



Designation: D5907 – 18

Standard Test Methods for Filterable Matter (Total Dissolved Solids) and Nonfilterable Matter (Total Suspended Solids) in Water¹

This standard is issued under the fixed designation D5907; 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 These test methods cover the determination of filterable matter, total dissolved solids (TDS), and nonfilterable matter, total suspended solids (TSS), in drinking, surface, and saline waters, domestic and industrial wastes. The practical range of the determination of nonfilterable particulate matter (TSS) is 4 to 20 000 mg/L. The practical range of the determination of filterable matter (TDS) is 10 mg/L to 150 000 $\mu\text{g/g}$. Section 20 on Quality Control pertains to these test methods.

1.2 Since the results measured by these test methods are operationally defined, careful attention must be paid to following the procedure as specified.

1.3 The test method for the determination of nonfilterable matter (TSS) must not be used when water samples were collected from open channel flow. For the determination of matter collected in open channel flow use Test Methods D3977.

1.4 The test methods appear in the following order:

Test Method A:	Sections 10 – 14
Filterable Matter (TDS) and Nonfilterable Matter (TSS), mg/L	

Test Method B:	Sections 15 – 19
Total Dissolved Solids High Precision Method, $\mu\text{g/g}$	

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.* For a specific hazard statement, see Section 8.

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

D1129 Terminology Relating to Water
D1193 Specification for Reagent Water
D1429 Test Methods for Specific Gravity of Water and Brine
D2777 Practice for Determination of Precision and Bias of Applicable Test Methods of Committee D19 on Water
D3370 Practices for Sampling Water from Closed Conduits
D3856 Guide for Management Systems in Laboratories Engaged in Analysis of Water
D3977 Test Methods for Determining Sediment Concentration in Water Samples
D4411 Guide for Sampling Fluvial Sediment in Motion
D5847 Practice for Writing Quality Control Specifications for Standard Test Methods for Water Analysis
D5905 Practice for the Preparation of Substitute Wastewater
E319 Practice for the Evaluation of Single-Pan Mechanical Balances
E898 Test Method of Testing Top-Loading, Direct-Reading Laboratory Scales and Balances

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms used in this standard, refer to Terminology D1129.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *filterable matter, n*—also commonly referred to as total dissolved solids (TDS).

3.2.1.1 *Discussion*—It is that dissolved matter that is capable of passing through a glass fiber filter and dried to constant weight at 180°C, as determined by following the procedures outlined in this test method.

3.2.2 *nonfilterable matter, n*—also commonly known as total suspended solids (TSS).

¹ These test methods are under the jurisdiction of ASTM Committee D19 on Water and are the direct responsibility of Subcommittee D19.05 on Inorganic Constituents in Water.

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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.

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