



## Standard Guide for Good Laboratory Practices in Laboratories Engaged in Sampling and Analysis of Water<sup>1</sup>

This standard is issued under the fixed designation D 3856; 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 provides information on consensus good laboratory practices for laboratories that provide services in the sampling and analysis of water. As consensus standards, these are the minimum criteria that all laboratories should consider in establishing their good laboratory practices.

1.2 This guide is designed to be used by those responsible for the selection, operation, or control of laboratory organizations engaged in sampling and analysis of water.

1.3 This guide presents features of organization, facilities, resources, and operations which affect the usefulness of the data generated.

1.4 This guide presents criteria for selection and control of the features described in 1.3 and also makes recommendations for the correction of unacceptable performance.

1.5 This guide describes methodology and practices intended to be completely consistent with the International Organization for Standardization (ISO) 9000 series of standards and Guide 25 – 1990 (1).<sup>2</sup>

1.6 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.7 *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:

D 1129 Terminology Relating to Water<sup>3</sup>

D 1193 Specification for Reagent Water<sup>3</sup>

D 2777 Practice for Determination of Precision and Bias of Applicable Methods of Committee D-19 on Water<sup>3</sup>

D 3370 Practices for Sampling Water from Closed Conduits<sup>3</sup>

D 3694 Practices for Preparation of Sample Containers and for Preservation of Organic Constituents<sup>4</sup>

D 4210 Practice for Intralaboratory Quality Control Procedures and a Discussion on Reporting Low-Level Data<sup>3</sup>

D 4375 Terminology for Basic Statistics in Committee D-19 on Water<sup>3</sup>

D 4447 Guide for the Disposal of Laboratory Chemicals and Samples<sup>5</sup>

D 4840 Guide for Sampling Chain-of-Custody Procedures<sup>3</sup>

D 4841 Practice for Estimation of Holding Time for Water Samples Containing Organic and Inorganic Constituents<sup>3</sup>

D 5172 Guide for Documenting the Standard Operating Procedures Used for Analysis of Water<sup>3</sup>

D 5847 Practice for Writing Quality Control Specifications for Standard Test Methods for Water Analysis<sup>4</sup>

E 456 Terminology Relating to Quality and Statistics<sup>6</sup>

E 548 Guide for General Criteria Used for Evaluating Laboratory Competence<sup>6</sup>

### 3. Terminology

3.1 For definitions of terms used in this guide, refer to Terminologies D 1129, D 4375, and E 456, Guide E 548, and ASTM MNL 7 (2).

### 4. Summary of Guide

4.1 This guide describes the criteria, guidelines, and recommendations for physical and human resources and data validation for the operation of a laboratory.

<sup>1</sup> This guide is under the jurisdiction of ASTM Committee D19 on Water and is the direct responsibility of Subcommittee D19.02 on General Specifications and Technical Resources.

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<sup>2</sup> The boldface numbers in parentheses refer to the list of references at the end of this guide.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 11.01.

<sup>4</sup> *Annual Book of ASTM Standards*, Vol 11.02.

<sup>5</sup> *Annual Book of ASTM Standards*, Vol 11.04.

<sup>6</sup> *Annual Book of ASTM Standards*, Vol 14.02.

