



Standard Test Methods for Corrosivity of Solvent Systems for Removing Water-Formed Deposits¹

This standard is issued under the fixed designation D 3263; 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 corrosivity of solvent systems used to remove water-formed deposits from the metal and alloy surfaces of water handling equipment. Four test methods are given as follows:

	Sections
Test Method A—Corrosivity in the Absence of Deposits	10 to 15
Test Method B—Corrosivity in the Presence of Selected Ions	16 to 21
Test Method C—Corrosivity with Magnetite-Coated Steel Specimens	22 to 28
Test Method D—Corrosivity with Deposit-Coated Specimens	29 to 35

1.2 Test Methods A and B provide for corrosivity testing under either static immersion or dynamic conditions.

1.3 Test Methods C and D are procedures applicable for corrosivity testing under static immersion conditions only.

1.4 *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 Water²

D 1193 Specification for Reagent Water²

D 2790 Test Methods of Analysis of Solvent Systems Used for Removal of Water-Formed Deposits³

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in these test methods, refer to Definitions D 1129.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *solvent system*—specified chemicals or combinations of chemicals, which may include corrosion inhibitors designed to react with and remove deposits.

4. Summary of Test Methods

4.1 These test methods consist of procedures wherein the corrosivity of solvent systems is determined by the weight loss experienced by metal specimens during exposure to the solvent systems.

4.2 Test Method A is a procedure to determine corrosivity from the weight loss of metal specimens during exposure to solvent systems in the absence of deposits. This corrosivity can be determined by either static immersion or dynamic techniques.

4.3 Test Method B provides the determination in solvent systems that have had selected ions added. It describes techniques for manufacturing the solvent with the desired ions and refers to Test Method A for the actual corrosivity testing.

4.4 Test Method C describes the techniques used to produce magnetited specimens that are subsequently used for the determination of the corrosivity of the solvent system.

4.5 Test Method D describes the techniques used to produce specimens coated with a synthetic deposit that are subsequently used for the determination of the corrosivity of the solvent system.

5. Significance and Use

5.1 Test Method A is necessary because the corrosivity of a solvent system can be detrimental to the equipment being cleaned. It is used to compare the corrosivity of various solvent systems and to determine the corrosivity of selected solvent systems under different conditions.

5.2 Test Method B is necessary because the corrosivity of a solvent system can be changed by the presence of ions in the solvent system. It is used to determine if the ions that might be present during a cleaning operation would significantly change the corrosivity of a solvent system.

5.3 Test Method C is necessary because the corrosivity of a solvent system under magnetite removal conditions can be different from the corrosivity in the absence of deposit. It is used to determine the corrosivity of the solvent system under magnetite removal conditions.

5.4 Test Method D is necessary because the presence or absence of deposits may affect the corrosivity of the solvent system. It is used to determine the corrosivity of solvent

¹ These test methods are under the jurisdiction of ASTM Committee D19 on Water and are the direct responsibility of Subcommittee D19.03 on Sampling of Water and Water-Formed Deposits, Analysis of Water for Power Generation and Process Use, On-Line Water Analysis, and Surveillance of Water.

Current edition approved Aug. 10, 2003. Published September 2003. Originally approved in 1973. Last previous edition approved in 1999 as D 3263 – 82 (1999)^{ε1}.

² *Annual Book of ASTM Standards*, Vol. 11.01.

³ Discontinued. See 1992 *Annual Book of ASTM Standards*, Vol. 11.02.