



Designation: D5847 – 02 (Reapproved 2020)

Standard Practice for Writing Quality Control Specifications for Standard Test Methods for Water Analysis¹

This standard is issued under the fixed designation D5847; 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 practice provides specific, mandatory requirements for incorporating quality control (QC) procedures into all test methods under the jurisdiction of Committee D19.

1.2 ASTM has adopted the following:

Policy on implementation of requirements for a quality control section in standard test methods generated by Committee D19 on Water.

GENERAL—By July 29, 1998, or at the next reapproval or revision, whichever is later, every D19 Standard Test Method shall contain a QC section that is in full compliance with the requirements of this practice.

NEW COLLABORATIVE TESTING—As of July 29, 1998, each collaborative study design shall include a QC section as part of the method to be tested. Prior to approval of the study design, the Results Advisor shall ascertain the appropriateness of the QC section in meeting the requirements of this practice and Practice D2777, and shall advise the designer of the study of any changes needed to fulfill the requirements of these practices. Before a collaborative study may be conducted, approval of the study design by the Results Advisor must be obtained.

OLDER VALIDATED METHODS—Standard test methods that were validated using Practices D2777 – 77, D2777 – 86, or D2777 – 94, when balloted for reapproval or revision, shall contain a QC section based upon the best information from the historical record. Where appropriate, information derived from the record of the collaborative study shall be utilized for this purpose. The introduction of the QC section into these standard test methods shall not be construed as a requirement for a new collaborative study, though the Subcommittee may opt for such a study. Any information available regarding QC or precision/bias testing shall be included in the appropriate sections of the published test method.

1.3 Required QC sections in all applicable test methods are intended to achieve two goals. First, users of Committee D19 test methods will be able to demonstrate a minimum competency in the performance of these test methods by comparison with collaborative study data. Second, all users of test methods will be required to perform a minimum level of QC as part of proper implementation of these test methods to ensure ongoing competency.

1.4 This practice contains the primary requirements for QC of a specific test method. In many cases, it may be desirable to implement additional QC requirements to assure the desired quality of data.

1.5 The specific requirements in this practice may not be applicable to all test methods. These requirements may vary depending on the type of test method used as well as the analyte being determined and the sample matrix being analyzed. See Explanation 1 in [Appendix X1](#).

1.5.1 If there are compelling reasons why any of the specific QC requirements listed in this practice are not applicable to a specific test method, these reasons must be documented in the QC section of the test method.

1.5.2 With the approval of Committee D19 on the recommendation of the D19 Results Advisor and the Technical Operations section of the Executive Subcommittee, a statement giving the compelling reasons why compliance with all or specific points of this practice cannot be achieved will meet the requirements of both ASTM and this practice.

1.5.3 Test methods developed prior to the approval of this practice with a QC section that meet the requirements of Practice D5789 are considered in compliance with this practice.

1.6 This practice is for use with quantitative test methods and may not be applicable to qualitative test methods.

1.7 Presently, this practice is applicable primarily to chemical test methods. It is intended that, in future revisions, the practice will be expanded to include other test methods such as microbiological test methods.

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

1.9 *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.*

¹ This practice is under the jurisdiction of ASTM Committee D19 on Water and is the direct responsibility of Subcommittee D19.02 on Quality Systems, Specification, and Statistics.

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