



Designation: D8170 – 20

Standard Guide for Using Disposable Handheld Soil Core Samplers for the Collection and Storage of Soil for Volatile Organic Analysis¹

This standard is issued under the fixed designation D8170; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide is intended for application to soils that may contain volatile organic compounds.

1.2 This guide provides a general procedure and considerations associated with using a disposable handheld soil core sampler to collect and temporarily store a soil sample for volatile organic analysis.

1.3 In general, an initial soil sample is collected (see Guides [D6169/D6169M](#) and [D6282/D6282M](#)) and the disposable handheld soil core sampler is then used to collect the 5 or 25 g soil sample from the initial soil core sample. The disposable handheld soil core sampler can also serve as a sample storage chamber. It is recommended that this standard be used in conjunction with Guides [D4547](#), [D4687](#), [D6169/D6169M](#), [D6232](#), [D6282/D6282M](#), [D6418](#), and [D6640](#), as appropriate, which provide information on the collection of the initial soil core sample.

1.4 *Units*—The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard. All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice [D6026](#). Reporting of test results in units other than SI shall not be regarded as nonconformance with this standard.

1.5 This guide offers an organized collection of information or a series of options and does not recommend a specific course of action. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this guide may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word “Standard” in the title of this document means only that the document has been approved through the ASTM consensus process.

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

- [D653 Terminology Relating to Soil, Rock, and Contained Fluids](#)
- [D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction](#)
- [D4547 Guide for Sampling Waste and Soils for Volatile Organic Compounds](#)
- [D4687 Guide for General Planning of Waste Sampling](#)
- [D5088 Practice for Decontamination of Field Equipment Used at Waste Sites](#)
- [D5792 Practice for Generation of Environmental Data Related to Waste Management Activities: Development of Data Quality Objectives](#)
- [D6026 Practice for Using Significant Digits in Geotechnical Data](#)
- [D6169/D6169M Guide for Selection of Soil and Rock Sampling Devices Used With Drill Rigs for Environmental Investigations](#)
- [D6232 Guide for Selection of Sampling Equipment for Waste and Contaminated Media Data Collection Activities](#)
- [D6282/D6282M Guide for Direct Push Soil Sampling for Environmental Site Characterizations](#)
- [D6418 Practice for Using the Disposable En Core Sampler](#)

¹ This test method is under the jurisdiction of ASTM Committee [D18](#) on Soil and Rock and is the direct responsibility of Subcommittee [D18.21.02](#) on Vadose Zone Monitoring.

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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.