cut to fit the inside diameter of the coring device. One plunger is

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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.