



Designation: D4193 – 08 (Reapproved 2020)^{ε1}

Standard Test Method for Thiocyanate in Water¹

This standard is issued under the fixed designation D4193; 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.

^{ε1} NOTE—Warning notes were editorially updated throughout in January 2020.

1. Scope

1.1 This test method covers the quantitative colorimetric laboratory measurement of dissolved thiocyanate in water, waste water, and saline water in the range from 0.1 to 2.0 mg/L. For higher concentrations, use an aliquot from the diluted sample.

1.1.1 *Validation*—This test method was validated over the range of 0.07 to 1.42 mg/L. This test method was validated at nine laboratories at four levels. This test method may be valid for reporting results down to lower levels as validated in individual user laboratories.

1.1.2 *Application*—This test method has been validated in reagent water, Type II, in multiple laboratories and 7 natural waters, 1 laboratory effluent, 1 steel mill effluent, and 2 dechlorinated and treated sanitary effluents in single laboratories. It is the user's responsibility to assure the validity of the test method on any untested matrices.

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

1.3 *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 specific hazard statements, see Section 9.

1.4 *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
- D1192 Guide for Equipment for Sampling Water and Steam in Closed Conduits (Withdrawn 2003)³
- D1193 Specification for Reagent Water
- D2036 Test Methods for Cyanides in Water
- D2777 Practice for Determination of Precision and Bias of Applicable Test Methods of Committee D19 on Water
- D3370 Practices for Sampling Water from Flowing Process Streams
- D3856 Guide for Management Systems in Laboratories Engaged in Analysis of Water
- D4210 Practice for Intralaboratory Quality Control Procedures and a Discussion on Reporting Low-Level Data (Withdrawn 2002)³
- D4841 Practice for Estimation of Holding Time for Water Samples Containing Organic and Inorganic Constituents
- D5788 Guide for Spiking Organics into Aqueous Samples
- D5789 Practice for Writing Quality Control Specifications for Standard Test Methods for Organic Constituents (Withdrawn 2002)³
- D5847 Practice for Writing Quality Control Specifications for Standard Test Methods for Water Analysis
- D7237 Test Method for Free Cyanide and Aquatic Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection
- D7365 Practice for Sampling, Preservation and Mitigating Interferences in Water Samples for Analysis of Cyanide
- E60 Practice for Analysis of Metals, Ores, and Related Materials by Spectrophotometry
- E275 Practice for Describing and Measuring Performance of Ultraviolet and Visible Spectrophotometers

¹ This test method is under the jurisdiction of ASTM Committee D19 on Water and is the direct responsibility of Subcommittee D19.06 on Methods for Analysis for Organic Substances 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.

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