



Designation: D 1252 – 9500

Standard Test Methods for Chemical Oxygen Demand (Dichromate Oxygen Demand) of Water¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 These test methods cover the determination of the quantity of oxygen that certain impurities in water will consume, based on the reduction of a dichromate solution under specified conditions. The following test methods are included:

Test Method A—Macro COD by Reflux Digestion and Titration

Test Method B—Micro COD by Sealed Digestion and Spectrometry

1.2 These test methods are limited by the reagents employed to a maximum chemical oxygen demand (COD) of 800 mg/L. Samples with higher COD concentrations may be processed by appropriate dilution of the sample. Modified procedures in each test method (Section 15 for Test Method A and Section 24 for Test Method B) may be used for waters of low COD content (< 50 mg/L).

1.3 As a general rule, COD results are not accurate if the sample contains more than 1000 mg/L Cl⁻. Consequently, these test methods should not be applied to samples such as seawaters and brines.

1.4 This test method was used successfully on a standard made up in reagent water. It is the user's responsibility to ensure the validity of these test methods for waters of untested matrices.

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 and health practices and determine the applicability of regulatory limitations prior to use.* For specific hazard statements, see Section 8 and Note 3 and Note 9.

2. Referenced Documents

2.1 ASTM Standards:

¹ These test methods are under the jurisdiction of ASTM Committee D-19 on Water and are the direct responsibility of Subcommittee D19.06 on Methods for Analysis for Organic Substances in Water.

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