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Standard Practice for Sampling Using a Trier Sampler[1]

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1. Scope

1.1 This practice covers sampling using a trier. A trier resembles an elongated scoop as shown in Fig. 1. The trier is used to collect samples of granular or powdered materials that are moist or sticky and have a particle diameter less than one-half the diameter of the trier.

1.2 The trier can be used as a vertical coring device only when it is certain that a relatively complete and cylindrical sample can be extracted.

1.3 *This standard does not purport to address all of the safety problems, 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]

D4687 Guide for General Planning of Waste Sampling

D5088 Practice for Decontamination of Field Equipment Used at Waste Sites

D5283 Practice for Generation of Environmental Data Related to Waste Management Activities: Quality Assurance and Quality Control Planning and Implementation

3. Summary of Practice

3.1 As a coring device, the trier is pushed into the material to be sampled and is turned to cut the core. The core is then removed from the hole.

4. Significance and Use

4.1 This practice is applicable to sampling soils and similar fine-grained cohesive materials. This practice is to be used by personnel who are to acquire the samples.

4.2 This practice should be used in conjunction with Guide D4687, which covers sampling plans, safety, quality assurance, preservation, decontamination, labeling, and chain-of-custody procedures; Practice D5088, which covers the decontamination of field equipment used at waste sites; and Practice D5283, which covers project specifications and practices for environmental field operations.

5. Sampling Equipment

5.1 The trier should be made from materials that are compatible with the substances being sampled and with the tests or analyses to be performed. Either stainless steel or polytetrafluoroethylene-coated metal will be suitable for most situations (see Fig. 1).

6. Sample Containers

6.1 Plastic, glass, or other nonreactive containers should be used. Refer to Guide D4687 for further information on containers.

7. Procedure

7.1 Record appropriate information and observations on the sample location.

7.2 If sampling soils, remove surface vegetation or debris, or both, from the area of sample extraction.

7.3 For core sampling, proceed as follows:

7.3.1 Insert the trier approximately perpendicular to the surface of the material and rotate (one or two times) to cut a core.

7.3.2 Pull the core out of the hole slowly. Do not allow additional overburden material to become part of the sample. Inspect the core surface, and note the appearance of any irregularities (for example, scratches, pock marks, and pebbles). Also inspect the core for breakage. If breakage has occurred and the core does not satisfy minimum length requirements, discard it and extract another from an immediately adjacent location.

7.4 Transfer the sample into a suitable container using a clean spatula. Seal the container and affix a label.

7.5 Complete the field logbook and chain-of-custody forms.

7.6 Decontaminate the used equipment in accordance with Practice D5088.

[1] This practice is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.03 on Sampling Equipment.

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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.