



Designation: D6323 – 19

Standard Guide for Laboratory Subsampling of Media Related to Waste Management Activities¹

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1. Scope

1.1 This guide covers common techniques for obtaining representative subsamples from a sample received at a laboratory for analysis. These samples may include solids, sludges, liquids, or multilayered liquids (with or without solids).

1.2 The procedures and techniques discussed in this guide depend upon the sample matrix, the type of sample preparation and analysis performed, the characteristic(s) of interest, and the project-specific instructions or data quality objectives.

1.3 This guide includes several sample homogenization techniques, including mixing and grinding, as well as information on how to obtain a specimen or split laboratory samples.

1.4 This guide does not apply to air or gas sampling.

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

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

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

¹ This guide is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.01 on Planning for Sampling.

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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.

[C702/C702M Practice for Reducing Samples of Aggregate to Testing Size](#)

[C859 Terminology Relating to Nuclear Materials](#)

[D346/D346M Practice for Collection and Preparation of Coke Samples for Laboratory Analysis](#)

[D2234/D2234M Practice for Collection of a Gross Sample of Coal](#)

[D4547 Guide for Sampling Waste and Soils for Volatile Organic Compounds](#)

[D4823 Guide for Core Sampling Submerged, Unconsolidated Sediments](#)

[D5681 Terminology for Waste and Waste Management](#)

[D5743 Practice for Sampling Single or Multilayered Liquids, With or Without Solids, in Drums or Similar Containers](#)

[D6051 Guide for Composite Sampling and Field Subsampling for Environmental Waste Management Activities](#)

3. Terminology

3.1 *Definitions*—For definitions of terms used in this guide, refer to Terminology [D5681](#).

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *contaminant unit, n*—the largest particle size that contains the contaminant of interest

3.2.1.1 *Discussion*—The contaminant of concern, as defined by the project objectives, may be associated with all the particle sizes or associated with only a certain particle size or sizes. At the time of waste generation, discharge, or spill, the particle size of this contaminant of concern may be on the atomic or molecular scale, such as solvent spill into sand, or a macroscale, such as lead acid batteries at a dump site. The contaminant unit may also be in between these scales, such as lead particles encapsulated in coal. In practice, the contaminant unit may change if the contaminant unit becomes absorbed or adsorbed to particles larger than the contaminant unit. It is the size of the contaminant unit at the time of subsampling, not at the time of generation, that is referred to as the contaminant unit.

3.2.2 *maximum allowable particle size, n*—the largest lineal dimension of a sample's individual particles accepted for a given sample mass.

3.2.2.1 *Discussion*—The maximum allowable particle size