



Designation: D6517 – 18 (Reapproved 2023)

Standard Guide for Field Preservation of Ground Water Samples¹

This standard is issued under the fixed designation D6517; 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 covers methods for field preservation of ground water samples from the point of sampling through receipt at the laboratory. Laboratory preservation methods are not described in this guide. Purging and sampling techniques are not addressed in this standard but are addressed in Guides [D6564/D6564M](#), [D6634/D6634M](#), [D7929](#), and Practice [D6771](#).

1.2 Ground water samples are subject to chemical, physical, and biological change relative to in situ conditions at the ground surfaces due to exposure to ambient conditions during sample collection. Physical and chemical preservation of samples minimize further changes in sample chemistry that can occur from the moment the ground water sample is retrieved, to the time it is removed from the sample container for extraction or analysis.

1.3 *Units*—The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 *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.*

1.5 *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 This guide is under the jurisdiction of ASTM Committee [D18](#) on Soil and Rock and is the direct responsibility of Subcommittee [D18.21](#) on Groundwater and Vadose Zone Investigations

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1.6 *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](#)

[D3694 Practices for Preparation of Sample Containers and for Preservation of Organic Constituents](#)

[D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction](#)

[D4840 Guide for Sample Chain-of-Custody Procedures](#)

[D5903 Guide for Planning and Preparing for a Groundwater Sampling Event](#)

[D6089 Guide for Documenting a Groundwater Sampling Event](#)

[D6564/D6564M Guide for Field Filtration of Groundwater Samples](#)

[D6634/D6634M Guide for Selection of Purging and Sampling Devices for Groundwater Monitoring Wells \(Withdrawn 2023\)](#)³

[D6771 Practice for Low-Flow Purging and Sampling Used for Groundwater Monitoring](#)

[D7929 Guide for Selection of Passive Techniques for Sampling Groundwater Monitoring Wells](#)

2.2 Other Documents:

[Standard Methods for the Examination of Water and Wastewater](#), 20th ed., 1999⁴

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.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

*A Summary of Changes section appears at the end of this standard