



Standard Guide for Sampling of Drums and Similar Containers by Field Personnel¹

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1. Scope

1.1 This guide covers information, including flow charts, for field personnel to follow in order to collect samples from drums and similar containers.

1.2 The purpose of this guide is to help field personnel in planning and obtaining samples from drums and similar containers, using equipment and techniques that will ensure that the objectives of the sampling activity will be met. It can also be used as a training tool.

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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- C 783 Practice for Core Sampling of Graphite Electrodes²
- D 1452 Practice for Soil Investigation and Sampling by Auger Borings³
- D 1586 Test Method for Penetration Test and Split-Barrel Sampling of Soils³
- D 1587 Practice for Thin-Walled Tube Geotechnical Sampling of Soils³
- D 2113 Practice for Diamond Core Drilling for Site Investigation³
- D 4448 Guide for Sampling Groundwater Monitoring Wells⁴
- D 4687 Guide for General Planning of Waste Sampling⁴
- D 4700 Guide for Soil Sampling from the Vadose Zone³
- D 4823 Guide for Core-Sampling Submerged, Unconsolidated Sediments⁵
- D 4840 Guide for Sample Chain of Custody Procedures⁶
- D 5088 Practice for Decontamination of Field Equipment Used at Nonradioactive Waste Sites⁷

D 5283 Practice for Generation of Environmental Data Related to Waste Management Activities: Quality Assurance and Quality Control Planning and Implementation⁴

D 5358 Practice for Sampling with a Dipper or Pond Sampler⁴

D 5451 Practice for Sampling Using a Trier Sampler⁴

D 5495 Practice for Sampling with a Composite Liquid Waste (COLIWASA) Sampler⁴

3. Terminology

3.1 Definitions:

3.1.1 *bung*, *n*—usually a 2-in. (5-cm) or ¾-in. (1.3-cm) diameter threaded plug specifically designed to close a bung hole.

3.1.2 *bung hole*, *n*—an opening in a barrel or drum through which it can be filled, emptied or vented.

3.1.3 *consolidated solid*, *n*—*as used in this guide*, a compact solid not easily compressed or broken into smaller portions.

3.1.4 *drum*, *n*—*when used in the flow charts in this guide*, the word implies any drum, barrel or non-bulk container of 5 to 110 gal (19 to 400 L) capacity.

3.1.5 *representative sample*, *n*—a sample collected such that it reflects one or more characteristics of interest of the lot or population from which it was collected.

3.1.6 *sample*, *n*—one or more items or portions collected from a lot or population.

3.1.7 *sampler*, *n*—the device used to obtain a sample.

3.1.8 *sludge*, *n*—*as used in this guide*, any mixture of solids that settles out of solution; sludges contain liquids that are not apparent as free liquids.

3.1.9 *unconsolidated solid*, *n*—*as used in this guide*, uncemented or uncompacted material that is easily separated into smaller portions.

3.1.10 *work plans*, *n*—plans that are specific to sampling at a particular site; examples are Health and Safety Plans and Sampling and Analysis Plans.

4. Summary of Guide

4.1 This guide uses a decision-tree format to lead persons intending to sample waste materials from drums and similar containers through a series of questions. The answers to the questions result in recommended actions, including the selection of appropriate sampling equipment. Brief instructions on

¹ This guide is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.02 on Sampling Techniques.

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² *Annual Book of ASTM Standards*, Vol 15.01.

³ *Annual Book of ASTM Standards*, Vol 04.08.

⁴ *Annual Book of ASTM Standards*, Vol 11.04.

⁵ *Annual Book of ASTM Standards*, Vol 11.02.

⁶ *Annual Book of ASTM Standards*, Vol 11.01.

⁷ *Annual Book of ASTM Standards*, Vol 04.09.